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A.V. Aistov
National Research
University Higher School of Economics, Russia
aaistov@hse.ru

Corruption and Shadow Economy in Transitional Countries

A number of indicators confirm that transitional countries and countries where transition is over belong to different clusters. The research is devoted to comparison of countries in transition with countries joined the European Union in 2004 and 2007. All of them illustrate similarities in dependence of corruption perceptions on the size of shadow economy within the boundaries estimated in the research. As a practical complement to the development of policy decisions, regression analysis is used. It shows some similarities and differences in relationships of governance indicators with corruption perceptions in countries with different size of shadow economy.

corruption, quality of institutions, the CPI score, shadow economy, transitional economies, well-being

1 Introduction

Despite of the long history, corruption is still attractive for a lot of economists as a subject of study. In light of the continuous discussion on the question about if it is a grease or sand in economic development (Aidt, 2009), research of corruption relationships with governance and market forces in developing economies is especially current (Olken & Pande, 2012).

If we are a bit anxious about further, we have to pay attention on personal expectations, since they have great impact on behaviour. If these expectations are widely spread in society, they can have a great influence on economic development. This is one of the reasons why this study is devoted to corruption perceptions.

The other reason for using perceptions but not actual corruption incidents in empirical research is that corrupted agents usually hide their participation in corrupt practices (Banerjee, Hanna, & Mullainathan, 2012). The last fact could be the cause of sample attrition and estimates bias if we use data from corruption surveys with questions about actual episodes in respondents' lives.

It is well known that perceptions deviate from corruption itself (Treisman, 2007; Olken & Pande, 2012). The measurement of corruption via perceptions of corruption by economical agents or population usually overestimates the level and probability of grafts (Olken & Pande, 2012). At the same time Olken and Pande (2012) do not reject the fact that corruption perceptions have impact on rent-seeking behaviour. This was confirmed by high correlations of indexes of perceptions with experimental data (see, for example, Treisman, 2007). Treisman (2007), Banerjee et al. (2012), and Olken and Pande (2012) underline that surveys of corruption perceptions have the advantage of good coverage in cross-sections and time dimensions. For these reasons, indices based on this kind of data — the Transparency International (TI) Corruption Perceptions Index (CPI) is among them — are popular among economists, mass media and politicians.

In the current research empirical estimates of correlation of corruption perceptions on a country level with the gross product per capita and subjective well-being of population of the country, the size of the shadow economy and some institutional characteristics of the country are made. Special attention is paid to transitional economies in comparison with countries that joined the European Union (EU) in 2004 and 2007, and developed countries. The merit of the present research is the use of multivariate approach to the problem.

2 Literature Review

There are a fair number of theoretical models devoted to the relationship of corruption and shadow economy, but some of them contradict each other since they are designed on different assumptions. For this reason, empirical inference of the models still remains current.

Many authors suggest theoretical models exploring the idea of the complementary relationship of corruption and shadow economy. Some papers present empirical evidence for this. For example, Jay Pil and Thum (2005) have developed several theoretical models with unofficial and official sectors of the economy as complements. Particularly they showed that high control of entrepreneurs allows corrupt officials to charge higher bribery payments and that could push entrepreneurs into the shadow.

Echazu and Bose (2008) explain positive impact of shadow economy on corruption in a theoretical model, supposing that corrupt officials control both the formal and informal sectors.

The results mentioned above are not indisputable. For example, Dreher, Kotsogiannis, and McCorrison (2009) developed a theoretical model where the shadow economy and corruption are substitutes. They showed theoretically that the size of the shadow market decreases with the quality of institutes, but this effect is ambiguous. It “depends on the relative effectiveness

of institutional quality in the shadow and corruption markets” (Dreher et al., 2009). If institutes are more effective in a battle against the shadow economy, institutional quality can enhance corruption.

Dreher et al. (2009) have made empirical estimates on a cross-section of countries. The data were averaged over the period of 2000–2002. The key variables were the size of the shadow economy (in % of official GDP) taken from (Schneider, 2005b, 2005a) and the (no)corruption index provided by the International Country Risk Guide (ICRG). Institutional quality was proxied by government effectiveness. Substitution of the shadow economy by corruption was confirmed empirically.

Dreher and Schneider (2010) showed that in low-income countries corruption grows with the shadow economy. This result was received empirically on a cross-section of 98 countries from 2000–2002 (Dreher, Kotsogiannis, & McCorriston, 2007).

Buehn and Schneider (2012a) used the structural equation model to receive empirical evidence for a complementary relationship of corruption and the shadow economy on a sample of 51 countries (18 developed and 33 developing) from 2000–2005.

Goel and Saunoris (2014) on cross-sections and panel of 67 countries over 2000–2006 confirmed that corruption complemented the shadow economy in the shadow determinants equations, but the result was not robust when they tried to explain corruption by the shadow economy.

Some authors contradict each other concerning the relation between GDP per capita and its growth with corruption level in a country. Among the empirical results based on the long time series data it is worth mentioning Brown and Shackman (2007). They considered the corruption level in a relationship with a large number of political, legal and economic indicators. Their optimistic conclusion is that the growth of indicators is causal to corruption level decrease. The converse is not true: variations in corruption level did not influence the considered indicators. The other idea was that GDP per capita growth causes the corruption level growth in the short-run and decreases it in the long run.

Other authors tried to find causality effects too. For example, Kalyuzhnova, Kutan, and Yigit (2009) showed that a high level of corruption has a negative impact both on GDP per capita and economic growth, but economic development, to the contrary, reduces corruption levels.

Aidt (2009) has noticed divergence in the results of different authors. On the basis of a literature review, he put forward two hypotheses. The first of them was “that corruption can be efficient — or that it greases the wheels of commerce”. The second one was “that it creates rather than corrects inefficiencies”. Aidt (2009) used data on annual growth rates of real GDP per capita from 1970–2000 in a sample of 60–80 countries without the former socialist countries. Aidt’s (2009) empirical estimates confirm that the level of corruption practically does not correlate with the growth rate of GDP per capita.

One of the recent studies concerning the influence of GDP per capita on the level of corruption was made by Goel and Ram (2013). Their empirical estimates on a large cross-country data set confirm that GDP per capita mitigates corruption. The other interesting result received by Goel and Ram (2013) is the conclusion about the higher level of corruption in countries with transitional economies.

Some authors, such as Welsch (2008), argued that GDP per capita is the unsuccessful indicator of well-being, and that it is better to use respondents’ subjective self-reports to a construct consistent indicator of population well-being. He argued that the influence of corruption on the well-being through GDP is indirect influence, and influence through non-material factors is direct. Research carried out by him has shown that the value of direct influence (in a monetary equivalent) is much above an indirect one. It would be a good robustness check if GDP per capita in the models were replaced with the subjective well-being indicator.

3 Data

Nowadays there are several well-known indicators of corruption perceptions in countries/territories that are available in open access. Due to the high correlation among them (Treisman, 2007) they give similar results when we are interested in parameters of regression models. In the current research the CPI score is used. It gives empirical studies the combination of precision and country coverage (Treisman, 2007). The CPI ranks countries and territories according to the level of corruption in the public sector as perceived by external experts and internal observers in respect to the corresponding countries and territories.

According to the TI's intentions, the CPI score "is an attempt to assess the level at which corruption is perceived by businessmen as impacting commercial life."¹ A higher score corresponds to lower perceptions of corruption in a country.

The CPI had 10-point score before 2012, but after 2012 the scale was increased to 100 (a country without corruption has a score of 100). In the current research all the scores were multiplied by 10 before 2012 to avoid numerical problems in empirical estimates.

To check a proposition about the correlation of the CPI score and shadow economy, data on the sizes of shadow economies (in % of official GDP) calculated by Buehn and Schneider (2012b) and Schneider (2013) by the MIMIC (Multiple Indicators and Multiple Courses) and the currency demand approach are used.

"Well-being" in the current research is the mean value of respondent answers the questions about life satisfaction in 151 countries. A scale with 11 steps (0–10) was given to each respondent to choose the answer.²

The Worldwide Governance Indicators (WGI) project³ is a source of data to control for institutional quality in models with corruption perceptions as the dependent variable. Estimates of the indicators range from approximately -2.5 (weak) to 2.5 (strong).

4 Nonparametric Estimates

The first idea was to check the correlation of the CPI score with the level of the shadow economy. Nonparametric estimates are very convenient to visualize the functional form of the dependence of the CPI score on the size of a shadow economy. Some estimates are shown in Figure 1. On the left in Figure 1, estimates of shadow economies made by Buehn and Schneider (2012b) for 145–161 countries for the period of 1997–2007 are used. On the right in Figure 1, estimates of the shadow economies for 36 countries (31 European countries plus Australia, Canada, Japan, New Zealand, and USA) considered by Schneider (2013) for the period of 2003–2013 are used.

Figure 1 illustrates that corruption and shadow economy can have both a complement and a substitute relationship. The CPI score decreases when the size of the shadow economy increases from about 10% to 40% of the official GDP.

In countries where the size of the shadow economy is higher (more than 45% of the official GDP) the CPI score does not reflect changes in corruption perceptions with the share of shadow economy.

The right hand graph in Figure 1 confirms that in countries with a small size of shadow economy (less than about 15% of the official GDP) corruption could substitute the shadow economy.

Several clusters of countries could be discovered if country characteristics in the "shadow economy" – "the CPI score" axes were plotted. The result for transitional economies is very

¹ http://www.transparency.org/files/content/tool/1995_CPI_EN.pdf

² <http://www.happyplanetindex.org/about/>

³ <http://info.worldbank.org/governance/wgi/index.aspx#doc>

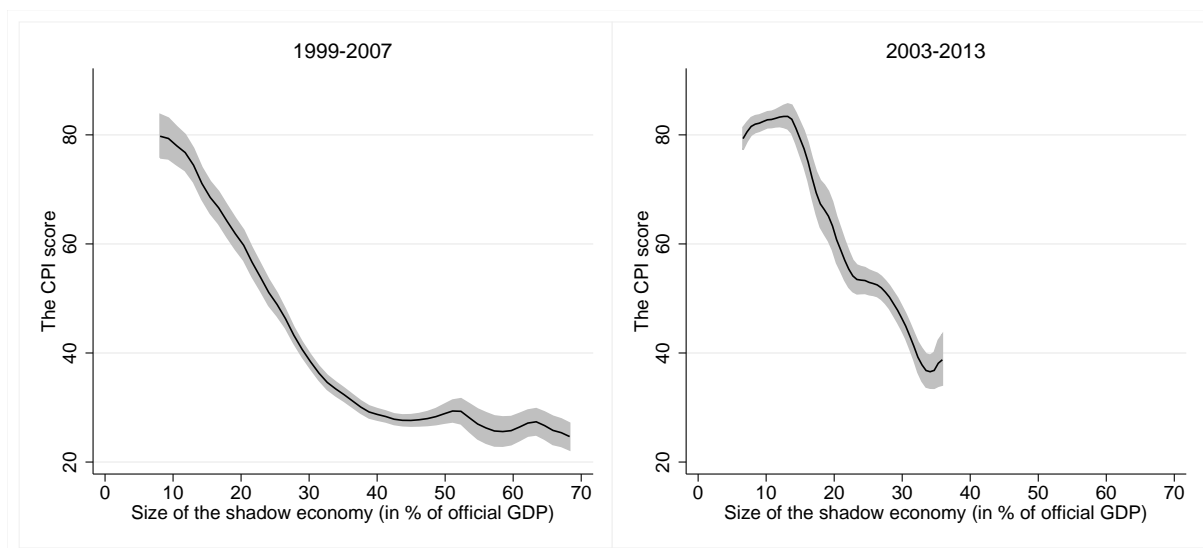


Figure 1. Nonparametric estimates of dependence of the CPI score on the size of shadow economy, 95% confidence intervals are shown in gray

optimistic. As an example, Figure 2 shows general trend — a nonparametric estimate of the sizes of shadow economies dependence on the 2007 CPI. This is the “base line” that is shown in Figure 2 by a decreasing curve. To keep the clarity of the picture, only transition (by the IMF and the World Bank definitions of 2000–2010) and former transition (as of 2007) economies are shown.

In the left hand side graph of Figure 2 we can see that transition economies are characterised by a high level of corruption perceptions in the public sector (a low CPI score) with a high diversity in the size of the shadow economy. Only Georgia, Azerbaijan, Laos, and the small cluster of four countries (the last are small shadow economies) diverge from the common trend.

If we suppose that the improvement of the quality of institutions accompanies transition processes, then corruption perceptions should be reduced in countries where the transition is over. Countries that joined the EU in 2004 and 2007 are plotted in the right hand graph of Figure 2.

Many authors use GDP per capita as an indicator of economic development. Nonparametric estimates within the scope of the current research based on CPI scores and World Bank data on GDP per capita⁴ show positive correlation of GDP per capita with the CPI score. The novelty is that in the two extreme situations — high and low corruption in countries we could not see statistically significant dependence of GDP per capita on the CPI score. This agrees with Aidt’s (2009) hypotheses about the dual role of corruption in economic development. Aidt’s second hypothesis (2009) about the “sand in the wheels” effect looks to be true for countries with CPI scores in a range of about 30–75.

Considering countries in transition and economies where transition processes are over, it is easy to discover that they are clearly separated. The transition process is accompanied by a decrease in corruption perceptions in the public sector and growth of GDP per capita. Before the transition is over, we do not observe dependence of GDP per capita on the CPI score. This could mean that for some countries, corruption could be “sand in the wheels”, but for others “it greases the wheels”.

As it was mentioned above it would be interesting to control the results by using respon-

⁴ <http://data.worldbank.org/indicator/NY.GDP.PCAP.CD?page=1>

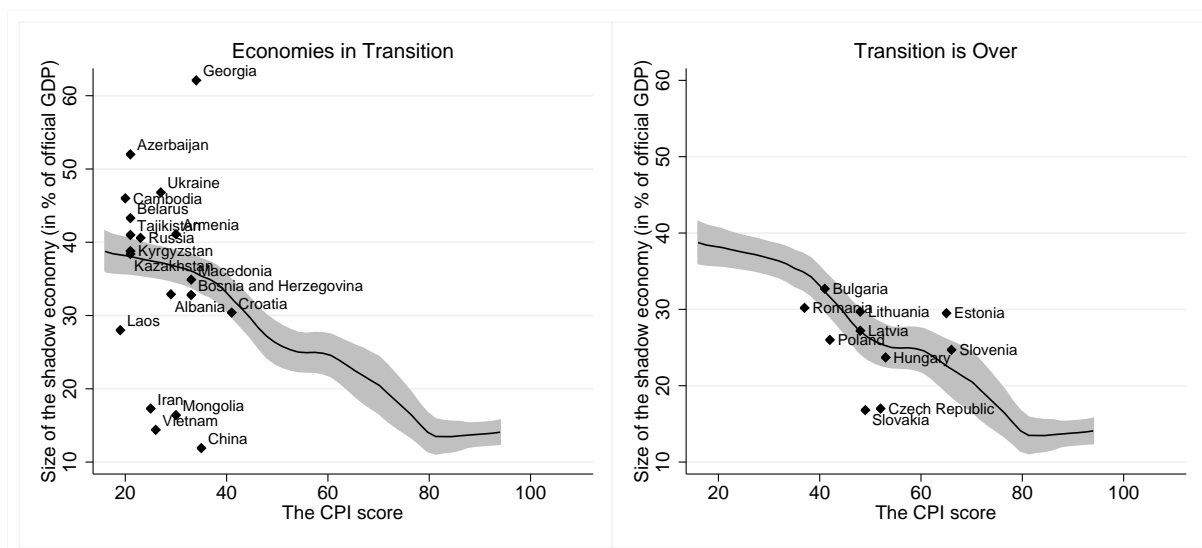


Figure 2. Countries with transition economies and countries that have completed the transition process plotted in the graphs of nonparametric estimates of dependence of the size of the shadow economy on the CPI score in 2007, 95% confidence interval for nonparametrics is gray

dents' subjective self-reports about well-being instead of a formal indicator such as GDP per capita. As it was expected, estimates did not show any qualitative differences in spread of well-being in transitional countries and in countries where transition is over. Considered countries were separated only with respect to the CPI score. This could be explained by the dependence of subjective well-being on individual unobservables (country level fixed effects) that cannot be controlled in nonparametric analysis.

5 Regression Analysis

In the estimates the advantage of panel data to control for unobservable country fixed effects that could correlate with the explanatory variables were used. The results are presented in Tables 1 and 2. Most variables have self-explanatory names.

In columns "1999–2007" and "2003–2013" in Table 1 different data were used as explanatory variable named "Shadow economy". The left side columns (1999–2007) have data on shadow economies published by Buehn and Schneider (2012b). The right side columns (2003–2013) have Schneider's (2013) data. Different time periods and samples of the countries are similar to a robustness check of our results to the data.

In the models presented in Tables 1 and 2, the variable "Education expenditure" contains estimates made by the World Bank, that is "the current operating expenditures in education including wages and salaries and excluding capital investments in buildings and equipment" as a percentage of Gross National Income (GNI).⁵ This information was included as an explanatory variable in regressions, because it was expected that education increases the human and social capital of a population and makes citizens more law-abiding, thus reducing corruption.

The following countries are "Developed" in Table 1: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom, and the United States.

Breusch and Pagan and fixed effects F -tests confirm the presence of unobservable time-invariant country characteristics in models presented in Tables 1 and 2. Hausman's tests for-

⁵ http://www.econstats.com/wdi/wdiv_736.htm

Table 1. Models with panel data, the CPI score is dependent variable

	1999–2007			2003–2013					
	OLS	RE	FE	Cyprus, Malta, Turkey		Developed		Transitional	
				RE	FE	RE	FE	RE	FE
GDP per capita / 10000	17.55*** (0.650)	4.099*** (0.656)	1.367** (0.661)	14.46 (16.00)	-35.33** (15.03)	0.510 (1.207)	3.032*** (1.123)	19.47*** (4.523)	11.68* (5.999)
(GDP per capita) ² / 10	-14.47*** (0.967)	-3.487*** (0.686)	-1.296* (0.669)	-28.78 (32.09)	52.30** (25.16)	-0.463 (0.806)	-1.760** (0.716)	-30.70** (14.80)	-21.37 (15.75)
Transition		-6.793*** (1.021)	-10.98*** (2.647)						
Transition is over		5.190*** (1.448)	7.688* (4.093)					11.37** (4.649)	
Education expenditure (% of GNI)	2.754*** (0.234)	1.683*** (0.284)	1.117*** (0.292)	1.270 (1.914)	-2.664 (1.947)	0.100 (0.647)	-0.444 (0.591)	0.421 (1.064)	-1.766 (1.185)
Shadow economy (% of official GDP)	-0.240*** (0.0343)	-0.653*** (0.0669)	-0.251** (0.110)	-2.178* (1.240)	-6.196*** (1.490)	0.496* (0.277)	1.546*** (0.289)	0.550* (0.290)	-0.711 (0.784)
Constant	27.98*** (1.763)	55.40*** (2.955)	47.00*** (3.998)	92.02** (42.95)	280.4*** (52.82)	69.41*** (8.473)	49.19*** (8.406)	1.798 (12.15)	63.39** (26.75)
Observations	990	990	990	29	29	220	220	110	110
Groups		138	138	3	3	22	22	11	11
Adjusted R^2	0.812								
R^2 within		0.033	0.037	0.155	0.639	0.168	0.204	0.370	0.399
R^2 between		0.684	0.660	0.999	0.678	0.408	0.415	0.807	0.080
R^2 overall		0.697	0.672	0.765	0.288	0.344	0.363	0.666	0.122
F	714.66		8.05		9.72		12.44		15.77
Breusch and Pagan χ^2		1928.74				351.46		71.23	
Fixed effects F			55.27		19.80		94.00		21.98
Hausman χ^2			1701.47		43.05		110.39		15.71

Standard errors in parentheses

* $p < .1$, ** $p < .05$, *** $p < .01$

mally reject random effects (RE) models in favour of fixed effects (FE) models both in Table 1 and Table 2.

Table 1 illustrates the relationship between the size of a shadow economy and how the CPI score varies among groups of countries. Corruption and shadow economies are complements in average if we consider estimates on a rather large sample of countries. This could be seen from the negative relationship between the size of the shadow economy and the CPI score presented in the FE column of “1999–2007” estimates in Table 1. Considering this model it should be noticed that estimates for the size of shadow economy made by Buehn and Schneider (2012b) for the period of 1999–2007 have very small variation in time. These estimates are more similar to the average values over the period of observation for each country. This makes it impossible to trace dynamics. It would be better to talk about between countries comparisons. In countries with higher levels of shadow economy (in percentage of official GDP) corruptions perceptions in the public sector have a tendency to be higher.

The same result is observed for Cyprus, Malta, and Turkey, where the share of shadow economies is rather high (26.5%, 26.4%, and 29.1% of official GDP in 2007, respectively). This result is shown in the FE column for Cyprus, Malta, Turkey for the period of 2003–2013 in Table 1. This is already within group dynamics (estimates of the shadow economy made by

Schneider (2013) are used). That means that in such countries, growth of the shadow economy is accompanied by corruption perceptions growing in the public sector. The last is not true in developed countries with a relatively low share of shadow economy in their GDP. Estimates presented in the FE column for those countries for the period of 2003–2013 confirm that corruption could go in a shadow from the public sector, so they are substitutes.

Considering estimates made on the sample of transitional countries (Table 1), we cannot say anything definite about the relationship of the shadow economy and corruption perceptions. The within-groups effect is insignificant but RE estimates (with the between groups part in them) confirm the presence of substitute effect in the relationship. An accurate conclusion could be the following. Every economy in transition has its own way; in some of them the shadow economy and corruption in public sector are complements; in others they may be substitutes.

RE models presented in Table 1 for the period of 1999–2007 and for transitional economies for the period of 2003–2013 confirm that in countries where the transition is over the CPI score is higher than average on a sample (*ceteris paribus*). Education expenditures reduce corruption too (1999–2007 columns in Table 1).

As was said by Banerjee et al. (2012), “Corruption exists because there are not enough monitoring and incentives to eliminate it.” Following these ideas in the current research we can reveal factors that are valuable in reducing corruption in transitional economies by comparison of the results with other countries. To achieve the goal, six indicators from the WGI project were added as explanatory variables in the models instead of the size of the shadow economy.

Considering the results presented in Table 2, we have to notice that explanatory variables in the models have relatively small time fluctuations inside the countries. For this reason rather high explanatory power of the regressions in the between dimension in comparison to the within dimension. Nonetheless, tests have rejected RE models as inconsistent.

The first three columns (“All”) in Table 2 represent estimates on the sample of the largest size. This sample was split in two subsamples: “Transitional” and “Not transitional”. Columns “Transitional” show estimates for former transitional economies (countries that joined the EU in 2004 and 2007) and transitional economies. “Not transitional” is the remainder of the “All” sample.

Taking into account between effect, partially captured by RE estimates (column “RE” for “All” countries), we can say that the mean value of the CPI score in transitional economies is significantly lower (at 10% level of significance) than in other countries, *ceteris paribus*.

Education expenditures positively correlate with the CPI score in within dimension, transitional economies excepted.

The insignificance of FE estimates of “Government effectiveness” and “Voice and accountability” in “Not transitional” countries can be explained by the small within variation of these indicators in that countries over time. The same is observed for the “Rule of law” and “Political stability.”

A very optimistic result is that democracy partially captured by the “Voice and accountability” indicator has a significant positive influence cleansing corruption in countries with transitional economies.

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Table 2. Models with panel data, the CPI score is dependent variable (2000–2012)

	All			Not transitional			Transitional		
	OLS	RE	FE	OLS	RE	FE	OLS	RE	FE
GDP per capita / 10000	2.207*** (0.247)	2.599*** (0.346)	1.797*** (0.417)	1.968*** (0.259)	2.173*** (0.373)	0.593 (0.452)	-0.303 (1.575)	0.221 (1.889)	0.693 (2.222)
(GDP per capita) ² / 10	-1.597*** (0.270)	-2.141*** (0.349)	-1.784*** (0.393)	-1.421*** (0.279)	-1.807*** (0.368)	-0.841** (0.414)	21.40*** (6.857)	18.80** (7.950)	17.01* (8.853)
Transition	-0.510 (0.389)	-1.621* (0.935)							
Transition is over	-1.017* (0.591)	-1.887 (1.491)					0.144 (1.017)	-1.373 (1.796)	
Education expenditure (% of GNI)	-0.0968 (0.0784)	0.292** (0.132)	0.416** (0.177)	-0.185** (0.0844)	0.261* (0.144)	0.361** (0.184)	0.383* (0.211)	0.583* (0.334)	0.544 (0.547)
Control of corruption	17.28*** (0.443)	11.89*** (0.598)	8.321*** (0.719)	17.60*** (0.475)	12.24*** (0.644)	8.621*** (0.747)	15.29*** (1.338)	10.14*** (1.674)	5.549*** (2.073)
Government effectiveness	1.724*** (0.530)	3.375*** (0.698)	2.730*** (0.811)	2.199*** (0.569)	3.213*** (0.753)	1.298 (0.860)	-1.732 (1.498)	2.879 (1.825)	6.814*** (2.165)
Regulatory quality	0.993** (0.400)	1.731*** (0.586)	2.754*** (0.704)	0.810* (0.445)	1.776*** (0.658)	2.039*** (0.765)	2.887*** (1.046)	2.437* (1.343)	4.312** (1.807)
Rule of law	0.0560 (0.524)	1.809** (0.748)	0.903 (0.899)	-0.224 (0.556)	1.865** (0.813)	-0.102 (0.965)	0.969 (1.566)	1.493 (2.027)	0.963 (2.571)
Political stability and abs. of violence/terror.	0.314 (0.216)	0.589* (0.330)	0.470 (0.405)	0.218 (0.236)	0.456 (0.366)	0.366 (0.434)	0.629 (0.553)	0.994 (0.782)	0.875 (1.028)
Voice and accountability	-1.386*** (0.242)	-1.017** (0.456)	-0.642 (0.745)	-1.337*** (0.258)	-1.021** (0.508)	-1.031 (0.785)	-1.810** (0.749)	-1.153 (1.109)	4.887** (2.148)
Constant	40.41*** (0.414)	38.73*** (0.688)	38.86*** (0.822)	40.92*** (0.440)	39.21*** (0.743)	41.88*** (0.894)	36.40*** (1.320)	34.89*** (1.900)	33.43*** (2.282)
Observations	1595	1595	1595	1276	1276	1276	319	319	319
Groups		155	155		126	126		29	29
Adjusted R ²	0.956			0.960			0.880		
R ² within		0.211	0.216		0.168	0.178		0.402	0.433
R ² between		0.967	0.957		0.968	0.965		0.946	0.893
R ² overall		0.952	0.942		0.956	0.953		0.874	0.823
F	3141.00		43.77	3424.02		27.36	233.98		23.83
Breusch and Pagan $\bar{\chi}^2$		717.01			610.93			60.20	
Fixed effects F			8.70			9.92			5.64
Hausman χ^2			98.72			131.45			37.79

Standard errors in parentheses

* $p < .1$, ** $p < .05$, *** $p < .01$

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Artem I. Alsufyev
Graduate School of Management (GSOM), Saint-Petersburg State University
alsufyev@gsom.pu.ru

Elena K. Zavyalova
Graduate School of Management (GSOM), Saint-Petersburg State University
zavyalova@gsom.pu.ru

Employee Training and Development as a Driver of Innovation Activity of Emerging Markets Firms

The purpose of the study is to identify the specific characteristics personnel training and development practices in innovation-active companies of the BRIC countries. Socio-cultural features of the BRIC countries were considered situational factors influencing the choice of specific approaches. Based on the Lawler questionnaire, expert interviews with representatives of top management of 141 innovation-active companies of the BRIC countries were conducted. Results of the analysis of information sources and conducted empirical study enables us to conclude that innovation-active companies of the BRIC countries possess both universalistic and situational approaches features regarding human resource development. This model can be referred as hybrid.

Keywords: *personnel training and development, BRIC, comparative analysis*

1. Introduction

Knowledge, skills, and behavior of employees are becoming an increasingly important resource that companies possess. Human capital (knowledge, skills, and behavior of employees) serves as the basis of competences that ultimately lead to the success of the company and, therefore, the effective human resource management in terms of training can be considered as a new space where companies are forced to compete. Analysis of the literature shows that the majority of studies on the relationship between training and the organizational performance, explore the experience of companies in developed countries, in most cases - the US and the UK, and focus on such distinctive features of their approaches as increasing investments in training and development and long-term strategic orientation (Shipton et al., 2006). Therefore, the question arises whether the identified patterns on the relationship of training and development and performance are universal, or they depend on different socio-economic and cultural contexts. So far there is no conclusive evidence of how these approaches are feasible in companies of the emerging economies, particularly in the BRIC countries (Brazil, Russia, India, China), which according to experts, by 2050 year should surpass the GDP of developed countries. Although, there are obvious differences of national culture and institutional environment in BRIC countries from the developed countries, comparative studies of approaches to employees training and methods of human resource development in the majority of this group practically have not been carried out.

Innovation activity as a specific type of organizational activity essentially determines the approaches to human resource management in companies. However, there is a lack of comparative studies of the interrelationship between innovation activity of companies and personnel development approaches in different cultural contexts. The nature of the relationship between innovation activity and approaches to human resource development in different cultural contexts is still unclear, as there is a lack of cross-country comparative studies. The question stands whether innovation activity as a kind of organizational activity contributes to the convergence of approaches to human resource development or local characteristics of the BRIC countries influence these approaches.

The purpose of this article is theoretical and empirical exploration of approaches to personnel training and development in innovation-active companies of the BRIC countries in the context of convergence and divergence theory.

2. Divergence and convergence factors and the innovative activity of BRIC companies

Socio-economic conditions, national culture and institutional environment are considered to be external factors influencing the formation of the organizational culture and the choice of strategies and management practices. The theory of divergence postulates that national culture is one of the key factors of the objective differences in management practices between countries and regions of the world. An alternative theory is the theory of convergence. It does not consider national culture as the most important source of differences at the national level. The theory of convergence considers institutional factors of economic, legal and socio-political nature as the main sources of differences. Under the influence of increasing international competition, there is a convergence of management techniques in the direction of "best practices." Thus, the choice of effective strategies related to approaches to personnel management has two options: standardizing management practices and the choice of "best practices", or localization of HR practices, bringing them into line with the characteristics of the national culture (Pudelko, 2006).

Understanding the cultural factors and institutional environment that can affect the efficiency of business operations is an urgent problem in the area of human resource management. There are a number of descriptive and comparative studies on the impact of country-specific factors on human resource management practices in Brazil, Russia, India and

China. Many researchers compared the approaches to HRM in different cultural contexts. The majority of them have found important differences in human resource management practices caused by context-specific features of these countries. At the same time, despite the fact that some HRM studies in one or more countries of BRIC is widely represented in the academic literature, there is an obvious lack of comparative studies of approaches to HRM in companies of four BRIC countries.

Innovation activity as a kind of organization activity essentially determines the practices and approaches to human resource management of the company. The academic literature has proven that company's innovation activity affects the human resource management and it, in turn, can affect the results of innovation activity (e.g. (Tereza Leme Fleury 1996; Searle & Ball 2003)). Achieving a high level of innovation activity requires implementation and use of specific policies and practices of personnel management. Many researchers have tried to develop the most effective approaches to personnel management that can be applied in innovation-active firms (Shipton et al., 2006). Many of the proposed approaches and practices of innovation-active firms are based on HRM system common for Western culture of management. Therefore, according to some researchers companies that focus on innovation activity usually adopt Western management practices more rapidly than not innovation-active companies. For example, according to a study (Tereza Leme Fleury, 1996), the telecommunications sector in Brazil that focuses on technological development pays significant attention to the development of human resources, use of modern tools and methods of management in accordance with the standards of international companies such as IBM.

The above features of personnel training and development in the BRIC companies allow to suggest that there are significant differences in the approaches to employees development in companies of these countries because of the economic, social, cultural, and institutional factors.

A substantial lack of knowledge in this field was influences the formulation of the empirical research problem that is to identify common features and differences in the approaches to the personnel training and development in innovation-active companies of the BRIC countries.

3. Methodology

The empirical study was conducted by Graduate School of Management St. Petersburg State University, University of Minnesota, University of Illinois, University of São Paulo, and the University of Delhi. The survey took place in 2011-2013. We used methodology developed and used by researchers of the University of Illinois led by John Lawler to assess the practices of human capital development, including the practices of training and development, performance assessment and evaluation, compensation and career development (Bartlett et al., 2002). This tool has been used in a number of international studies, including Russia (Ardichvili & Dirani, 2005). The primary method of data collection was structured interview and it was based on the Lawler's questionnaire.

The objects of the study were the 131 innovation-active companies of Brazil, Russia, India and China with number of employees from 50 to 1500 people.

Innovation-active companies were selected based on the Oslo Manual recommendations, which presents the internationally accepted criteria for data collection and analysis of innovation-active companies.

Data collection in Brazil, China, and India was held in innovation clusters, and respondents were selected in accordance with the "snowball" method of data collection.

We used the one-way analysis of variance (ANOVA) method to test the convergence hypothesis of personnel training and development approaches in BRIC innovation-active countries. We applied Levene's test to check the assumption of equality of variance in four

groups. Based on the test results we concluded that there is a difference between the variances in the population. For this reason, we used Tumhein post-hoc test for pair-wise multiple comparisons of statistically significant differences between group means.

4. Results of the study

Mean values of the characteristics of personnel training and development approaches in innovation-active companies of BRICs are presented in Table 1.

Table 1

Characteristics of training and development approaches in innovation-active companies of the BRIC countries

No	Characteristic of training and development approaches	Mean values / differences between countries			
		Russia	Brazil	China	India
1	Training is offered to improve employees' interpersonal skills.	3,08	3,56	3,14	4,08
		C	C, D	C	D
2	New employees undergo extensive training related to the values and culture of the company.	3,58	3,48	3,95	3,95
		F	F	F	F
3	There is considerable cross-training, so that employees are familiar with different jobs and can fill in for others when necessary.	3,89	2,92	3,10	3,65
		J, L	K	K, L	L
4	Training in our company is primarily intended to prepare employees for their current jobs rather than provide broader knowledge.	3,74	2,96	3,86	3,38
		A	B	A	A, B
5	Training in this company is seen more as a short-term cost than a long-term investment.	2,26	2,23	2,70	3,43
		G	G	G	H
6	The company devotes considerable resources to employee training and development.	3,43	3,38	3,19	3,87
		M, N	M, N	M	N
	N	54	26	22	29

$p < 0.05$

In table 1 the same letters denote statistically different mean values between groups (p -value $< 0,05$). For example, while analyzing the item number two we can conclude that Russian and Chinese innovation-active companies are similar with regard to considering training programs as tools for improving employees interpersonal skills (Latin "C") and differ from India (Latin "D"). At the same time, Brazilian companies are similar to Russian and Chinese companies ("C") and Indian ("D") simultaneously.

General characteristics of innovation-active companies in the countries with regards to approaches to personnel training and development are the following (the mean value is greater than 3): companies invest considerable resources in employees training and development; new employees undergo extensive training related to the values and culture of the company; companies consider training is as a means to improve employees' interpersonal skills.

There are also differences in the approaches to personnel training and development. In innovation-active companies of Brazil, Russia, and China training is seen more as a long-term investment rather than a short-term cost. Indian innovation-active companies consider training more as a short-term cost. Innovation-active companies of Russia and China use training programs to primarily to prepare employees for their current jobs. Training programs of Brazilian and Indian companies are primarily intended to provide broader knowledge for their employees. Training is also intended at providing personnel interchangeability in innovation-

active companies of China, Russia, and India. Innovation-active companies of Brazil do not intend at providing personnel interchangeability.

5. Discussion of Results

The obtained results suggest that universal aspects in the approaches to personnel training and development in innovation-active companies of the BRIC countries involve significant investments in this activity. This trend is consistent with the approaches of innovation-active companies of developed countries.

In addition, this approach is consistent with considering training programs as long-term investments, according to responses of Chinese, Russian, and Brazilian companies' employees. Indian companies differ slightly from this trend.

We assume that socio-economic and cultural contexts define other training and development approaches in BRICs. Organizational culture maintenance is common to all BRIC companies. Companies demonstrate an interest in the adoption of relevant norms and values and building meaningful interpersonal relationships.

Main differences are connected with short-term operational or long-term strategic approaches to personnel training and development, as well as the universalization and individualization of the acquired knowledge.

Russian and Chinese companies are more inclined to develop current employees' skills rather than develop them strategically. Indian and Brazilian companies are less likely to have such short-term orientation.

Russian, Chinese, and Indian companies choose approaches to training providing the universalization of the acquired knowledge and interchangeability in the workplace. Brazilian companies are less supportive of this approach.

We can conclude that training and development approaches in Russian, Chinese, and Indian companies have a lot in common with HRM model for companies-innovators described by Schuler and Jackson (Schuler, Jackson, 1987).

6. Conclusion

The purpose of this article was to identify the characteristics of approaches and practices of personnel training and development in BRIC innovation-active companies in the context of divergence and convergence theory. A common feature of these companies is their focus on innovations. The subject of the study are the approaches to personnel training and development used by BRIC companies to achieve their goals. Socio-cultural features of the BRIC countries are regarded as the situational factors. The research problem is based on contradictory assessments of approaches towards personnel training and development in innovation-active companies presented in the literature: universalistic and contingency approach in HRM, theories of divergence and convergence in general management.

From the of point convergence theory, BRIC innovation-active companies should use the universal HRM practices proven to be effective in increasing innovation performance. According to divergence theory, there are many features of the BRIC companies HRM that distinguish them from Western countries (Johnes, 2012).

Based on the analysis of information sources and conducted empirical research we conclude that there are both universal and context-specific approaches to personnel training and development. In general, these approaches can be used named as hybrid.

Considering programs as long-term investments is characteristic of the universal approach that characterizes innovation-active companies of developed and developing countries. Context-specific characteristics of training and development approaches are orientation of training programs on current operations or strategic development, individualization of the training programs.

It appears to be more convincing that historical and cultural dependence plays greater role in defining personnel training and development approaches in BRIC countries. These include, for example, the priority of collectivist values in Russian, Chinese, and Indian innovation-active companies with some differences in Brazilian companies that are more focused on long-term strategy and training individualization.

The study limitations are related to the use of subjective indicators from the expert interviews, the small sample size, and misbalance in the availability of academic information on BRIC companies HRM. However, this study represents the first attempt of comparative analysis of approaches to personnel development and training in companies considering innovation activity as not only their goal, but also the condition for their countries to develop.

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**E.V. Andreevsky, Saint-Petersburg state electrotechnic university “LETI”,
eliseyandreevsky@mail.ru**

**M.A. Akhmedkhanov, Leningrad state university named after A.S. Pushkin,
murad66687@mail.ru**

**Yu. V. Daneykin, National research Tomsk polytechnic university,
daneykin@tpu.ru**

Improvement of the reliability of force structures personnel by effective professional selection

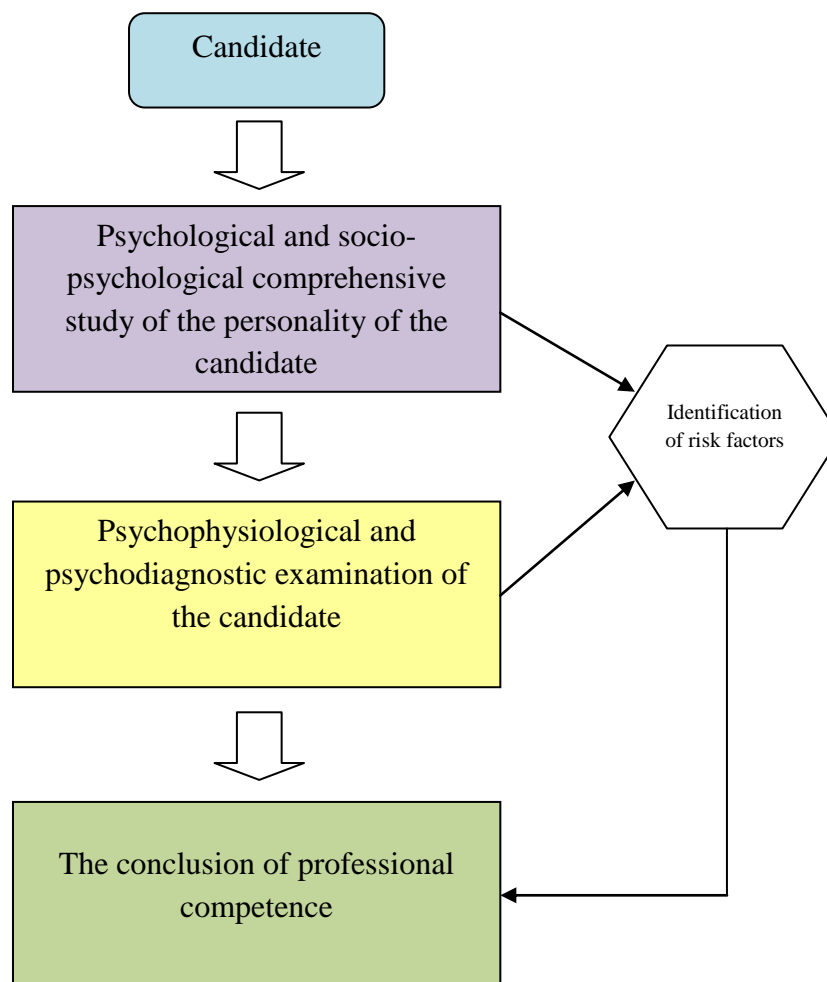
Abstract: One of the tasks of professional selection in force structures is to identify a candidate's "risk factors", the presence of which makes impossible to adopt a candidate for the service. One of these factors is the mental instability and tendency to commit ordinary crimes, as well as different types of addiction and suicidal risks. It was revealed that persons, who have committed certain crimes listed above, possess similar characteristics of the psychological profile based on adapted MMPI-test data. In this way it seems appropriate to include MMPI in the test battery of the psychodiagnostical examination of candidates at force structures.

Key words: *professional psychological selection, risk factors, ordinary crimes, addictions, MMPI-test, symptom complex.*

1. Introduction.

In the center of any professional activities there is a person with individual psychological characteristics and, on another hand, possible behavioral deviations. It is a very serious problem for the structures where personnel are enforced with service weapon. A possible solution is to organize effective professional psychological selection system that will afford to identify "risk factors", the presence of those makes impossible to adopt a candidate for the service. In general, professional psychological selection is a set of measures that ensure the efficient selection of candidates by assessing individual psychological and psychophysiological qualities of their personality.

This set of measures can be presented in a generalized form: 1 - psychological and socio-psychological comprehensive study of the personality of the candidate, 2 - psychophysiological and psychodiagnostic examination of the candidate, 3 - the conclusion of professional competence in the particular specialty. (Pic.1.)



Pic. 1 – Generalized scheme of professional psychological selection.

Basing on the conclusion of professional competence, a candidate may be accepted, or denied on stage of selection. Obvious advantage is that in case of presence of risk factors, the candidate will not be allowed to hold the weapon. Related accidents will be prevented even before the emergence.

As serious risk factors we see:

- propensity to commitment of ordinary crimes;

- different kinds of addictions;
- propensity to suicidal actions.

2. Description of research

We studied a research of Yu. Antonyan, M. Yenikev and V. Eminov (Ministry for interior of Russia), that was conducted with persons who have committed criminal offenses, such as murder and grievous bodily harm, robbery, rape and theft.

This contingent (over 300 people) was studied using the technique of multilateral study of personality (adapted MMPI with 13 scales: 3 - valuation, 10 - core).

Valuation:

- Scale L (false) "measures" the desire to look in a more favorable light;
- Scale F (reliability) allows in addition to assessing the reliability of the data to assess the mental state (satisfaction with the situation, and so on), the degree of adaptation;
- Scale K (correction) enables you to differentiate individuals seeking to soften or hide certain character traits to identify the level of social experience, knowledge of social norms.

Core:

- 1 (somatization of anxiety) reveals concern for their health;
- 2 (depression) - anxiety disorders, loss of interest in things, depression and so on;
- 3 (demonstrative hysteroidity) - a tendency to hysterical reactions or demonstrative behavior;
- 4 (impulsivity) - a tendency to act on the first impulse, under the influence of emotions and so on;
- 5 (masculinity-femininity) - expressions of traditional male or female character traits;
- 6 (rigidity) - penchant for suspicion, rancor, increased sensitivity in interpersonal relationships;
- 7 (alarm) - occurrence of anxiety reactions, fixation of anxiety and restrictive behavior;
- 8 (isolation) - the tendency to comply with psychic distance between themselves and the world around them, withdrawal;
- 9 (activity) - the overall level of activity, the presence of optimism or pessimism;
- 0 (social contacts) - the difficulty of implementation of social contacts, isolation.

It was revealed that persons, who have committed certain crimes listed above, possess similar characteristics of the psychological profile based on MMPI data. Having compiled and analyzed the results of the study, we identified the "symptom complexes" of psychological factors of persons who are likely to commit criminal offenses.

For easy interpretation and comparison of different profiles, evaluation of the data is made in T-scores (from 20 to 120. The normative profile is within 0-65 T-scores. The scales having peaks within 65-75 T-scores indicate the presence of accentuation; and more than 75 - neuroses, reactive states or psychopathy).

3. Main results

3.1. Murderers

Murderers (and persons who have committed grievous bodily harm) show symptom, which is determined primarily by the peaks on scales F, 3, 6 8. Murderers compared with all other groups of criminals showed the best results on the scales of 3, 5, 0.

Their behavior is determined by "affectively charged ideas," implemented in certain situations under certain conditions.

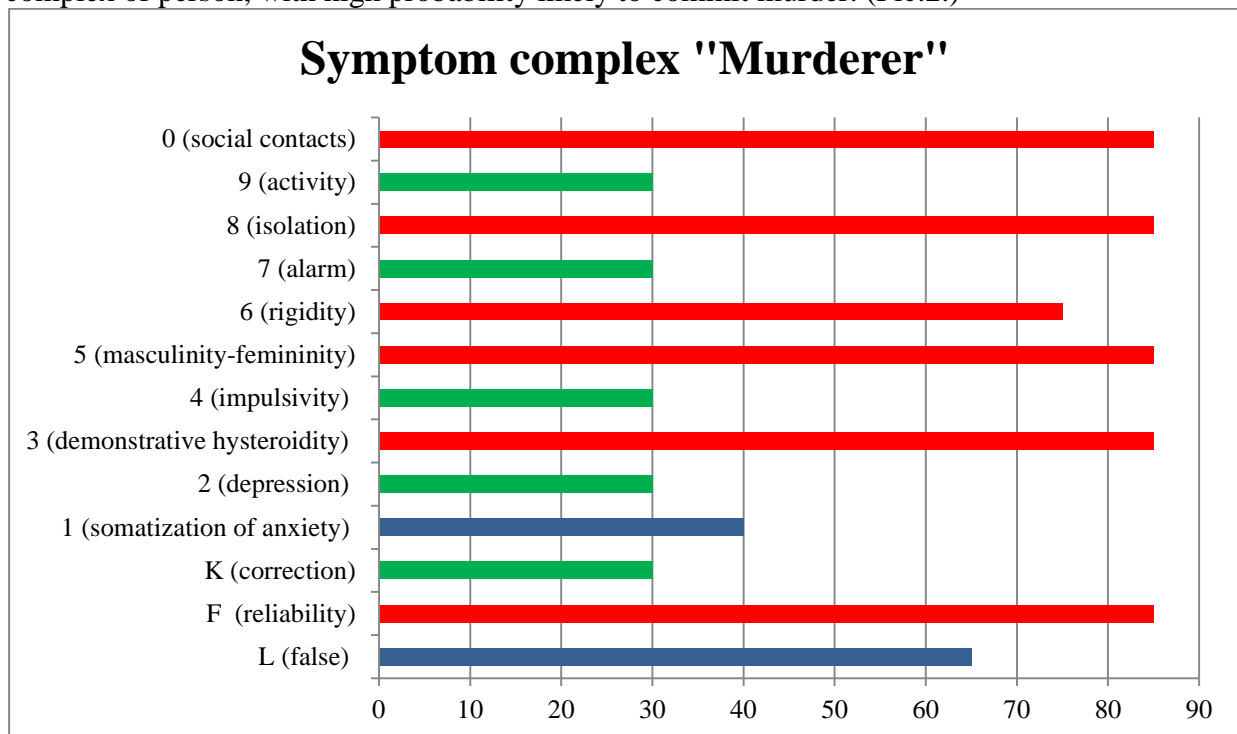
These people are very "sensitive to the elements of interpersonal interaction" suspicious, hostile to the environment. More often they have an inadequate assessment of the situation because it is easy to change in the heat of passion. Because of the increased sensitivity to elements of interpersonal interaction, this type is easily irritated at the minimum level of tension in social contact.

This type often shows increased stability of ideas - if they have opinion about someone or something, then it is difficult to re-convince. Any difficulties and troubles are interpreted as the result of hostile opposition from the environment, in personal failures are blamed other people. Most sensitive to infringement of personal dignity and honor, such people often have elevated self-consciousness of their value.

Peaks on scales F and 8 indicate the presence of emotional disorders, social exclusion, and difficulty in assimilation of the moral and legal norms. Committing the crime, that person does not want to see any other way to resolve the conflict. Committing an act of violence, such a person believes that he thereby protect himself, his honor or the interests of others. A distinctive feature of the murderers - excessive resistance of passion, reaction of "short circuit" (increasing scale 3).

To the greatest degree murderer tends to look in the best light. He attaches great importance to the opinion of others about themselves, situations that arise in interpersonal contacts (increasing scale 3 and 5, and the relatively high value of the scale L). Murderer is more closed and uncommunicative, making more difficult interpersonal relationships and contributing to conflict (high value on the scale 0).

Basing on these data, using the package MS Excel we depicted a generalized symptom complex of person, with high probability likely to commit murder. (Pic.2.)



Pic. 2 – Generalized symptom complex «Murderer».

3.2. *Selfish-violent criminals (robbers)*

For this category of persons we can see peaks on the scales F, 4, 6, 8, 9. These people are characterized by impulsive behavior, disregarded social norms, increased aggressiveness. Increasing the scale 6 reinforces aggressive behavior by enhancing affective state. Peak 8 on the scale shows a significant alienation from others, it reduces the possibility of an adequate

assessment of the situation. The rise of the scale 9 (raising the overall level of activity) leads to the fact that a characteristic feature of the behavior becomes impulsivity, suddenly aggressive behavior may occur. Such antisocial behavior becomes a permanent line. There are difficulties in the assimilation of moral and legal norms, their neglecting. Selfish -violent criminals are determined by the trend for the immediate satisfaction of emerging needs and desires, by violation of the normative regulation of behavior, weakening intellectual and volitional control. This category has the greatest need for self-affirmation, and the lowest intellectual level (low scale value K).

Basing on these data, using the package MS Excel we depicted a generalized symptom complex of person, with high probability likely to commit selfish - violent crimes. (Pic.3.)



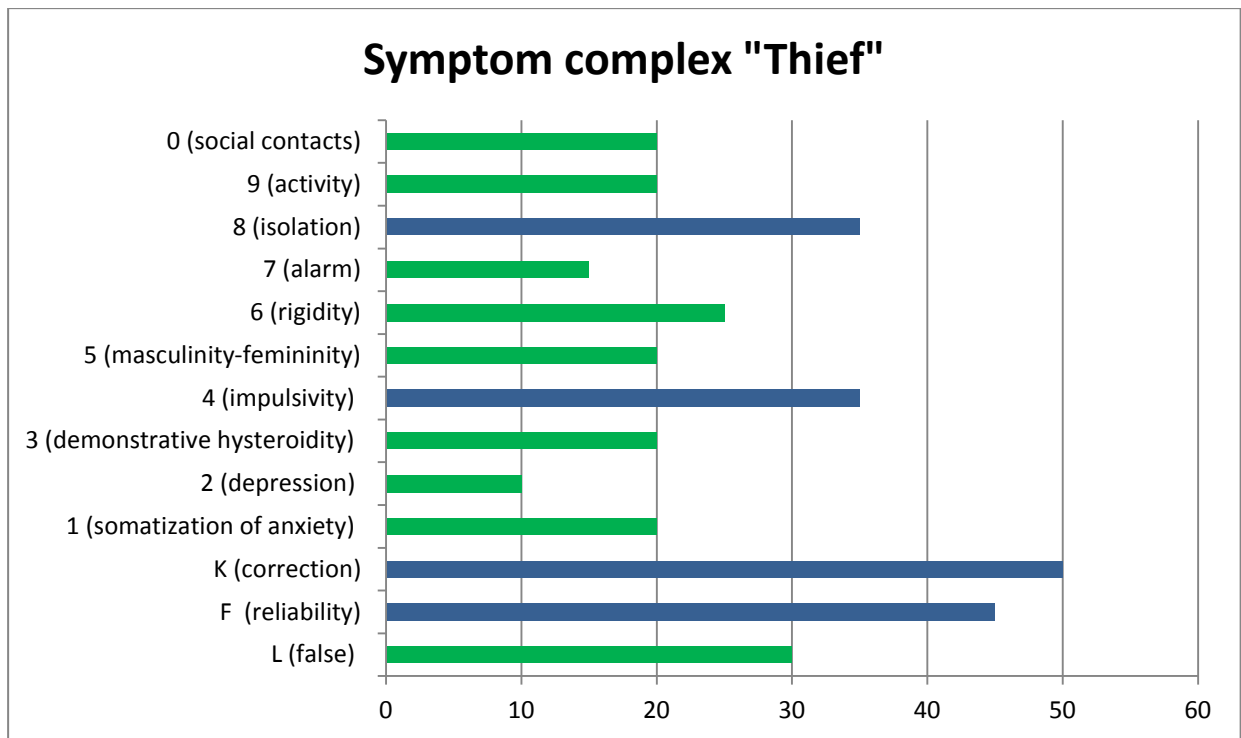
Pic. 3 – Generalized symptom complex «Selfish -violent criminal».

3.3. Thieves

Profile of thieves is similar to the profile of selfish-violent criminals (peaks on scales F, 4, 6, 8, 9), but their profiles are the lowest of all surveyed categories, that may indicate a lesser severity of their respective personality traits. From selfish-violent criminals thieves differs by a marked decline on the scales F, 4, 6, 7, 8, 9 and the rise of the scale K (correction). Such persons are more socially adapted, less impulsive and rigid; have less resistance affect, less anxious and aggressive. They are better able to control their behavior, which is characterized by flexibility, confidence to make decisions (reduced scale 7). And if the behavior of murderers is caused by the often affective ideas and misunderstood social norms and requirements, and the behavior of selfish-violent criminals lies in impulsivity and difficulties in the assimilation of social norms, the thieves have relatively good attitude to these rules, but, nevertheless, possess their internal rejection and conscious violation.

Such persons have a relatively low level of anxiety (low value on the scale 2). At the same time, they have well-developed communication skills and seek to interpersonal contacts (reduced scores on scale 0). They are socially adapted, have characteristic reactions of self-blame for past antisocial actions (relatively low values on the scale 2, 6, 7, 8, 0).

Basing on these data, using the package MS Excel we depicted a generalized symptom complex of person, with high probability likely to commit theft. (Pic.4.)

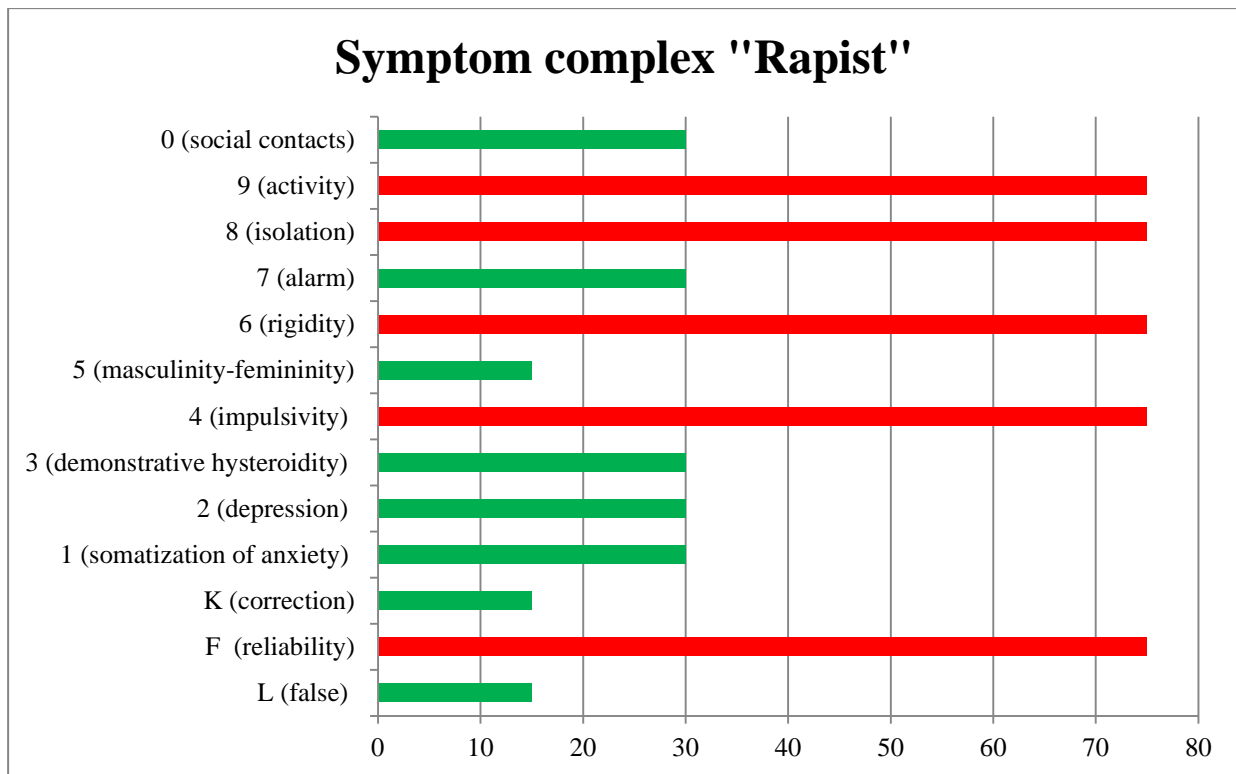


Pic. 4 – Generalized symptom complex «Thief».

3.4. Rapists

Profile of this category of persons is similar to other types of criminals, but has low scale value L and 5. This may indicate the presence of such properties as the tendency to dominate and achieve the goal, reducing sensitivity to other people, underlining its strength and masculinity, disregard for detail. This is evidenced by the nature of the crime, which largely reflects the desire to assert them in the male role. Intelligent control of behavior is low as well as that of the selfish and violent criminals (low levels of scale K).

Basing on these data, using the package MS Excel we depicted a generalized symptom complex of person, with high probability likely to commit rape. (Pic.5.)



Pic. 5 – Generalized symptom complex «Rapist».

So, it seems appropriate to include MMPI in the test battery of the psychodiagnosical examination of candidates at force structures. The data obtained, in addition to the use for the conclusion of professional competence, can be processed in MS Excel, the resulting psychological profile and interpretation can be compared with the description of a group of persons who have committed ordinary crimes. If there are suspicions, it is necessary to conduct a survey for additional diagnostics instruments.

3.5. Detection of addiction

Addictive (dependent) behavior is an attempt to escape from reality by changing the mental state, which provides an imaginary security and emotional comfort.

Despite the apparent differences in appearance, addictive behaviors have fundamentally similar psychological mechanisms. In connection with this we can identify common signs of addictive behavior.

First of all, dependent behavior of the person is manifested in its quest for sustainable change of psychophysical condition. This desire is experienced by man as impulse-categorical, irresistible, and insatiable. Outwardly it may seem like a struggle with himself, and often - as a loss of self-control.

By using modern psychodiagnosical tools (for example, method of G. Lozovaya) we can identify propensity to 13 types of addictions:

1. Alcohol addiction.
2. Internet and computer addiction.
3. Love addiction.
4. Drug addiction.
5. Compulsive gambling.
6. Nicotine addiction.
7. Food addiction.
8. Addiction to sexual relations.
9. Workaholism.

10. Television addiction.
11. Religious addiction.
12. Addiction to a healthy lifestyle.
13. Pharmaceutical addiction.
14. General tendency to addiction.

3.6. Detection of suicidal risks

Armed personnel of force structures can use weapon for committing suicide, which can create a serious breach in security system. To avoid this risk, we can use method "SR-45" to identify the propensity to suicidal reactions. Examinees are asked to answer 45 questions, with serial numbering from 1 to 45. The answers are recorded on a form used in the survey, with indexation "yes" if the answer is yes, and "No" if the answer is no. Questions are adequate to suicidal manifestations. Using these questions and allegations as an additional stimulus of the material allows the survey to identify persons who have the propensity to suicidal reactions, and form one group of risk.

4. Conclusion

The results of conducted research revealed possibility of early detection of such risk factors in professional selection, as tendency to commit ordinary crimes, as well as different types of addiction and suicidal risks. It is highly recommended to take this data to consideration, especially for professional selection in force structures, where daily duties are connected with holding and using different kinds of weapon.

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**E.V. Andreevsky, Saint-Petersburg state electrotechnic university “LETI”,
eliseyandreevsky@mail.ru**

**M.A. Akhmedkhanov, Leningrad state university named after A.S. Pushkin,
murad66687@mail.ru**

**Yu. V. Daneykin, National research Tomsk polytechnic university,
daneykin@tpu.ru**

Improvement of the reliability of force structures personnel by effective professional selection

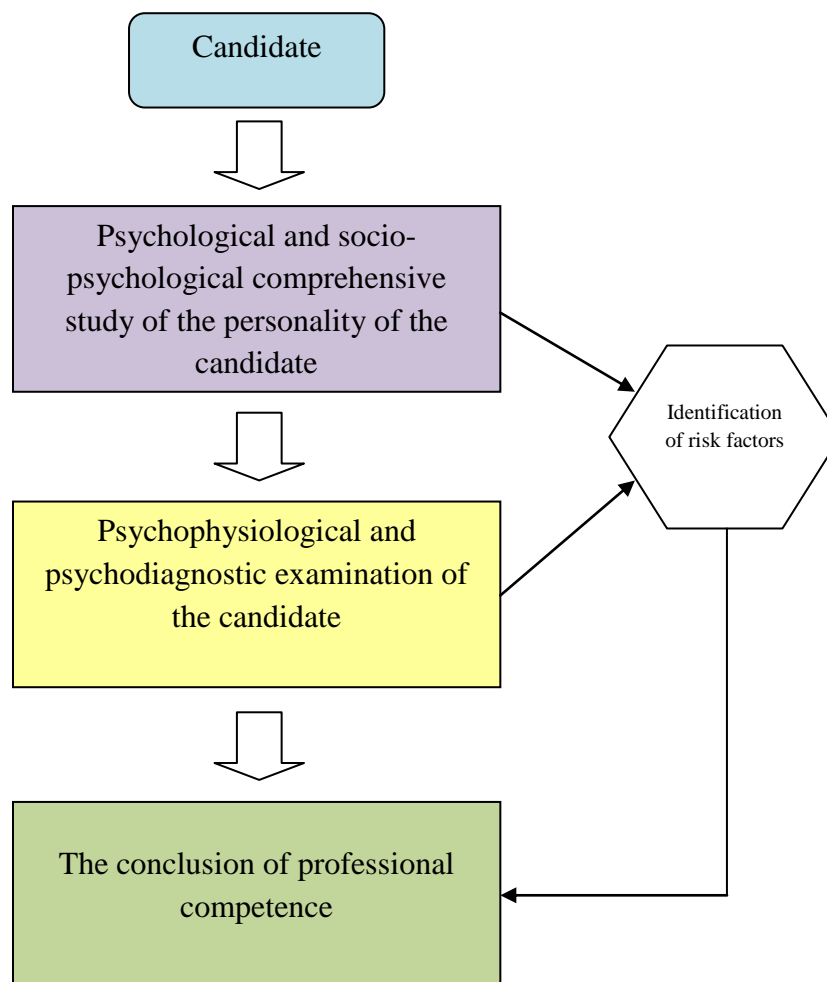
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This set of measures can be presented in a generalized form: 1 - psychological and socio-psychological comprehensive study of the personality of the candidate, 2 - psychophysiological and psychodiagnostic examination of the candidate, 3 - the conclusion of professional competence in the particular specialty. (Pic.1.)



Pic. 1 – Generalized scheme of professional psychological selection.

Basing on the conclusion of professional competence, a candidate may be accepted, or denied on stage of selection. Obvious advantage is that in case of presence of risk factors, the candidate will not be allowed to hold the weapon. Related accidents will be prevented even before the emergence.

As serious risk factors we see:

- propensity to commitment of ordinary crimes;

- different kinds of addictions;
- propensity to suicidal actions.

2. Description of research

We studied a research of Yu. Antonyan, M. Yenikev and V. Eminov (Ministry for interior of Russia), that was conducted with persons who have committed criminal offenses, such as murder and grievous bodily harm, robbery, rape and theft.

This contingent (over 300 people) was studied using the technique of multilateral study of personality (adapted MMPI with 13 scales: 3 - valuation, 10 - core).

Valuation:

- Scale L (false) "measures" the desire to look in a more favorable light;
- Scale F (reliability) allows in addition to assessing the reliability of the data to assess the mental state (satisfaction with the situation, and so on), the degree of adaptation;
- Scale K (correction) enables you to differentiate individuals seeking to soften or hide certain character traits to identify the level of social experience, knowledge of social norms.

Core:

- 1 (somatization of anxiety) reveals concern for their health;
- 2 (depression) - anxiety disorders, loss of interest in things, depression and so on;
- 3 (demonstrative hysteroidity) - a tendency to hysterical reactions or demonstrative behavior;
- 4 (impulsivity) - a tendency to act on the first impulse, under the influence of emotions and so on;
- 5 (masculinity-femininity) - expressions of traditional male or female character traits;
- 6 (rigidity) - penchant for suspicion, rancor, increased sensitivity in interpersonal relationships;
- 7 (alarm) - occurrence of anxiety reactions, fixation of anxiety and restrictive behavior;
- 8 (isolation) - the tendency to comply with psychic distance between themselves and the world around them, withdrawal;
- 9 (activity) - the overall level of activity, the presence of optimism or pessimism;
- 0 (social contacts) - the difficulty of implementation of social contacts, isolation.

It was revealed that persons, who have committed certain crimes listed above, possess similar characteristics of the psychological profile based on MMPI data. Having compiled and analyzed the results of the study, we identified the "symptom complexes" of psychological factors of persons who are likely to commit criminal offenses.

For easy interpretation and comparison of different profiles, evaluation of the data is made in T-scores (from 20 to 120. The normative profile is within 0-65 T-scores. The scales having peaks within 65-75 T-scores indicate the presence of accentuation; and more than 75 - neuroses, reactive states or psychopathy).

3. Main results

3.1. Murderers

Murderers (and persons who have committed grievous bodily harm) show symptom, which is determined primarily by the peaks on scales F, 3, 6 8. Murderers compared with all other groups of criminals showed the best results on the scales of 3, 5, 0.

Their behavior is determined by "affectively charged ideas," implemented in certain situations under certain conditions.

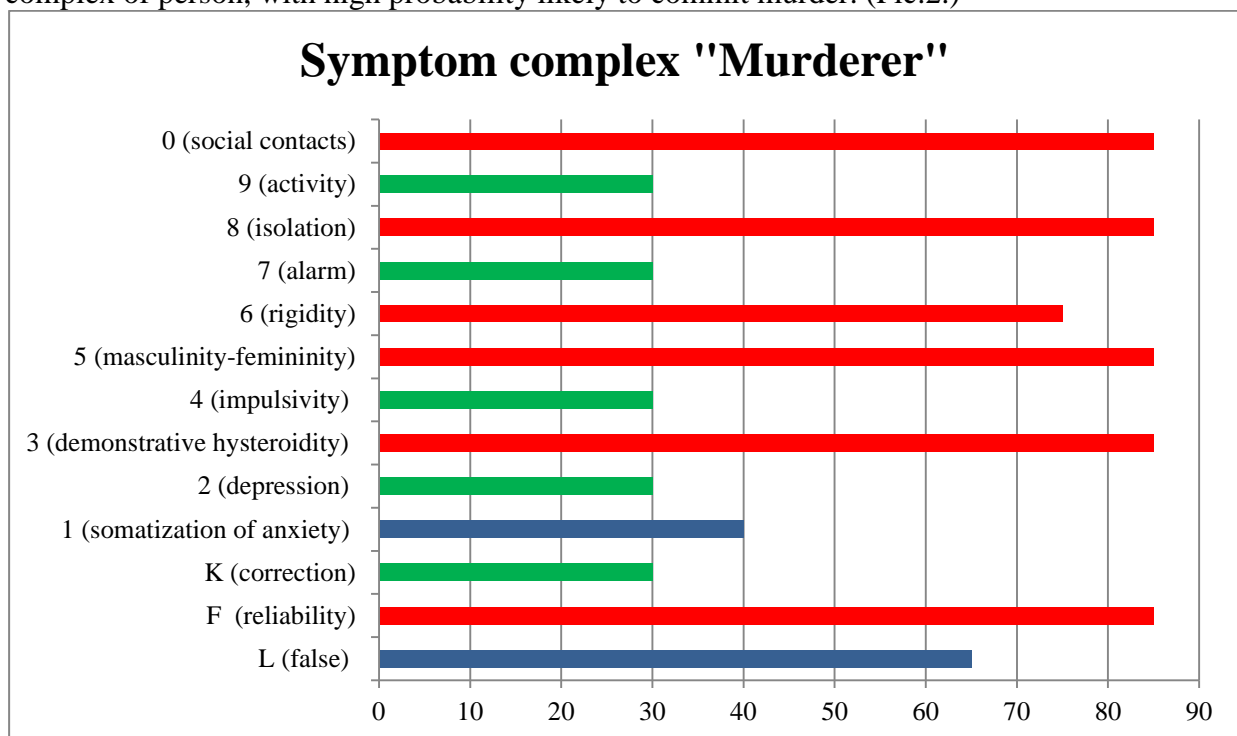
These people are very "sensitive to the elements of interpersonal interaction" suspicious, hostile to the environment. More often they have an inadequate assessment of the situation because it is easy to change in the heat of passion. Because of the increased sensitivity to elements of interpersonal interaction, this type is easily irritated at the minimum level of tension in social contact.

This type often shows increased stability of ideas - if they have opinion about someone or something, then it is difficult to re-convince. Any difficulties and troubles are interpreted as the result of hostile opposition from the environment, in personal failures are blamed other people. Most sensitive to infringement of personal dignity and honor, such people often have elevated self-consciousness of their value.

Peaks on scales F and 8 indicate the presence of emotional disorders, social exclusion, and difficulty in assimilation of the moral and legal norms. Committing the crime, that person does not want to see any other way to resolve the conflict. Committing an act of violence, such a person believes that he thereby protect himself, his honor or the interests of others. A distinctive feature of the murderers - excessive resistance of passion, reaction of "short circuit" (increasing scale 3).

To the greatest degree murderer tends to look in the best light. He attaches great importance to the opinion of others about themselves, situations that arise in interpersonal contacts (increasing scale 3 and 5, and the relatively high value of the scale L). Murderer is more closed and uncommunicative, making more difficult interpersonal relationships and contributing to conflict (high value on the scale 0).

Basing on these data, using the package MS Excel we depicted a generalized symptom complex of person, with high probability likely to commit murder. (Pic.2.)



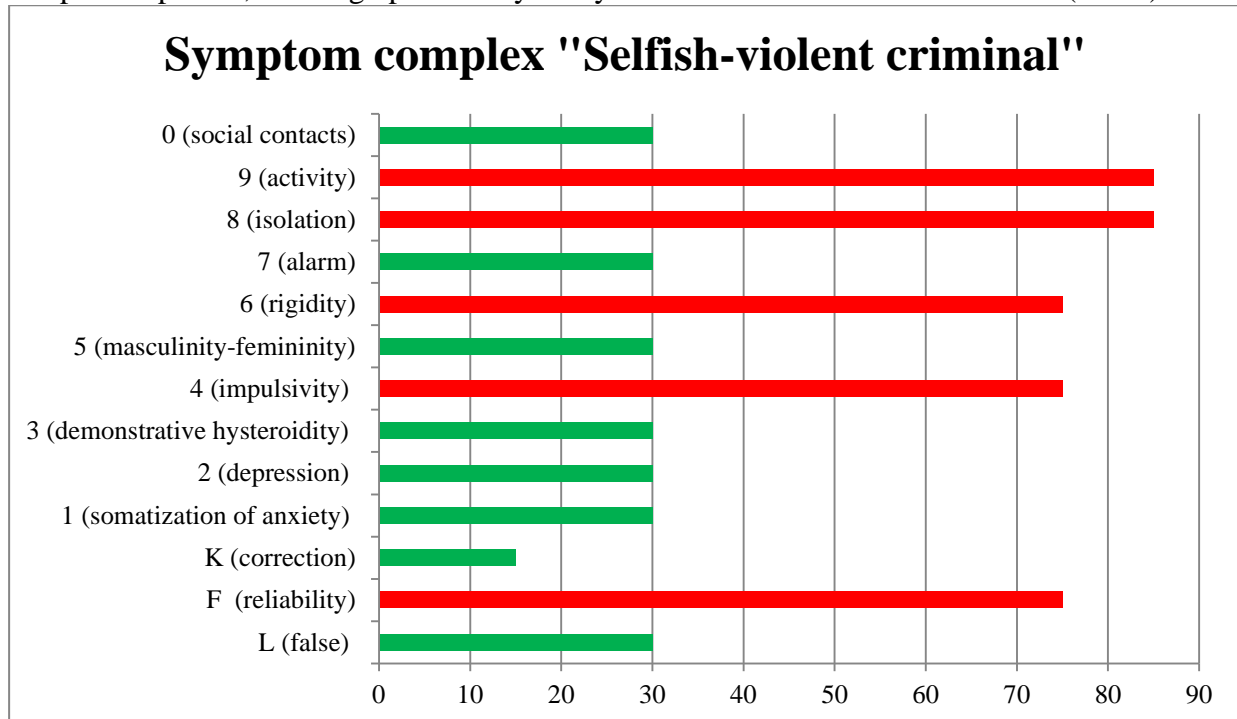
Pic. 2 – Generalized symptom complex «Murderer».

3.2. *Selfish-violent criminals (robbers)*

For this category of persons we can see peaks on the scales F, 4, 6, 8, 9. These people are characterized by impulsive behavior, disregarded social norms, increased aggressiveness. Increasing the scale 6 reinforces aggressive behavior by enhancing affective state. Peak 8 on the scale shows a significant alienation from others, it reduces the possibility of an adequate

assessment of the situation. The rise of the scale 9 (raising the overall level of activity) leads to the fact that a characteristic feature of the behavior becomes impulsivity, suddenly aggressive behavior may occur. Such antisocial behavior becomes a permanent line. There are difficulties in the assimilation of moral and legal norms, their neglecting. Selfish -violent criminals are determined by the trend for the immediate satisfaction of emerging needs and desires, by violation of the normative regulation of behavior, weakening intellectual and volitional control. This category has the greatest need for self-affirmation, and the lowest intellectual level (low scale value K).

Basing on these data, using the package MS Excel we depicted a generalized symptom complex of person, with high probability likely to commit selfish - violent crimes. (Pic.3.)



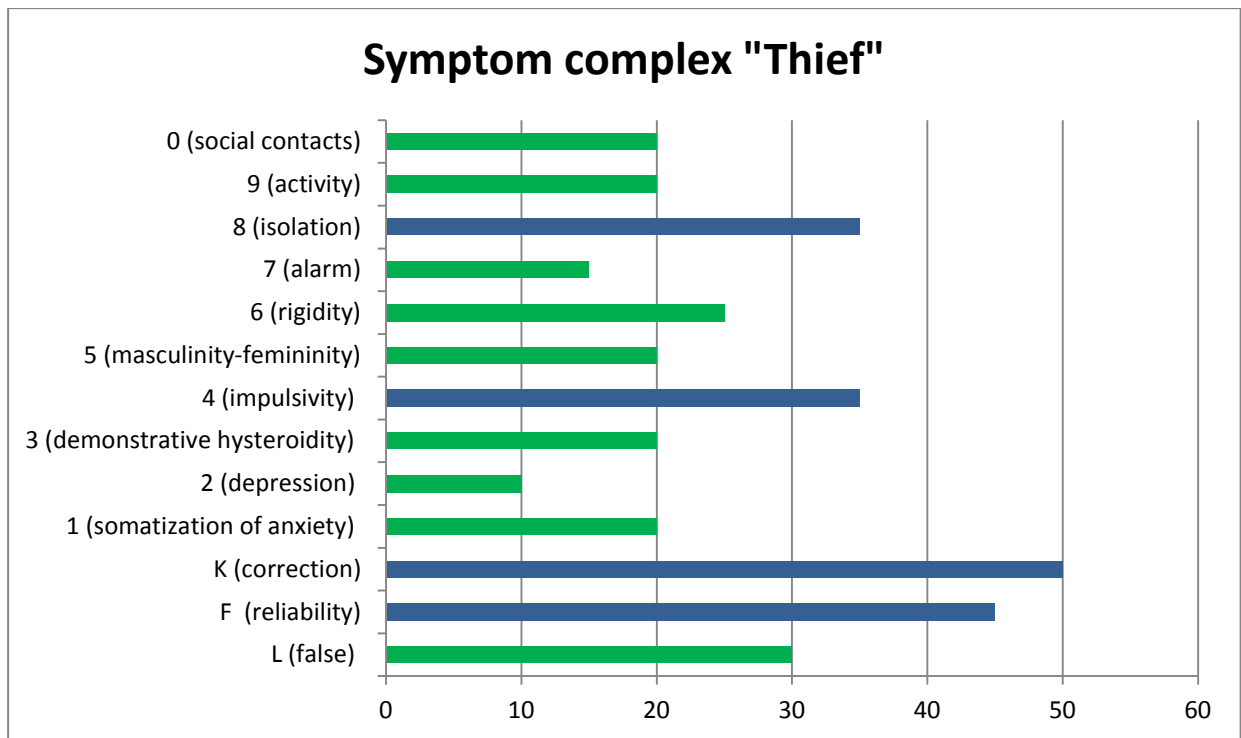
Pic. 3 – Generalized symptom complex «Selfish -violent criminal».

3.3. Thieves

Profile of thieves is similar to the profile of selfish-violent criminals (peaks on scales F, 4, 6, 8, 9), but their profiles are the lowest of all surveyed categories, that may indicate a lesser severity of their respective personality traits. From selfish-violent criminals thieves differs by a marked decline on the scales F, 4, 6, 7, 8, 9 and the rise of the scale K (correction). Such persons are more socially adapted, less impulsive and rigid; have less resistance affect, less anxious and aggressive. They are better able to control their behavior, which is characterized by flexibility, confidence to make decisions (reduced scale 7). And if the behavior of murderers is caused by the often affective ideas and misunderstood social norms and requirements, and the behavior of selfish-violent criminals lies in impulsivity and difficulties in the assimilation of social norms, the thieves have relatively good attitude to these rules, but, nevertheless, possess their internal rejection and conscious violation.

Such persons have a relatively low level of anxiety (low value on the scale 2). At the same time, they have well-developed communication skills and seek to interpersonal contacts (reduced scores on scale 0). They are socially adapted, have characteristic reactions of self-blame for past antisocial actions (relatively low values on the scale 2, 6, 7, 8, 0).

Basing on these data, using the package MS Excel we depicted a generalized symptom complex of person, with high probability likely to commit theft. (Pic.4.)

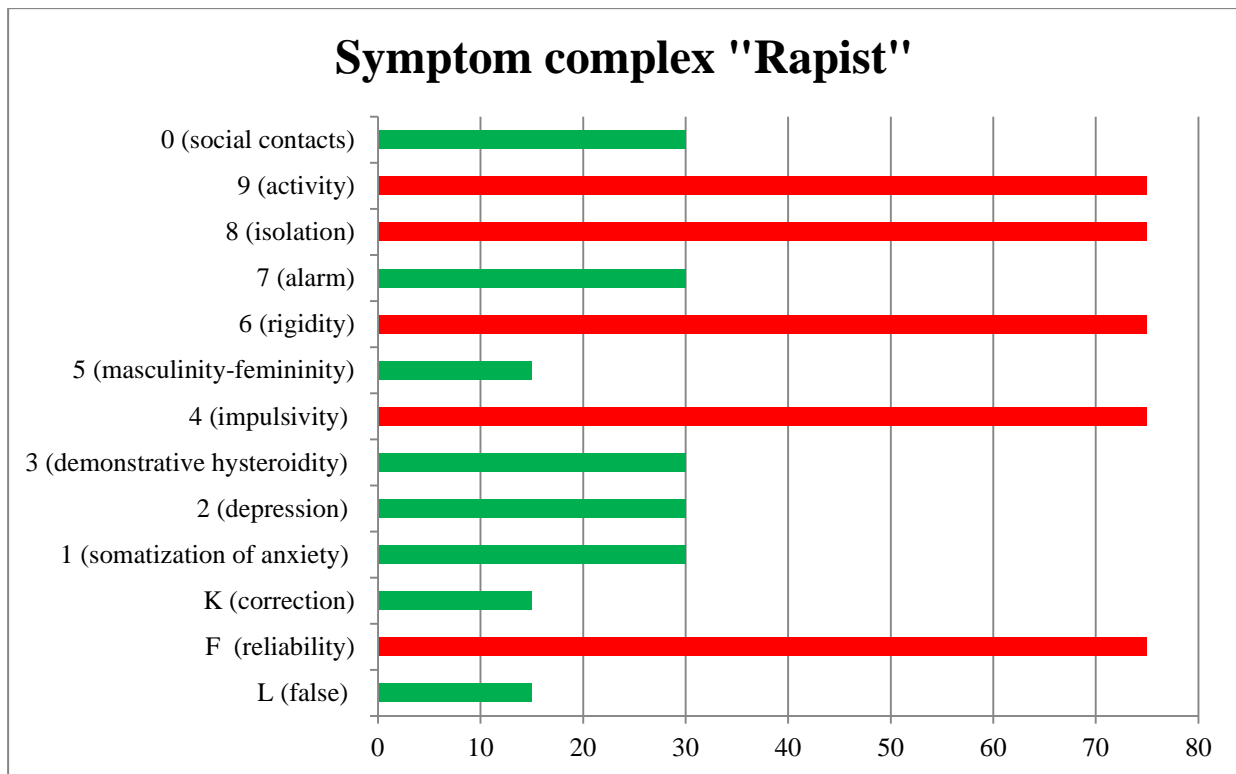


Pic. 4 – Generalized symptom complex «Thief».

3.4. Rapists

Profile of this category of persons is similar to other types of criminals, but has low scale value L and 5. This may indicate the presence of such properties as the tendency to dominate and achieve the goal, reducing sensitivity to other people, underlining its strength and masculinity, disregard for detail. This is evidenced by the nature of the crime, which largely reflects the desire to assert them in the male role. Intelligent control of behavior is low as well as that of the selfish and violent criminals (low levels of scale K).

Basing on these data, using the package MS Excel we depicted a generalized symptom complex of person, with high probability likely to commit rape. (Pic.5.)



Pic. 5 – Generalized symptom complex «Rapist».

So, it seems appropriate to include MMPI in the test battery of the psychodiagnosical examination of candidates at force structures. The data obtained, in addition to the use for the conclusion of professional competence, can be processed in MS Excel, the resulting psychological profile and interpretation can be compared with the description of a group of persons who have committed ordinary crimes. If there are suspicions, it is necessary to conduct a survey for additional diagnostics instruments.

3.5. Detection of addiction

Addictive (dependent) behavior is an attempt to escape from reality by changing the mental state, which provides an imaginary security and emotional comfort.

Despite the apparent differences in appearance, addictive behaviors have fundamentally similar psychological mechanisms. In connection with this we can identify common signs of addictive behavior.

First of all, dependent behavior of the person is manifested in its quest for sustainable change of psychophysical condition. This desire is experienced by man as impulse-categorical, irresistible, and insatiable. Outwardly it may seem like a struggle with himself, and often - as a loss of self-control.

By using modern psychodiagnosical tools (for example, method of G. Lozovaya) we can identify propensity to 13 types of addictions:

1. Alcohol addiction.
2. Internet and computer addiction.
3. Love addiction.
4. Drug addiction.
5. Compulsive gambling.
6. Nicotine addiction.
7. Food addiction.
8. Addiction to sexual relations.
9. Workaholism.

10. Television addiction.
11. Religious addiction.
12. Addiction to a healthy lifestyle.
13. Pharmaceutical addiction.
14. General tendency to addiction.

3.6. Detection of suicidal risks

Armed personnel of force structures can use weapon for committing suicide, which can create a serious breach in security system. To avoid this risk, we can use method "SR-45" to identify the propensity to suicidal reactions. Examinees are asked to answer 45 questions, with serial numbering from 1 to 45. The answers are recorded on a form used in the survey, with indexation "yes" if the answer is yes, and "No" if the answer is no. Questions are adequate to suicidal manifestations. Using these questions and allegations as an additional stimulus of the material allows the survey to identify persons who have the propensity to suicidal reactions, and form one group of risk.

4. Conclusion

The results of conducted research revealed possibility of early detection of such risk factors in professional selection, as tendency to commit ordinary crimes, as well as different types of addiction and suicidal risks. It is highly recommended to take this data to consideration, especially for professional selection in force structures, where daily duties are connected with holding and using different kinds of weapon.

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**Arenkov I.A., Doctor of Economic Sciences,
Professor of Marketing Department in St.Petersburg State University of Economics
igorarenkov@gmail.com**

**Salikhova I. Y., PhD
Assoc. Prof. of Marketing Department in St. Petersburg State University of Economics
yana.salichova@mail.ru**

**Yaburova D.V., post graduate student of St. Petersburg State University
d.yaburova@gmail.com**

Competitiveness factors of retail companies in the emerging markets

Annotation: The modern development of emerging markets makes organizations find the ways of enhancing their competitiveness. While the issues of sources of attaining competitive advantages and competitiveness assessment have been widely discussed by numerous researchers, there is a paucity of studies pertaining to the impact of different factors on developing retail company competitiveness under conditions of emerging markets. Therefore, this paper aims to investigate the main factors affecting the company competitiveness and examine the impact of intellectual capital and intangible assets on it.

Keywords: *intellectual capital, competitive advantage, retail companies, multiple-case study*

Introduction

The retail sector is one of the essential sectors for the Russian economy. It has an important role to play in stimulating growth and job creation in the internal market, and enhancing the standard of living. The efficiency of this sector has implications for innovation, price trends and competitiveness.

The year 2013 was relatively successful for FMCG retail trade, new stores were opened, chains continued their expansion, having entered the regions that were new for them. However the economic situation began to deteriorate and in 2014 political risks of the industry increased. Retail Sales in Russia decreased 9.20 percent in July of 2015 over the same month in the previous year reported by the Federal State Statistics Service. However, in recent years the nature of competition and shifting economic conditions have given rise to achieving the retail company competitiveness by developing not only tangible assets but also intangible including intellectual capital. In this paper we try to examine the factors affecting the competitiveness of companies engaged in retail trade. An exploratory field study utilizing an inductive methodology involving a multiple-case study approach was undertaken by conducting in-depth interviews with 10 key top-managers of retail companies in Saint Petersburg in the period of April-June 2015. As the present and also future success of a company is largely predetermined by the conditions in which the company exists, the interview included open questions concerning factors of both internal and external environment. We utilized content analysis techniques to identify these factors with their associated variables and further developed a research model. This study offers a comprehensive model for future competitiveness research and provides managerial implications for organizations to enhance their competitiveness.

1. Research method

Sample selection

To conduct the survey available subjects from retail companies in Saint Petersburg were chosen. The main criterion for respondents was that they must be aware about the company concepts, corporate strategy, personnel, motivation, relationships with partners, financial results. They are the representatives of top-management such as CEO, owner of business, head of retail department and so on. All companies belong to the retail trade, and they differ by the type of product.

All interviews were conducted on a voluntary basis of participants.

Data collection

The data were collected by using in-depth interviews approach.

The main aim of the survey was to identify factors and variables affecting the company competitiveness in the conditions of development of intellectual competition.

The questionnaire included questions focused on the following areas (Appendix 1):

- understanding the significance of being competitive;
- competitive factors of foreign and domestic retail companies;
- external factors that determine the company competitiveness on macro level;
- external factors that determine the company competitiveness on micro level;
- internal factors that determine the company competitiveness.

Before conducting all interviews, the questionnaire was pre-tested on the first respondent's answers. Received feedback from the first respondents proved that the questionnaire was working well for purposes of the survey. Finally, 10 interviews were conducted. The interviews were audio taped and then transcribed. All texts were reviewed for errors by the principal researcher in order not to miss mistakes for further content analysis.

Data analysis

Data analysis was conducted with the program of content-analysis. As Patton (1990) reported, ‘Content analysis is the process of identifying, coding, and categorizing the primary patterns in the data. This means analyzing the content of interviews and observations’.

The procedure of content analysis was divided into two stages.

The first stage dealt with identification of mentioned variables and included the following steps:

- check the content of interviews with correspondence with the program;
- download the data into the program;
- identify the words with the function “analysis” in the program;
- correct groups of similar words formed by the program considering peculiarities of the Russian language (different endings of the same word);
- sort words by the absolute value of the frequency of mentioning;
- sum frequencies of mentioning words in all interviews.

The second stage of content analysis dealt with the identification of factors with their associated variables influencing the retail companies competitiveness in order to develop a research model. This stage included the following steps:

- study the variables;
- divide variables into systematic categories of factors;
- name factors;
- check the names of the factors with the literature and give new names if necessary;
- sort variables by the factors, combining variables with different wording, but with one meaning;
- establish the tables of integrated factors and variables.

2. Results

Background information

Table 1 shows the background information about the retail companies involved in this survey.

The interviewees take in the retail companies positions such as CEO, Director of marketing and Commercial director. And their competences afford to gather necessary information for the purpose of the research.

The number of employees in the retail companies varies from 30 to over 4000.

The retail companies differ by the type of product – from clothes and jewelry to products for home and building materials (DIY).

Table 1
Background information of the interviews

Company	A	B	C	D	E	F	G	H	I	J
Age	40	43	38	47	42	32	41	45	35	53
Position of interviewee	CEO	Director of marketing	Director of the retail network	CEO	CEO	CEO	Commercial director	Head of Sales Department	Top manager of the store	CEO
Tenure of interviewee in the enterprise, years	5	10	8	10	7	11	15	16	9	20

Type of product	products for home and garden	building materials (DIY)	electric tools, tools for home appliances, auto products	luxury items, jewelry	products for home	bikes and bike accessories	clothes	shoes, clothes	shoes, clothes, accessories	building materials (DIY)
Education	higher education	two higher education	two higher education	two higher education	higher education	higher education	higher education	higher education	higher education	higher education
Gender of interviewee	male	female	male	male	male	male	female	male	female	male

All companies are federal and work around all country. The number of employees varies from 100 to 400.

Procedure No 1. Frequency of mentioning

According to the step-by-step procedure described above, 158 significant words were identified. The words with the number of mentioning not less than 5 are presented in the table.

The table includes words with frequency of mentioning not less than 5. Further number of words with frequency of mentioning less than 5 greatly increases. For example, there are 13 words with frequency 4, 23 words with frequency 3, 35 words with frequency 2 and 41 words with frequency 1.

Analysis of mentioned words lets distinguish main spheres that managers put attention to.

As you can see the first places take words in the sphere of marketing like ‘price’, ‘goods’, ‘client’, ‘cost’, ‘service’ ‘quality’, ‘assortment’. ‘brand’.

Another sphere is dedicated to innovation and include words like ‘technologies’, ‘innovation’, ‘information’, ‘informative’.

Sphere of characteristics of personnel is also important and includes words like ‘personnel’, ‘qualification’, ‘education’, ‘training’.

Table 2
List of frequently mentioned significant words

Word	Sum of mentioning	Word	Sum of mentioning	Word	Sum of mentioning
level	22	production	11	relationship	7
price	22	effectiveness	11	rate	7
goods	21	company	10	qualification	6
personnel	20	condition	10	tax	6
technologies	20	product	9	education	6
client	15	process	9	training	6
politics	15	development	9	resources	6
speed	14	market	9	strategy	6
finance	14	availability	8	brand	5
business	13	innovation	8	currency	5
quality	13	credit	8	informative	5
assortment	12	service	8	competetiveness	5
ability	12	power	8	delivery	5
cost	12	attendance	8	sanctions	5
loyalty	11	information	7	demand	5
production	11	markeitng	7		

Some retail companies talked about production as they produce their own goods under private labels. That is why there are words like ‘production’, ‘standard’, ‘R&D’, ‘equipment’, ‘patents’, ‘raw materials’. These words are not presented in the table because they have frequency of mentioning less than 5.

It is important to notice, that there are the words connected with the economic crisis in 2014-2015 such as ‘crisis’, ‘sanctions’, ‘currency’, ‘politics’. Crisis worsened activity of companies that bought goods and equipment abroad.

Moreover, identified spheres correlate with the factors that were identified in the Procedure No 2.

Procedure No 2. Identification of factors and variables

Identification of factors and variables was conducted separately for internal and external environment.

As for internal environment, 7 factors and 35 variables were identified. Appendix 2 shows the list of variables identified in each factor. 7 variables were stated by more than 5 enterprises: ability of leaders to recruit talented staff, level and availability of technologies, speed of reaction and decision-making, providing managers with up-to-date information, staff motivation and KPI, training and staff development, terms of cooperation with partners.

As for external environment, 10 factors and 80 variables were identified. Factors and variables of external environment include aspects of activity of competitors. External factor ‘Environments’ includes political, economical, social and technological factors that influence company’s activity and cannot be changed by the company.

Appendix 3 shows the list of variables identified in each factor. 13 variables were mentioned by more than 5 respondents. Moreover, one variable ‘level and availability of technologies, IT’ was mentioned by all 10 respondents.

Both internal and external factors and variables include elements of intellectual capital. There are many opinions according to the structure of intellectual capital and its consisting elements. The most popular and most often used for practical purposes is classification of intellectual capital into 3 elements. According to Ruus, intellectual capital includes human capital, relational and structural capital (Ruus, 2010). We revealed typical elements of intellectual capital from internal and external environment (table 3).

Table 3
Elements of Intellectual capital affecting company competitiveness

Internal environment	External environment
Human capital	
<ul style="list-style-type: none"> • sanity • staff qualifications • staff motivation and KPI • training and staff development 	<ul style="list-style-type: none"> • speed of decision-making • level of thinking • creative approach • training and staff development
Structural capital	
<ul style="list-style-type: none"> • corporate culture • level and availability of technologies, IT 	<ul style="list-style-type: none"> • brand strength • level and availability of technologies, IT
Relational capital	

<ul style="list-style-type: none"> • communication with customers 	<ul style="list-style-type: none"> • reputation • style of working with clients • relationship between managers of wholesale and retail
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Most of the elements refer to human capital. It supports the idea that human capital is the main element of intellectual capital that influences and form relational and structural capital. Human capital is a link between company and partners and form the level and conditions of collaboration.

The importance of human capital can be proved with the frequency of mentioning of keywords. Thus, the word ‘personnel’ was mentioned 20 times, words connected with structural capital such as ‘technologies’, ‘innovation’, ‘brand’ were mentioned from 20 to 5 times, and elements of relational capital such as ‘loyalty’, ‘relationships’ have frequency of mentioning from 11 to 4.

Comprehensive model

Figure 1 shows a comprehensive model that describes relationships between the factors affecting the company competitiveness.

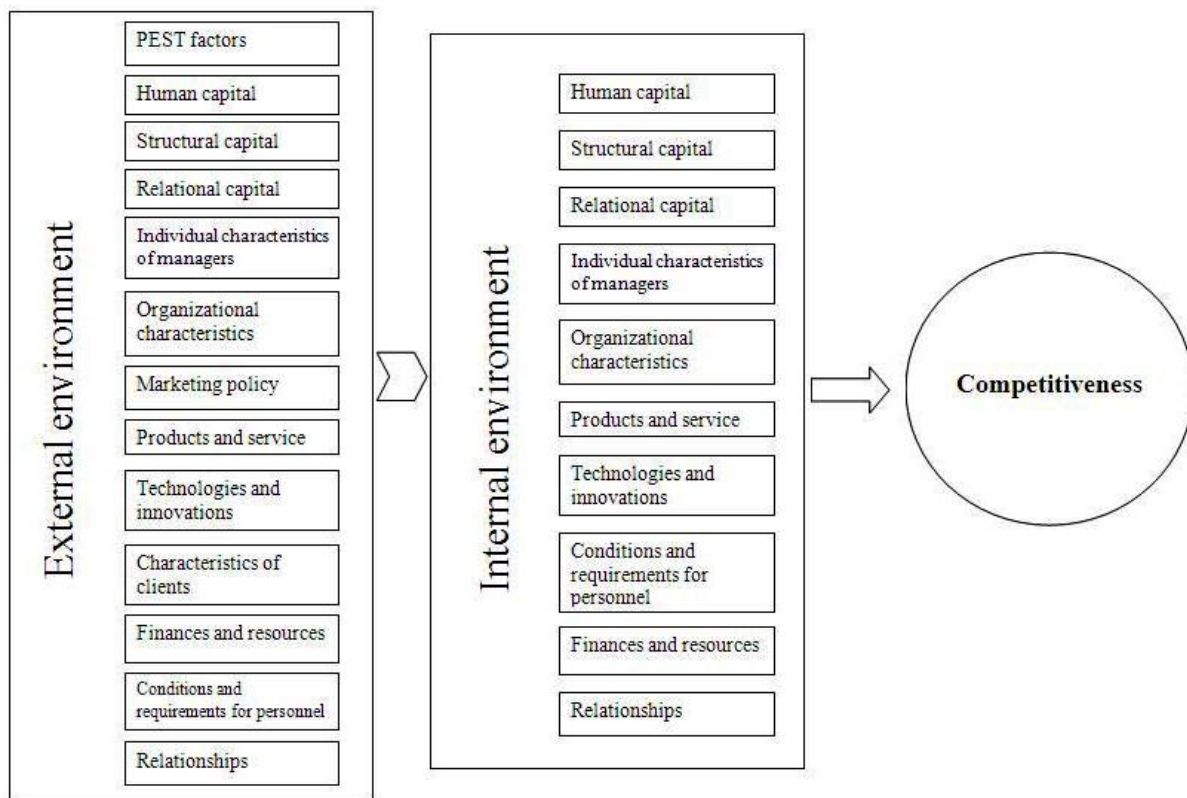


Figure 1. Factors affecting company competitiveness

3. Limitations

This study identified the list of significant factors and elements of intellectual capital that influence a retail company competitiveness. Nevertheless, the research has some limitations and assumptions. So the most important limitation is related with disadvantages of

in-depth interviews like influence of interviewer. Moreover, we faced mistrust and disclosing information by companies because of features of Russian culture or commercial secrets.

The further study includes quantitative research conducted by online-questionnaire to identify the significance of factors and relation with company performance.

Conclusion

This study presents an approach utilizing multiple-case method to identify the main factors and variables affecting retail companies competitiveness in Russia. Content analysis techniques allowed the researchers to create a comprehensive model that can be utilized for future studies in examining the influence of factors on retail companies competitiveness.

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Project of questionnaire to conduct in-depth interviews

Details about experts

1. Age
2. Position of interviewee
3. Tenure of interviewee in the enterprise, years
4. Type of product
5. Education

Part 1. General questions about the concept of competitiveness and its factors

- 1.1. What is competitiveness in your opinion?
- 1.2. List the factors that determine competitiveness of Russian companies in your industry
- 1.3. List the factors that determine competitiveness of foreign companies in your industry

Part 2. External factors that determine the company competitiveness

Macrolevel

- 2.1 What political factors affect the company competitiveness?
- 2.2 What economic factors affect the company competitiveness?
- 2.3 What social factors affect the company competitiveness?
- 2.4 What technological factors affect the company competitiveness?

Microlevel

- 2.5 What actions of competitors affect the company competitiveness?
- 2.6 What parameters of relationships with intermediaries affect the company competitiveness?
- 2.7 What parameters of relationships with suppliers affect the company competitiveness?
- 2.8 What parameters of relationships with financial institutions affect the company competitiveness?
- 2.9 What parameters of relationships with clients affect the company competitiveness?
- 2.10 What other stakeholders affect the company competitiveness and how?

Part 3. Internal factors that determine the company competitiveness

- 3.1. What factors related to the production affect the company competitiveness?
- 3.2. What parameters of financial management affect the company competitiveness?
- 3.3. What key parameters of the HR strategy affect the company competitiveness?
- 3.4. What benefits do information technologies give to improve competitiveness?
- 3.5. In what areas does your company use information technologies?

Thank you for participation

Appendix 2
Factors and variables of internal environment

Factors	Variables	Companies									
		A	B	C	D	E	F	G	H	I	J
Individual characteristics of managers	sanity	+			+		+				
	rate of reaction on changing of economic situation	+					+				
	ability of leaders to recruit talented staff, form a team		+	+		+	+		+		+
	ability to choose right partners	+									
Organizational characteristics	resource availability		+			+					
	company size					+					
	openness and transparency of the business					+	+				+
	corporate culture			+							
	creating favorable conditions for personnel (wages, working conditions)						+				
	presence of social lifts						+				
	image					+	+				+
Products and service	quality of product			+							
	quality of service							+			
Technologies and innovations	level and availability of technologies, IT		+		+	+		+			+
	level of automation (computerization) of accounting				+		+				
	speed of reaction and decision-making	+	+			+		+	+	+	+
	providing managers with up-to-date information		+	+	+	+	+		+	+	+
	ensuring availability of effective business processes						+				
	providing control of business processes						+				
	providing productive efficiency		+								
Conditions and requirements for personnel	staff qualifications					+		+			
	efficiency and productivity of staff		+								
	personnel involvement		+								
	staff motivation and KPI	+		+	+		+		+	+	
	attestation of staff	+								+	
	training and staff development	+					+	+	+	+	+
Finances and resources	cost of raw materials							+			
	cost of labor							+			
	effectiveness of financing		+								
	adequate and timely funding		+								
	source of financing (own or borrowed fund)			+							
	resource saving	+					+				
Relationships	personnel loyalty		+		+			+			
	communication with customers						+	+			
	terms of cooperation with partners	+	+	+				+		+	

Appendix 3
Factors and variables of external environment

Factors	Variables	Companies									
		A	B	C	D	E	F	G	H	I	J
Environments	sanctions and political instability	+				+	+	+	+		+
	instability of tax legislation	+		+							
	relationships with municipal authorities		+	+			+			+	
	customs policy and customs barriers					+			+		
	state support		+								
	exchange rates	+		+	+		+		+	+	
	tax regime					+	+				+
	inflation rate			+					+		+
	state regulation of the market			+		+	+				+
	seasonality	+					+				
	investment activity			+							
	wage growth								+		
	GDP growth								+		
	unemployment rate					+					
	supply-demand situation					+					
	size of market					+					
	level of R & D in the country						+				+
lack of qualitative education	+										
lack of opportunities and technologies to build factories						+					
Individual characteristics of managers	abilities to optimize taxation	+									
	speed of decision-making					+					
	flexible business practices						+				
Organizational characteristics	brand strength			+	+		+				
	location of shops			+							
	experience in sales	+	+		+	+	+	+		+	
	purchasing power		+								
	reputation						+				
	creditworthiness			+							
	size of the company			+							
using environmentally friendly production										+	
Marketing policy	marketing strategy	+	+		+	+	+			+	+
	price level			+	+	+				+	
	dumping	+	+	+		+	+	+		+	+
	expansion of chain stores			+							
	black PR from competitor's employees						+				
	price level of competitor's partners	+	+	+		+	+	+			
	knowledge of customer preferences						+				

**Appendix 3
Cont.**

Factors	Variables	Companies									
		A	B	C	D	E	F	G	H	I	J
Products and service	availability of goods			+						+	
	speed of delivery			+	+			+			
	quality of products				+		+	+		+	
	merchandising									+	
	assortment policy		+	+		+				+	
	quality of service				+		+	+			
	style of working with clients				+						
Technologies and innovations	level and availability of technologies, IT	+	+	+	+	+	+	+	+	+	+
	uniqueness of technologies		+	+							
	level of thinking						+				
	creative approach		+				+	+			
	costs of technologies		+								
Characteristics of clients	level of education	+		+		+					+
	lifestyle				+		+	+			+
	income levels				+	+	+	+		+	+
	changes in expenditure structure			+							
	values and preferences			+			+				+
	socio-demographic structure	+	+		+		+				
	purchasing power									+	
Finances and resources	availability of financial resources	+	+			+	+		+		+
	level of costs			+		+	+				
	attracted investments			+							+
	availability of borrowed funds		+			+	+				
	cost of financing		+								
Conditions and requirements for personnel	training and staff development									+	
Relationships	honesty and trustworthiness of partners	+			+	+	+	+			
	terms of cooperation with partners	+	+	+	+	+	+	+		+	
	customer loyalty		+	+		+		+	+		+
	speed of services		+								
	relationship between managers of wholesale and retail						+				

**Elena Arkhipova,
Saint-Petersburg State University
e.arkhipova@spbu.ru**

Aim and Purpose Inversion in English Language Classroom

Lack of students' intrinsic motivation is one of the main problems we face in the classroom. The paper considers a way to achieve teachers' and students' mutual goal of motivated language learning using aim and purpose inversion. Two groups of students participated; there were 27 students and four tasks they got, all the tasks required different soft skills. The results are given both in charts and examples.

The research shows that the leading role in structured learning belongs to planning and curriculum, and the more exact the latter is the more effective learning/teaching occurs.

Key words: *aim and purpose inversion, motivated learning, intrinsic motivation.*

Lack of students' intrinsic motivation is one of the main problems a teacher of English can face in the classroom. Unexpectedly enough, this problem occurs in high school classrooms, university ones even. Therefore, we are constantly searching for some ways to achieve teachers' and students' mutual goal of motivated – and therefore more effective – language learning. This talk considers particularly using aim and purpose inversion in a university classroom.

Basically, the described method makes students not just know they need some language skills but set the specific goal and make the teacher guide and help them to achieve that goal. The very common example is writing a resume while applying for a job; almost all the teachers face such a requirement from students when they actually start using English for their professional life and meet their very first challenges. But it seems to be much more effective to use this method on the earliest possible stages of learning/teaching.

Research suggest that motivation can influence language learning outcomes independently from language aptitude (Gardner, 1972; Wigfield&Wentzel, 2007). It was interesting to know whether students of B1 level of English would make significantly more effort when being really motivated despite the fact they faced certain challenges. The study of academic motivation is sometimes explained by researches as a subset of identity development (McCasin, 2009; Roeser&Peck,2009), goal-directed behavior (Boekaerts, de Koning&Vedder,2006) or interest development (Renninger, 2009). All these factors were taken under consideration during the insight.

As defined by Gardner (2001), integrativeness is one of two major factors that influence overall motivation. The second component of motivation, according to Gardner (2001), is attitudes towards the learning situation. Also, it is a complex construct that reflects an interest in learning a foreign language in order to become closer to the L2 community (Bernard, 2010).

Intrinsic motivation, based in autonomy and competence, means that a person enjoys learning a language because of the satisfaction felt when he/she masters a new concept (competence) or because of joy associated with learning the language. Extrinsically motivated activities, on the other hand, are engaged in in order to accomplish some goal that is separate from the activity in and of itself (Bernard 2010). But, reckoning the interest in L2 culture an intrinsic motivation (as a student enjoys getting to know the culture and language) we at the same time have an extrinsic one here (as the student wants, for example, to go to the L2 country to know it better and therefore studies harder). Obviously, activities can be initiated extrinsically and later be internalized to become intrinsically motivated, or they can begin out of intrinsic interest and be perpetuated in order to obtain other (extrinsic) outcomes (Bernard, 2010).

Integrated behaviors are the most intrinsically motivated (La Guardia, 2009). It means that a student values the language learning because he/she understands its usefulness.

We concentrated on aim and purpose inversion in a university English classroom in terms of getting students motivated. Two groups of students participated; there were 27 students and four tasks they got, all the tasks required different soft skills.

Stereotypic approach to teaching/learning means that normally a teacher gives some task to students, checks the results and gives feedback, which is relatively helpful but standard

and hardly motivating. We turned the situation upside down and made student demand a certain task, enforce deadlines, ask for feedback, ask for some time for correction and then present the second draft of the task.

Group 1 (14, B1) was offered to

- apply for a volunteer program for Sochi Olympics
- host some students from the UK in summer.

So the main things the students had to do were

- to pass an English test (otherwise they could not apply for the volunteer program),
- write a resume and a letter of motivation (for the same program),
- being hosts, write formal and informal letters to the UK coordinators and students.

Group 2 (13, B1+) was offered to

- participate in a British Council contest (main prize – 2 weeks English course in the UK),
- apply for a student conference,
- host some students from the UK in summer.

The main things this group had to do were

- to write a restaurant review (in order to participate in the contest),
- to create an application,
- being hosts, write formal and informal letters to the UK coordinators and students.

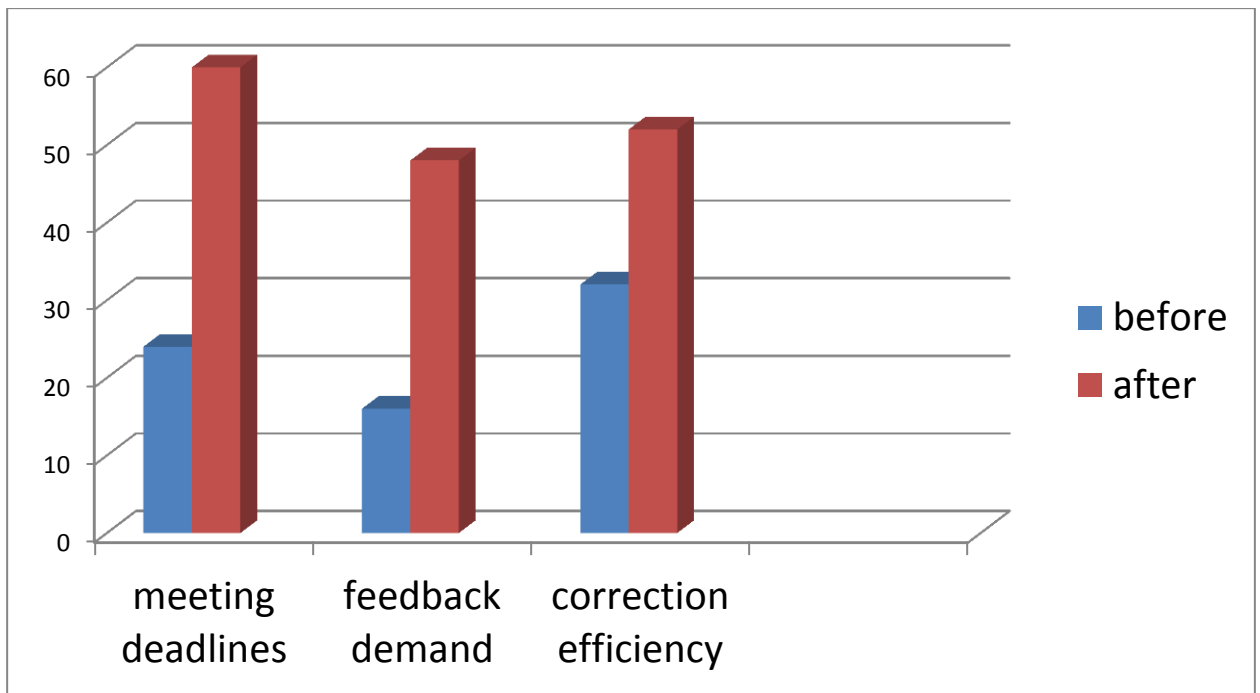
There is no need to mention that all these activities (formal and informal letters, a review, an application, a resume, a letter of motivation) were actually planned as a part of General and Academic English course. However, we decided not to give the tasks to students; instead, we gave them the chance to take part in something they wanted to and waited for them to set the tasks. They did it easily as they realized what exactly they needed to succeed. After that the roles changed completely: the students reminded the teacher about the deadlines, they asked for the second draft to be also checked before being sent, they insisted on detailed feedback and they were highly motivated overall.

All in all, there were three factors we measured (in %):

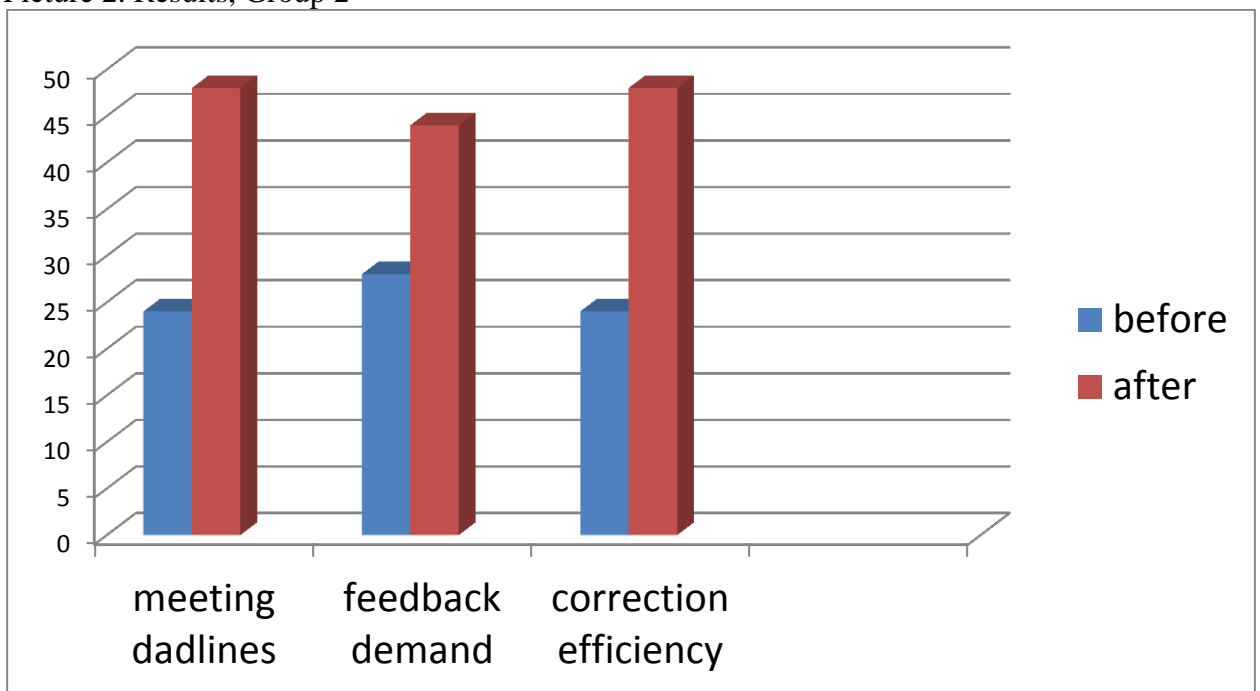
- meeting deadlines,
- feedback demand,
- correction efficiency.

The results are shown in the bar charts below.

Picture 1. Results, group 1



Picture 2. Results, Group 2



It is obvious that motivation level increased impressively in both groups.

The main conclusion made after the research is the most unpredictable one as we consider a creative way of learning/teaching. The leading role in aim and purpose inversion method belongs to planning and curriculum, and the more exact the latter is the more effective learning/teaching occurs. It has to be mentioned though that a teacher must be not just a 'giver' but also a coach and a good organizing leader in such a situation. But to achieve this

goal the teacher has to be ready for the students' needs beforehand and therefore plan 'inverted' activities very carefully and thoroughly.

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Babak L.N., Ph.D in Technical science, associate professor of School of Economics and Management, FEFU, Vladivostok, lightsome@yandex.ru

Khegay E.V, Ph.D in Economics, associate professor of School of Economics and Management, FEFU, Vladivostok, alenkahegay1405@mail.ru

Khegay K.S, C1502am, management of School of Economics and Management, FEFU, Vladivostok, chhs22@mail.ru

Filatkina M.D, B1402up, management of School of Economics and Management, FEFU, Vladivostok, filatkina_md@students.dvfu.ru

Structuring of the motivational factors of academic entrepreneurship

Abstract. The article presents an analysis of the basic research in academic entrepreneurs motivation, published in scientific journals over the period of 1987-2015. The aim of this study was to conduct a thorough analysis of the works devoted to the issues of motivation of academic entrepreneurs, and to determine the structure of the factors influencing the motivation of academic entrepreneurs. As a result, it was revealed that the motivation can be presented in four groups of interfering factors: personal motives, motives related to the availability of resources to create a business, motives related to a government support, and the motives related to professional and social environment.

Keywords: *academic entrepreneurship, motivation, prerequisites of academic entrepreneurship, spin-off.*

Introduction

Academic entrepreneurship is the process of getting and distribution of commercialized knowledge [Sass, 2013] through various forms, such as spin-offs, consulting activity, patenting and licensing of scientific research, as well as contractual arrangements [Lacka, 2012].

Currently, the academic enterprise carries out a number of very important tasks:

- economic development support on a region level as well as on a country level;
- economic value production [Benghozi, 2014];
- providing jobs [Wright, 2008];
- attracting investment in university technologies;
- effective means to commercialize technologies on early development stages;
- assistance in attracting and retaining new professors;
- students' education [Shirokova, 2012; Ilyina, 2013; Shirokova, Bogatyreva,

Galkina, 2014].

In this paper the authors analyze the scientific publications on the academic entrepreneurship motivation. The main objective of this work is to identify and structure the factors determining entrepreneurial motivation of scientists.

Most of the work is represented by two chapters "Academic entrepreneurship prerequisites" and "Factors affecting the entrepreneurial motivation of scientists". They describe the history and motivation of the academic entrepreneurship. In the final part the authors summarize the work and make a brief conclusion.

1. "Analysis of the literature" method of the study

For the analysis of research on the motivation of scientists and entrepreneurs, it was decided to appeal to the most authoritative information databases: Web of science, Scopus and eLIBRARY.

The time interval analysis was 28 years (1987-2015). The lower limit of the interval is determined by the appearance of the first publications on the given topic. Academic (peer-reviewed) journals were selected as sources of articles on academic motivation of entrepreneurs.

The key phrase «Academic entrepreneurship motivation» was used to search for items in the information databases of Scopus and Web of science. As a result, there were found 38 publications doing the search for key phrase in the information databases of Web of science, and 54 in the Scopus database. Based on a similar request, there has been found 12 scientific publications according to the Russian eLIBRARY.

Repetitive and irrelevant articles in the field of academic entrepreneurship were eliminated from the results obtained. There were selected publications for the purposes of the study, which refer to the motivation of academic entrepreneurs either as the main topic or as one of the key issues.

There were selected 42 articles after a review on the found request on the specified studies

It was also decided to include the book «Academic entrepreneurship» [Shane, 2004] in the analysis, a separate chapter of which is devoted to questions of academic entrepreneurs motivation.

Thus, there were included 43 scientific works in the final analysis.

After analysis of selected articles, there were defined the basic motives and identified academic entrepreneurship prerequisites. We consider these in more detail.

2. Academic entrepreneurship prerequisites

Academic entrepreneurship prerequisites originated back in the mid-1950s in the United States. At this time, teachers and graduates of engineering and humanities became employers [Merrifield, 1987]. It is worth noting that in the early stages of its development, academic entrepreneurship was not supported by the universities' policy and by scientists themselves. That is why any commitment to the organization of this economic phenomenon provoked a variety of protests and indignation [Lam, 2010].

Academic entrepreneurship began to be popular only by the end of the 1970s [Thon, 2015], the main reasons for which were:

- the need to create innovation in order to maintain the competitiveness of the US manufacturing compared with Japanese companies [Almobaireek; Manolova, 2013];
- reduction in state funding of universities, in consequence of the "Cold War" [Kozhitov, 2009];
- implementation of legislative reforms in the field of intellectual property protection, the main of which was the adoption of the Bayh-Dole Act in 1980 [Jain, 2014].

Thus, by the mid 80-ies of XX century, various forms of academic entrepreneurship (spin-offs, contract research, licensing and patenting of research findings, consulting activity) [Lacka, 2012] were developed in Europe and partly in Asia and the Balkan countries [Obschonka, 2011].

Currently, academic entrepreneurship is the process of creating new commercialized knowledge and then converting them into the public domain [Sass, 2013]. Academic entrepreneurship plays an important role in economic development and enhancement of the country and regions competitiveness [Sikula; 2013], contributes to the integration of different areas of science and industry, promotes research activities in universities, as well as creates jobs for citizens [D'Esto, 2011].

It should be noted that the work of scientists, fulfilling themselves in the framework of the academic enterprise is determined by a large number of motivational factors, that can be divided into four groups: personal motives; motives related to the availability of resources to create a business; motives related to a government support, and the motives related to professional and social environment. Let us consider each of these groups of factors in more detail.

3. Factors affecting the entrepreneurial motivation of scientists

3.1. Personal motives

This group of motives is determined by the desire of scientists to meet their needs related to the financial well-being, self-realization, career and reputation.

The financial benefits as a factor influencing the entrepreneurial motivation of scientists is on the first place in the majority of the studied publications. This is due to the fact that staff and faculty tend to get pretty low wages while entrepreneurial activity can not only improve their personal financial situation, but also attract investors to the issues they study [Cassar, 2007].

However, not all scientists are limited to financial gain, many of them are guided by a desire to "promote" their research and development into a practical environment, make them available to the public [Grimaldi, 2011]. To achieve this goal, scientists begin to cooperate with industry through patenting and licensing [Shevchenko, 2014].

In addition, some high-tech firms employ or contract with the faculty and staff of universities, which need financial support to promote their development [Firsova, 2011]. However, it is worth noting that this kind of cooperation is limited to the action of scientists associated with the publication of research results, at least to a certain point, described in the contract [Closs, 2013]. It follows that the business activity could undermine the free flow of knowledge, the organization of which is the main objective of any university [Benghozi, 2014].

But no matter what, academic entrepreneurship allows scientists to fully self-actualize themselves and also to climb the career ladder in the university [Zhang, 2009]. After all, scientists, who fulfilled themselves in different forms of academic entrepreneurship, were able to achieve the main goal of their professional activity, that is, to do something useful not only for science but also for society as a whole [Tartari, 2015].

3.2. Motives related to the availability of resources to create a business

The activities of scientists associated with entrepreneurship, requires a lot of financial, intellectual and physical costs. And in this case a University is able to provide a great support [Audretsch, 2014].

The renowned research universities such as the Massachusetts Institute of Technology, Stanford and others, there is a special structural unit called the technology transfer office (bureau) [Samson, 1993]. The responsibilities of this unit is to organize favorable conditions for scientists wishing to engage in research activities, that is:

- provision of the necessary infrastructure (laboratories, equipment);
- providing the "right" people for the project;
- search and attraction of investors to research projects;
- advising scientists on licensing and patenting;
- protection of intellectual property;
- advising and assistance to scientists in the spin-offs creation.

However, it is worth noting that the technology transfer office (bureau) could hinder an effective technology transfer across organizational barriers (bureaucracy) [Fini, 2010].

Another body that is able to assist in the implementation of the scientist's own business, is a business incubator, whose main task is to advise and assist in the creation of a spin-off (room rental at preferential rates, assistance in product promotion of a spin-off) [Stuart, 2006].

Generally, a university's policy related to the academic entrepreneurship plays an important role in helping scientists, which can be both positive and negative. This is due to the fact that the academic enterprise carries great benefits for a university, for example, to raise finance, but it, as mentioned above, can disrupt the natural course of the work of a university [Grimaldi, 2011].

3.3. Motives related to a government support

Academic entrepreneurship prerequisites originated back in the mid-1950s, however, it reached its widespread distribution only at the end of the 1970s. This time variation is largely due to the lack of regulatory laws and regulations [Kozhitov, 2009].

The US Bayh-Dole Act in 1980 established the rights on intellectual property of scientists and governmental financial assistance. In addition, this law consolidated the foundations of patenting and licensing of research activities of scientists. Bayh-Dole Act was accompanied by a number of supporting reforms until 1991 [Kolympiris, 2015].

It is noteworthy that after the introduction of the act in the United States, similar laws have started to appear in the countries of Asia and the Balkans [Zhang, 2009].

Hatch Act has played an important role in the regulation of the academic enterprise, which recognized the right of a university to the land [De Silva, 2010].

The result of the above laws and regulations is to increase the number of patents obtained by universities, increase in the income received by patenting and licensing, growth in a number of university researchers engaged in academic entrepreneurship, and an increase in the number of science parks [Fini, 2010].

Thanks to state support in the field of academic entrepreneurship, universities are able to generate a profit, that is, to substantially improve the economic image of the country [Shevchenko, 2014].

However, at the moment there is a complex system of bureaucracy, which greatly inhibits the processes of licensing and patenting. This type of barriers can reduce the level of scientists' interest in entrepreneurship. That is why a government needs to deal with the current problem [Koryakina 2014].

3.4. Motives related to professional and social environment

Professional contacts play an important role for the scientist during their participation in the business. These contacts form a set of partners – lawyers, suppliers of raw materials and equipment, representatives of advertising and banking services, insurance companies and other organizations [Sikula, 2013].

There is no doubt that the more "useful" contacts a scientist has at an early stage of business development, the easier it will be for him to overcome the crises of growth and development of a company [Thon, 2015].

Usually, university teachers and employees experience a large amount of commercial relations, because during their professional activities they have to cooperate with different business structures [Grimaldi, 2011].

Colleagues who have already had experience in business or are just going to do it have a huge influence on the opinions of scholars on academic entrepreneurship [Lam, 2010].

In psychology, this phenomenon of social comparison is called "peer effect". It is quite common for young scientists who are not yet able to determine their further professional development and therefore actively imitate their more successful colleagues [Zhang, 2009].

Also, "peer effect" is observed in groups with a strong interdepartmental rivalries, where everyone wants to climb up the career ladder than fellow peers [Goentnera, 2012].

In addition to colleagues, people-authorities have a great influence on the opinion of scientists, whose behavior and actions are perceived as a role model. Typically, this role falls onto the heads of scientific departments, and if they are actively involved in business, and even involve their subordinates, then, most likely, the entire department will soon begin to engage in various forms of academic entrepreneurship [Lam, 2010].

Social networks such as family and friends can have a vast impact on the decision of the scientist to become an entrepreneur, which is especially true for women scientists [Manolova, 2013]. The authors cite a number of examples when the support and assistance of friends helped scientists to become successful entrepreneurs or when they abandoned this idea forever.

It should be noted that different groups of factors have different effects on the scientific opinion on entrepreneurship. The authors suggest that motives related to the opinions of friends and the possibility of financial gain dominate in the early stages of a career development [Stuart, 2006]. The motives of self-realization and expansion of professional knowledge and skills dominate in the later stages [Thon, 2015].

4. Discussion and conclusion

The analysis allowed us to determine the basic academic entrepreneurship prerequisites:

- the need to create innovation in order to maintain the competitiveness of the US manufacturing compared with Japanese companies [Almobaireek; Manolova, 2013];
- reduction in state funding of universities, in consequence of the “Cold War” [Kozhitov, 2009];
- implementation of legislative reforms in the field of intellectual property protection, the main of which was the adoption of the Bayh–Dole Act in 1980 [Jain, 2014].

These events contributed to the fact that in the late 1970s, the academic entrepreneurship began spread actively across Europe, Asia and the Balkans [Obschonka, 2011].

Currently, the academic entrepreneurship is able to generate its own income through creation of commercialized knowledge. Academic entrepreneurship contributes to economic growth and competitiveness, both at regional and national levels [D'Este, 2011].

Moreover, analysis of the selected articles revealed the main factors influencing the entrepreneurial motivation of scientists.

All factors were divided into four groups (fig. 1):

- personal motives;
- motives related to the availability of resources to create a business;
- motives related to a government support;
- motives related to professional and social environment.

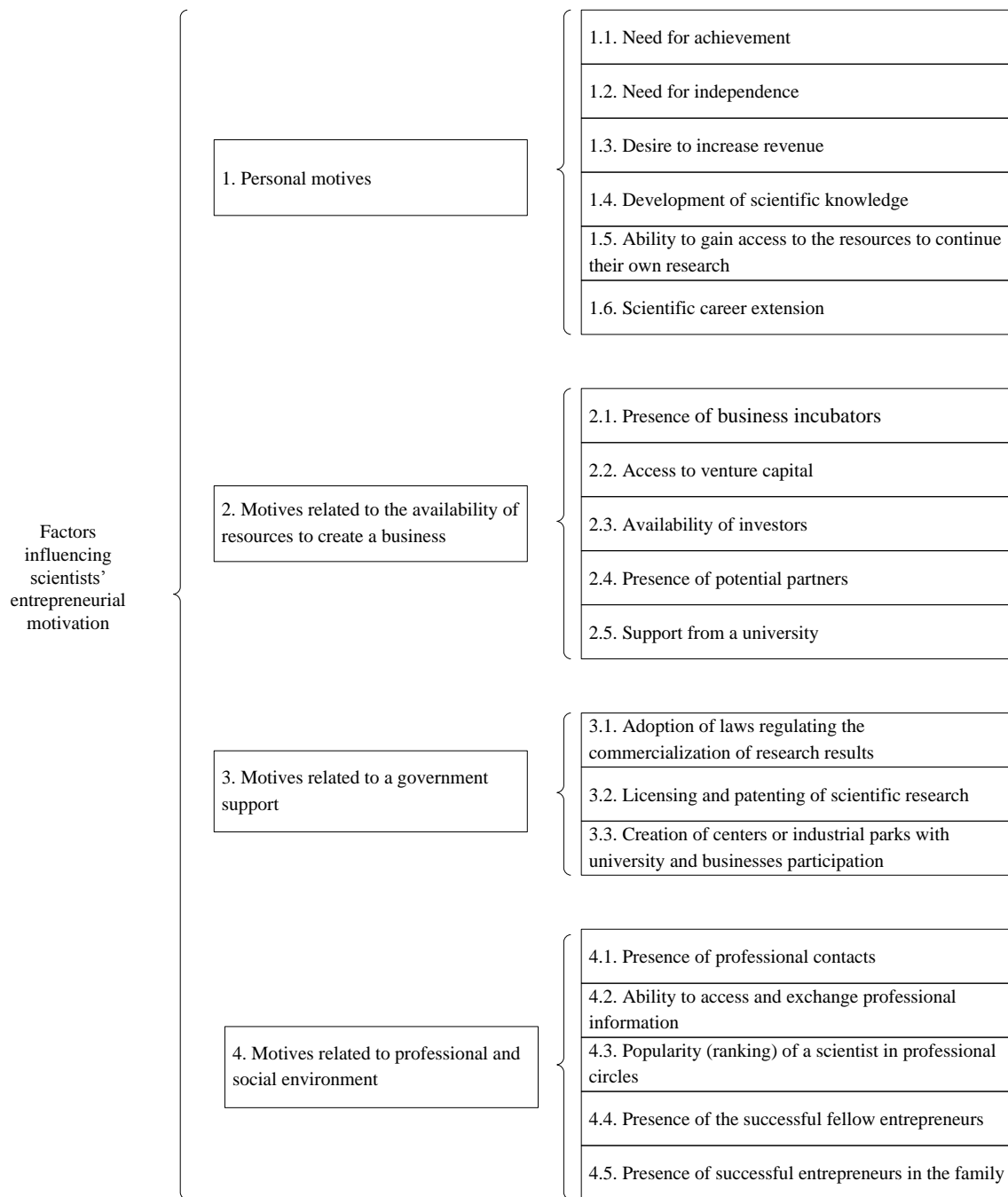


Figure 1 – Factors influencing scientists' entrepreneurial motivation

"Personal motives" is the most discussed among all groups. Personal motives determine the desire of a scientist to meet their needs in the field of financial well-being, self-realization, career and reputation.

Many authors believe that the primary motive – financial gain is dominant only at the early stages of a scientist's career [Stuart, 2006]. In the future, the scientist's main purpose is self-realization and scientific reputation [Thon, 2015].

A group of motives related to the availability of resources to create a business is describes all those factors that a university is able to offer in order to create favorable conditions for scientists wishing to engage in research activities [Samson, 1993].

Here, focus is placed on two structural units: technology transfer office (bureau) and business incubator, the main purpose of which is at all possible assistance to scientists in the creation and commercialization of knowledge [Stuart, 2006].

However, many authors recognize that these units are too bureaucratic, so their activity is carried out very slowly. During the "stagnation" period, a scientist's motivation to carry out business activities can decrease [Fini, 2010].

The third group of factors – "motives related to a government support" is also important.

The authors believe that the Bayh-Dole and Hatch Acts determined the development and dissemination of academic entrepreneurship, having secured the protection of intellectual property, the right to obtain university land, as well as licensing and patenting [Kolympiris, 2015; De Silva, 2010].

Motives related to professional and social environment, according to some authors, are on a par with personal motives, which are a priority for young scientists in the decision-making process of the entrepreneurial activities [Stuart, 2006; Thon, 2015].

Professional connections are presented by business partners who can help a scientist in the early stages of business development [Sikula, 2013]. The authors believe that the experienced scientists have much more of such connections than that of young scientists [Grimaldi, 2011; Thon, 2015].

This is due to the fact that teachers and staff in the course of their professional activities cooperate with a large number of business structures, thereby accumulating "useful" connections [Grimaldi, 2011].

Colleagues have huge influence on the opinion of scientists. The colleagues' influence is described by a phenomenon in psychology science called "peer effect" or the "effect of social comparison". This "effect ..." refers to the desire of a scientist to compare themselves with their more successful counterparts, causing it to grow and self-perfection [Lam, 2010; Zhang, 2009; Goentner, 2012].

Social connections include family, friends and colleagues of a scientist, which can significantly affect their opinion on the academic entrepreneurship.

Influence of family and friends is determined by their attitude (good or bad) to the academic entrepreneurship. This factor is especially important for women scientists [Almobaieek; Manolova, 2013].

The authors of studied publications come to the conclusion that it is impossible to determine the exact impact of the power of a group of factors, since their influence is largely dependent on a scientist, his temperament, values, beliefs, and so on [Sikula, 2013].

In any case, the academic entrepreneurs motivation is very different from the traditional. That is why this topic requires further research.

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Evgeny Yu. Blagov
Graduate School of Management, Saint Petersburg State University
e.blagov@spbu.ru

Evgeni V. Gilenk
Graduate School of Management, Saint Petersburg State University
e.gilenko@spbu.ru

Angelina S. Bashlykova
Graduate School of Management, Saint Petersburg State University
Bashlikova.bm2015@ledu.gsom.spbu.ru

Cultural Dimension Values Differentials Influence on The Cross-Cultural Group Performance: A Case of Cross-Cultural Student Groups at GSOM SPbU

Abstract. Most of the existing theoretical and empirical models assessing the influence of cultural dimension values of the group members on the group performance effectiveness are analyzing correlations between the level of particular cultural dimensions and the group's performance, not looking on the effects of relationships tensity between holders of different values of particular dimensions in the group.

This study tends to fill this gap, investigating the influence of differentials of the cultural dimensions developed in the GLOBE model on the performance of cross-cultural student groups working on projects required by the working programs of the taken courses.

Keywords: *cross-cultural management, GLOBE model, student performance, intragroup dynamics.*

1. Topicality and theoretical background

Most of the contemporary cross-cultural management literature, originating from the seminal works of Hofstede (1980) and Trompenaars (1994), is bound in the empirical research design to the single-factor analysis of linkages between specific cultural dimensions and various outcomes, e.g., group work effectiveness and efficiency. However, such analysis, although mentioning the influence of change in cultural dimensions on the dependent variables, does not usually look at what the mechanisms of such influence are.

One of the methodologies that could help in coping with this drawback is the model developed within the GLOBE (Global Leadership and Organizational Behavior Effectiveness) Research Program (House et al. (ed.), 2004).

A strong point of this model is looking at the cultural dimensions from the perspectives of both cultural dimensions as social practices and cultural dimensions as social values, thus dividing the variables related to the cultural dimensions in research designs into two groups of variables for one “general” cultural dimension, often tending to inverse the relationship (as “values” often demonstrate the lack of a respective trait as “practices”).

However, this methodology, although allowing to take a deeper look into the in-group interplay of cultural dimension values, still stays within the paradigm of analyzing linear relationships between the dimension values and the outcomes. To overcome this methodological limitation, an idea is proposed by the authors of this paper to construct the independent variables of in-group behavior dynamics mechanisms research on the basis of the in-group differentials of cultural dimensions, i.e., consider the difference between the minimal and maximal values of the respective dimensions. Using such independent variables, it becomes possible to figure out and analyze the intergroup tensions between group participants with different levels of cultural dimensions, and the influence of such tensions on the group work results.

This methodology is tested in the research described in the paper on cross-cultural student groups, namely, the students of GSOM SPbU working on projects in cross-cultural groups during their study.

Such a research object does surely create a limitation for the research results generalizability, as student groups are obviously different from groups of professionals, e.g., in the level of material responsibility to the result, thus being different in the abovementioned “in-group tension”; however, as the goal of the research is not developing recommendations for professional management, but developing and testing a new methodology of analyzing in-group tensions in cross-cultural groups and these tensions’ effects, this limitation does not seem to be crucial.

2. Research methodology

2.1. Research variables

2.1.1. Dependent variables

As the research object is the cross-cultural student groups doing their projects while studying at the GSOM SPbU institute, the basis for the dependent variables formulation is the competences the development of which is provided in the Federal State Educational Standards of the BSc and MSc levels in the “Management” and “Public Administration” fields.

Leaving out the competences in narrow functional areas of management (e.g., financial management, marketing, logistics, etc.), the competences developed in the respective programs are divided into the “organizational and managerial”, “entrepreneurial” and “information analytical” blocks.

As formulations of specific competences within each of these blocks overlap to a certain extent, for the sake of the research easiness it is logical to deduce the competences of these blocks into a smaller number of unified competences.

Having the student groups as a research object, it is reasonable to assume that the formulations of these unified competences should describe criteria of the students' group work, for the respondents to adequately understand the asked questions.

Consequently, the "organizational and managerial" block of competences was reduced to two unified competences of **tasks delegation clarity** and **tasks fulfillment timeliness** in working on the group project. Entrepreneurial competences were reduced to a unified competence of **idea generation capability**; the "information analytical" block competences were reduced to the **information analysis depth** integral competence.

2.1.2. Independent variables

The basis for the independent variables formulation is the GLOBE model.

As it was mentioned above, the strong point of this model in relation to most other models presented in the mainstream literature on cross-cultural management is the division of variables into cultural dimensions as social practices and cultural dimensions as social values. This division seems to be especially actual for studying the cultural dimension differentials within groups, as the interplay between the same dimensions as social values and social practices creates in-group tensions with potential of generating both destructive and constructive conflicts, that can be also generated by the increase in cultural dimension differentials, so it is interesting to look at the interplay of the effects caused by changing differentials of one dimension and the effects caused by differences in the dimension as social value and social practice.

From the cultural dimensions used in the GLOBE model, those were chosen that have direct developments of the dimensions introduced in Hofstede (1980), as these dimensions have the most thorough theoretical and empirical grounding. These dimensions are the following: power distance; uncertainty avoidance; gender equality; institutional collectivism; in-group collectivism. For each dimension, both data for social values and social practices were analyzed.

The independent variables themselves were formulated in the following way.

Question 4 in the research questionnaire asks for the nationalities of the participants of the cross-cultural groups about which the respondents are asking questions.

For the sake of simplifying the research design, the group participants are assumed to be more or less typical representatives of their national cultures. Thus, from the cultural dimension values of the respective countries, the maximal differentials between the lowest and highest cultural dimension value in each group are counted, serving as the independent variables of the research.

2.2. Data collection

Data for the empirical part of the research were collected via an online questionnaire on the Qualtrics.com platform, developed for the students studying at BSc and MSc educational programs at the GSOM SPbU institute.

The questionnaire was held in April-May 2015. Among the students of the BSc programs the students of the 4th year of study were questioned as those who most probably have an experience of working in cross-cultural student groups; among the MSc program students, the students of both years of study were questioned, as due to the questionnaire being held in the spring semester, a cross-cultural group work could have been already achieved by the 1st year students.

The questionnaire consists of 16 questions.

The first four questions of the questionnaire are introductory, asking about the respondent's gender and age. The third question asks whether the respondent took part in the cross-cultural group projects while studying at the GSOM SPbU institute. In case of the affirmative response, the survey is continued, with the fourth question asking to list the nationalities of the participants of the project.

Questions 5-16 are dedicated to the dependent variables of the study. For each of the dependent variables there is a separate block of three questions, with the third question being a reformulated version of the first, thus making the questions in each block excessive for the purpose of obtaining more reliable answers.

The questions have the following formulations. Idea generation capability block: 1) New ideas generation in the team didn't face any difficulties; 2) The participants have always been ready to listen to each other's ideas; 3) The team members often suggested new interesting ideas. Tasks delegation clarity block: 1) While working on the project, each participant clearly knew what specific tasks she/he is working on; 2) While working on the project, each participant has been aware about the other participants' tasks; 3) Each team member's task has been clearly specified within the group. Tasks fulfillment timeliness block: 1) Each participant did her/his tasks on time; 2) While working on the project, the group could always adhere to the set deadlines; 3) The project has been completed and delivered to the professor on time. Information analysis depth block: 1) The team tried to use all the possible accessible information to do the project; 2) Information necessary to do the project has been analyzed by the group maximally thoroughly; 3) The team participants has been looking for additional sources of information (often visited the library, have been searching for rare editions, consulted with the professors or the business practitioners).

To increase the questions reliability, the order of following the questions in the questionnaire was changed by mixing the order of questions related to different dependent variables.

The questionnaire has been answered by 110 respondents; from these answers, 84 are valid.

2.3. Quantitative analysis methodology

Let us now turn to the description of the quantitative part of the research methodology. The main problem with the dataset collected is that it is heterogeneous. Thus, in order to increase the quality of further research, we had to introduce some segmentation. Moreover, to check the consistency of the respondents' answers we applied the principal components analysis. After that linear regressions were run in each of the clusters.

2.3.1. Principal Components Analysis

As it was mentioned before, the questions in each block of the questionnaire were excessive for the purpose of obtaining most reliable answers. Thus, to check whether the respondents' answers were indeed excessive, we ran a type of factor analysis called the *principal components analysis* (PCA).

The PCA is a statistical procedure that uses an orthogonal transformation to convert a set of possibly correlated variables into a set of linearly uncorrelated variables (called principal components or PC). The impact of these uncorrelated variables on the total variance of the set of variables is then analyzed. If the whole set of initial variables may be substituted by a subset of variables whose common variance covers a substantial share of the variance of the initial set of variables, then this reduced set of variables should be preferred. In our case, finding such a subset of variables would mean that the respondents indeed understood the

questions correctly and provided excessive answers. Thus we use PCA to find out whether there is indeed redundancy in the answers of the respondents (as it was intended).

For all the four blocks of questions the first two principal components (PC1 and PC2) explain at least 85% of the total variance. Thus, the three dependent variables in each block can indeed be replaced with only two variables. This confirms that the answers of the respondents were consistent.

2.3.2. Hierarchical Cluster Analysis

Since our whole sample of observations seemed to be heterogeneous, we applied a hierarchical cluster analysis to both sets of the independent variables: the social values and the social practices set.

Hierarchical cluster analysis is a technique for finding groups of similar (mathematically close) observations in a sample. The analysis is aimed at sample segmentation in order to reduce heterogeneity in the data.

Fig. 1. The Dendrogram of Social Practices Independent Variables

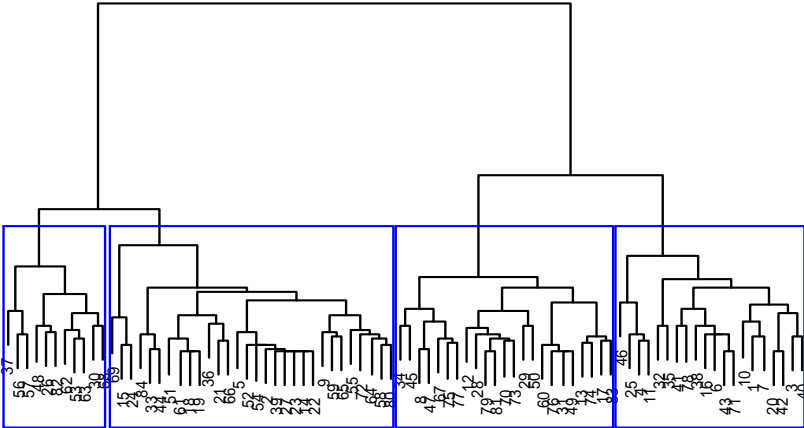
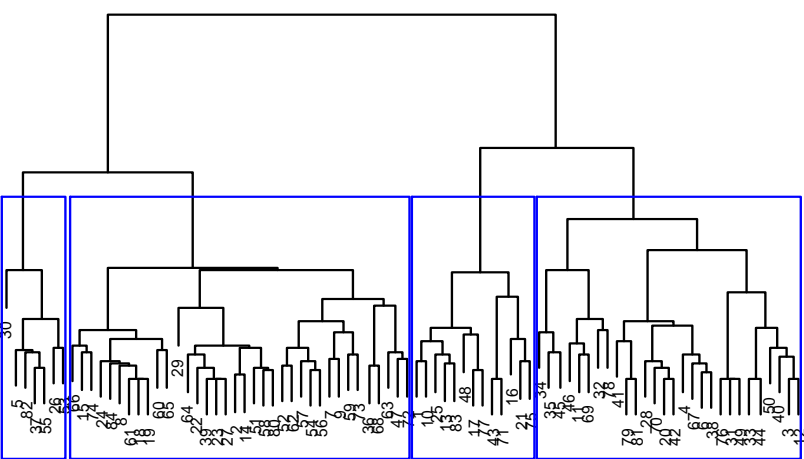


Fig. 2. The Dendrogram of Social Values Independent Variables



The resulting dendrograms are given in Figures 1 and 2. It can be clearly seen from this dendrograms that there are *four* prominent groups of observations (clusters) in our sample. Thus we proceed our analysis within these clusters.

2.3.3. The Linear Regression Approach

The main research technique that was adopted in this study is linear regression, which is run in each of the four clusters for both social values and social practices sets of variables. A typical equation in our study looks like this:

$$DV_i = \beta_0 + \beta_1 \cdot dGendEq_i + \beta_2 \cdot dInstCol_i + \beta_3 \cdot dInGroupCol_i + \beta_4 \cdot dPDI_i + \beta_5 \cdot dUAI_i + \varepsilon_i$$

Here *DV* stand for dependent variable which we have four: idea generation capability; tasks delegation clarity; tasks fulfillment timeliness; information analysis depth. The independent variables are the differentials of the following indicators: gender equality (*GendEq*), institutional collectivism (*InstCol*), in-group collectivism (*InGroupCol*), power distance (*PDI*), and uncertainty avoidance (*UAI*).

After estimation of each of the regressions, the necessary diagnostic tests were carried out. Specifically, we tested for heteroskedasticity of the residuals and, when necessary, robust standard errors were calculated. The main goodness-of-fit measure was the coefficient of determination (R^2).

3. Results and discussion

The results of running the above-described linear regression analysis are presented in Table 2.

Table 2. The results of linear regression analysis¹

Question №	Idea generation capability			Tasks delegation clarity			Tasks fulfillment timeliness			Information analysis depth		
	11	12	13	21	22	23	31	32	33	41	42	43
PDISV ²	+	-	-	-	-	-	-	-	-	-	-	-
	-	+	+	+	+	-	+	+	+	+	+	+
	+	+	+	+	+	+	+	+	-	+	+	+
	-	+	+	-	-	+	-	+	-	-	-	+
PDISP	-	+	-	-	-	-	-	-	+	-	-	-
	-	+	+	-	+	-	-	+	+	+	+	+
	+	+	+	+	-	+	+	-	+	+	+	+
	+	+	-	+	-	+	+	+	-	-	+	+
UAISV	-	-	-	-	+	-	-	+	-	-	-	-
	+	+	+	+	+	+	+	-	-	-	+	-
	+	+	+	+	+	+	+	+	+	+	+	+
	+	+	+	-	-	+	-	-	+	-	-	+
UAISP	-	-	-	-	+	-	-	+	-	-	-	+
	+	+	-	-	+	+	-	-	-	-	+	+
	+	+	+	+	+	+	-	+	+	+	+	+
	+	+	+	+	+	+	+	+	-	-	-	+
GenderSV	-	+	-	-	-	-	-	-	-	-	-	+
	+	+	+	-	+	-	+	+	+	-	-	+
	+	+	+	-	-	+	-	-	+	+	+	-
	-	+	-	+	-	-	+	+	-	-	-	+
GenderSP	+	+	+	+	-	+	+	+	+	+	+	+

¹ Green and red colours are marking respectively positive and negative coefficients that are statistically significant at the level of 0.20.

² “SV” in this table and further in the “Discussion” part is used as a shortened form of “social values”, “SP” as a shortened form of “social practices”.

	-	-	-	-	-	-	-	-	-	-	-	-
	+	+	+	+	+	+	+	-	-	-	-	-
	+	+	+	-	+	-	-	+	+	+	+	-
InstCollSV	+	-	+	+	+	-	-	+	+	-	-	+
	-	-	-	+	-	+	+	-	-	-	-	-
	-	-	-	+	+	+	+	+	-	+	+	+
	-	+	-	+	+	+	+	+	-	+	+	+
InstCollSP	-	-	-	-	+	-	-	-	-	-	-	+
	-	+	-	-	+	-	+	+	-	-	-	+
	-	+	-	+	+	+	+	+	-	-	+	+
	+	-	-	+	-	-	+	-	-	-	+	+
InGrCollSV	-	-	-	-	-	-	-	-	+	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-
	+	-	+	+	+	-	+	-	+	-	+	-
InGrCollSP	-	-	-	-	+	+	-	+	+	+	+	+
	-	+	+	+	+	+	+	+	+	+	+	-
	-	+	-	+	+	-	-	+	-	-	+	-
	-	+	+	-	+	+	+	+	-	+	-	-

The first noticeable result is a substantial excess of statistically significant SV coefficients quantity over the SP ones for nearly all the analyzed cultural dimensions except for the gender equality. This excess can be explained in the following way. Cultural dimensions as social values, in contrast to the cultural dimensions as social practices, can be interpreted as perceivably lacking traits of national culture (House et al. (ed.), 2004); thus, it can be suggested that the SP differentials increases can stimulate a positive effect of synergy of the cultural traits being sources of the national business cultures' effectiveness, while the SV differentials increase can cause the opposite effect of synergy of the traits that can be "problematic" for these cultures.

Thus, it can be supposed, that if the respondents due to the social desirability bias tend to characterize the described groups strongly positively in cases when their experience of working in these groups was not strongly negative (Bernardi, 2006), the detected dependencies between the respondents' answers and the SV differentials can really be explained by the above-described "negative synergy effect" that has more significant influence on the results than the "positive synergy", the signs of the influence of which can be distorted by this bias.

However, if such logic worked for all the cultural dimensions under scrutiny, among the statistically significant SV differential coefficients those with negative sign would be prevalent, showing the decrease in the cross-cultural groups' work effectiveness with increase in the cultural dimensions differentials.

As it can be seen from Table 2, this is true for such cultural dimensions as in-group collectivism and gender equality.

Speaking about the in-group collectivism cultural dimension, an interesting thing is that statistically significant negative SV coefficients are prevalent in all clusters except for Cluster 4, i.e., the cluster with the biggest average differential. This can be explained by a suggestion that for this cluster, SV differentials of other cultural dimensions exert strong influence opposite to that of the in-group collectivism differential increase. Looking at Table 2, the institutional collectivism SV differential seems to be the most obvious candidate for this. According to House et al. (ed.) (2004), in most cultures it is typical for institutional and in-group collectivism to be negatively correlated due to socially determined conflict of interests between the formalized social institutions and the small groups. It can be suggested

that the negative influence of the in-group collectivism SV differential on the cross-cultural collectives work effectiveness can be associated with the tendency of people comparatively low in in-group collectivism as a social value toward an opportunistic behavior in, e.g., student free-riding and relative forms, in groups consisting of people with different levels of this parameter (Ralston et al., 2014). Suggested opposite effect in Cluster 4 can be explained by the orientation of the people comparatively high in institutional collectivism toward following formal rules and regulations (Ching Gu et al., 2014), that in this cluster could be more important for the group's work than the "opportunistic" effect of the in-group collectivism SV differential increase.

Gender equality cultural dimension SV and SP statistically significant coefficient signs can be interpreted thuswise. According to House et al. (ed.), (2004), comparatively high level of gender equality as a social practice can be linked to predominant orientation on formal result achieving than on human relationships quality, which, conversely, can be linked to comparatively low gender equality level. Statistically significant gender equality SP differential coefficients can be seen in all the three questions of one dependent variable only for Cluster 2 and dependent variable of tasks delegation clarity. Consequently, it can be suggested that for this cluster the increase of comparative difference between the result and relationship orientation of the groups participants leads to decrease of the participants' mutual understanding levels, thus hampering the coordination of work. Analogous explanation can be suggested for statistically significant negative coefficients in particular questions of the "Tasks fulfillment timeliness" and "Information analysis depth" dependent variables due to these variables' dependence from the in-group coordination. Consequently, as the "Idea generation capability" variable depends on the in-group coordination least, all the gender equality SP differential statistically significant coefficients of this variable have positive signs.

It should be noted that for the "Tasks delegation clarity", "Tasks fulfillment timeliness" and "Information analysis depth" dependent variables, in various clusters positive statistically significant coefficients also exist, showing absence of significant influence of the above-described effect. Analogously to the relationships between the levels of institutional and in-group collectivism differentials in Cluster 4, it can be suggested that these are the results of different power of influence of various cultural dimensions for groups with different level of overall cultural diversity.

It is obvious that due to a great possible variety of such influences, the analysis of these calls for development of much more precise measurement instruments than the cultural dimension differentials analysis suggested in this paper; development of such instruments can surely be called an important direction of further research development in the field.

As for the gender equality SV differentials, an interesting result is that of presence of statistically significant negative coefficients at the questions of all the dependent variables in the clusters 1 and 4 and absence of such coefficients in Clusters 2 and 3, while having the statistically significant positive coefficients mainly in Cluster 2. As it was said above, SV differential increase can be potentially more strongly linked to in-group conflict situations than the SP differential increase due to the essence of SP cultural dimensions showing actually "strong" traits of national culture and SV cultural dimensions showing the lack of such traits. According to this, statistically significant negative coefficients of the gender equality SV differential in Cluster 1 can be interpreted as the results of a negative influence of the increase of this differential *ceteris paribus* in the groups culturally rather homogenous in other cultural dimensions. In more culturally heterogeneous groups this negative influence can be neutralized by other factors or even transform to a positive effect that can be demonstrated by statistically significant positive coefficients in Clusters 2 and 4; an in-depth inquiry into causes of such transformation also seems a potentially fruitful direction of further

research. Statistically significant negative coefficients in Cluster 4 can point to a higher in-group conflict potential and, thus, lesser results stability of the cross-cultural groups with overly high degree of diversity that can increase the group's sensitivity to the negative influence of *ceteris paribus* increase of the gender equality SV differential, as in Cluster 1.

For the cultural dimensions of power distance, uncertainty avoidance and institutional collectivism there is less statistically significant negative SV coefficients than SP ones, not supporting the suggestion of predominantly negative influence of the SV differentials increase on the groups work effectiveness.

However, the logic of signs distribution for these variables is close to that of the gender equality SV differentials, with prevalent distribution of the statistically significant negative coefficients in Clusters 1 and 4.

Thus, a proposition can be made that an optimal cultural diversity level for group work in various fields must be "moderate", not too small and not too large. To a certain extent this proposition can be called naïve and obvious; however, less obvious could be questions about specific "optimal levels" of different cultural dimensions for different types of group activity. Undoubtedly, this is one of the main directions of further development of the ideas of the research presented in this paper.

Among the coefficients of the "Power distance" independent variable, the most notable result seems to be the statistical significance of all the three SV coefficients for the "Tasks delegation clarity" dependent variable in Clusters 1 and 3. Interestingly, in Cluster 1 all the coefficients have negative signs (as well as several coefficients at the "Idea generation capability" and "Tasks fulfillment timeliness" dependent variables' questions), while in Cluster 3 all the coefficients have positive signs (as well as several coefficients at the "Idea generation capability" and "Tasks fulfillment timeliness" variables' questions).

For most clusters there is a visible trend of increase in the statistically significant positive coefficients quantity with the increase of cluster overall cultural diversity, but still negative coefficients can be seen in Cluster 4 at some the questions of the "Tasks delegation clarity" and "Tasks fulfillment timeliness" variables. So, the most significant result regarding the "Power distance" independent variable is that the SV differential increase for Cluster 1 has statistically significant negative influence on the tasks delegation clarity in the group, while for Cluster 3 the SV differential increase exerts statistically significant positive influence. In addition to the tasks delegation clarity, in Cluster 3 statistically significant positive coefficients are obtained for the questions of other dependent variables; it can subsequently be concluded that the most positive influence of an increase in the differential of power distance as a social value on the cross-cultural group work effectiveness is linked to the moderately high level of the group's cultural diversity.

As for the power distance SP differentials, there are no statistically significant coefficients for all the three questions of any of the dependent variables in each of the clusters; however, the presence of statistically significant negative coefficients in Clusters 1 and 4 and statistically significant positive coefficients at Cluster 3 can be noted, while Cluster 2 does not have any statistically significant coefficients. Such results, although with less quantity of the statistically significant coefficients, are rather close to the power distance SV differentials.

In both the SP and SV coefficients of uncertainty avoidance the first thing attracting attention is the excess of the statistically significant coefficients quantity in Clusters 1 and 4 over that in Clusters 2 and 3, analogous to that discussed above for other independent variables. In addition to that, a trend of having negative coefficients mainly in Clusters 1 and 4 while having positive coefficients mainly in Clusters 2 and 3 is also topical for this independent variable. Thus, it can be suggested that for uncertainty avoidance the above-described hypothetical mechanisms of positive influence of differential increase on the

clusters with moderate cultural diversity levels and negative influence on the clusters with both too low and too high cultural diversity levels can also work. However, as for the uncertainty avoidance there are no three statistically significant coefficients for all the three questions of any dependent variables in any of the clusters, detailed examination of this suggestion is a subject of research of a sample with greater number of respondents.

The institutional collectivism variable, finally, shows the following results.

Among the 14 statistically significant coefficients of the institutional collectivism SP differentials only two have negative sign: that at the first question of the “Information analysis depth” dependent variable in Cluster 1 and that at the third question of the “Tasks fulfillment timeliness” dependent variable in Cluster 4. Other statistically significant coefficients at Clusters 1 and 4 and the only one statistically significant coefficient in Cluster 3 (second question of the “Information analysis depth” variable) are positive. In Cluster 2 there are no statistically significant coefficients, like the power distance and institutional collectivism SP differentials, thus making it possible to suggest that the increase of these cultural dimensions differentials has the smallest influence on the group work effectiveness for groups with “moderately low” level of cultural diversity, somewhere close to the level of Cluster 2 in the presented research. Presence of the statistically significant coefficients in Clusters 1 and 4 both in the SV and SP differentials also supports the above-discussed suggestions about the positive effect of the moderate level of the cultural diversity.

4. Conclusion.

A goal of developing and testing a new methodology of analyzing in-group tensions in cross-cultural groups and these tensions’ effects has been reached in the paper by developing a methodology of analyzing the differentials of cultural dimensions values within cross-cultural groups. This methodology was tested on a sample of students doing projects in cross-cultural groups while studying at the GSOM SPbU institute. The analysis of the results allows getting an insight into the dynamics of intergroup tensions between group participants with different levels of cultural dimensions, and the influence of such tensions on the group work results; a number of suggestions about possible further research directions are also made.

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Evgeny Yu. Blagov
Graduate School of Management, Saint Petersburg State University
e.blagov@spbu.ru

Evgeni V. Gilenk
Graduate School of Management, Saint Petersburg State University
e.gilenko@spbu.ru

Angelina S. Bashlykova
Graduate School of Management, Saint Petersburg State University
Bashlikova.bm2015@ledu.gsom.spbu.ru

Cultural Dimension Values Differentials Influence on The Cross-Cultural Group Performance: A Case of Cross-Cultural Student Groups at GSOM SPBU

Abstract. Most of the existing theoretical and empirical models assessing the influence of cultural dimension values of the group members on the group performance effectiveness are analyzing correlations between the level of particular cultural dimensions and the group's performance, not looking on the effects of relationships tensity between holders of different values of particular dimensions in the group.

This study tends to fill this gap, investigating the influence of differentials of the cultural dimensions developed in the GLOBE model on the performance of cross-cultural student groups working on projects required by the working programs of the taken courses.

Keywords: *cross-cultural management, GLOBE model, student performance, intragroup dynamics.*

1. Topicality and theoretical background

Most of the contemporary cross-cultural management literature, originating from the seminal works of Hofstede (1980) and Trompenaars (1994), is bound in the empirical research design to the single-factor analysis of linkages between specific cultural dimensions and various outcomes, e.g., group work effectiveness and efficiency. However, such analysis, although mentioning the influence of change in cultural dimensions on the dependent variables, does not usually look at what the mechanisms of such influence are.

One of the methodologies that could help in coping with this drawback is the model developed within the GLOBE (Global Leadership and Organizational Behavior Effectiveness) Research Program (House et al. (ed.), 2004).

A strong point of this model is looking at the cultural dimensions from the perspectives of both cultural dimensions as social practices and cultural dimensions as social values, thus dividing the variables related to the cultural dimensions in research designs into two groups of variables for one “general” cultural dimension, often tending to inverse the relationship (as “values” often demonstrate the lack of a respective trait as “practices”).

However, this methodology, although allowing to take a deeper look into the in-group interplay of cultural dimension values, still stays within the paradigm of analyzing linear relationships between the dimension values and the outcomes. To overcome this methodological limitation, an idea is proposed by the authors of this paper to construct the independent variables of in-group behavior dynamics mechanisms research on the basis of the in-group differentials of cultural dimensions, i.e., consider the difference between the minimal and maximal values of the respective dimensions. Using such independent variables, it becomes possible to figure out and analyze the intergroup tensions between group participants with different levels of cultural dimensions, and the influence of such tensions on the group work results.

This methodology is tested in the research described in the paper on cross-cultural student groups, namely, the students of GSOM SPbU working on projects in cross-cultural groups during their study.

Such a research object does surely create a limitation for the research results generalizability, as student groups are obviously different from groups of professionals, e.g., in the level of material responsibility to the result, thus being different in the abovementioned “in-group tension”; however, as the goal of the research is not developing recommendations for professional management, but developing and testing a new methodology of analyzing in-group tensions in cross-cultural groups and these tensions’ effects, this limitation does not seem to be crucial.

2. Research methodology

2.1. Research variables

2.1.1. Dependent variables

As the research object is the cross-cultural student groups doing their projects while studying at the GSOM SPbU institute, the basis for the dependent variables formulation is the competences the development of which is provided in the Federal State Educational Standards of the BSc and MSc levels in the “Management” and “Public Administration” fields.

Leaving out the competences in narrow functional areas of management (e.g., financial management, marketing, logistics, etc.), the competences developed in the respective programs are divided into the “organizational and managerial”, “entrepreneurial” and “information analytical” blocks.

As formulations of specific competences within each of these blocks overlap to a certain extent, for the sake of the research easiness it is logical to deduce the competences of these blocks into a smaller number of unified competences.

Having the student groups as a research object, it is reasonable to assume that the formulations of these unified competences should describe criteria of the students' group work, for the respondents to adequately understand the asked questions.

Consequently, the "organizational and managerial" block of competences was reduced to two unified competences of **tasks delegation clarity** and **tasks fulfillment timeliness** in working on the group project. Entrepreneurial competences were reduced to a unified competence of **idea generation capability**; the "information analytical" block competences were reduced to the **information analysis depth** integral competence.

2.1.2. Independent variables

The basis for the independent variables formulation is the GLOBE model.

As it was mentioned above, the strong point of this model in relation to most other models presented in the mainstream literature on cross-cultural management is the division of variables into cultural dimensions as social practices and cultural dimensions as social values. This division seems to be especially actual for studying the cultural dimension differentials within groups, as the interplay between the same dimensions as social values and social practices creates in-group tensions with potential of generating both destructive and constructive conflicts, that can be also generated by the increase in cultural dimension differentials, so it is interesting to look at the interplay of the effects caused by changing differentials of one dimension and the effects caused by differences in the dimension as social value and social practice.

From the cultural dimensions used in the GLOBE model, those were chosen that have direct developments of the dimensions introduced in Hofstede (1980), as these dimensions have the most thorough theoretical and empirical grounding. These dimensions are the following: power distance; uncertainty avoidance; gender equality; institutional collectivism; in-group collectivism. For each dimension, both data for social values and social practices were analyzed.

The independent variables themselves were formulated in the following way.

Question 4 in the research questionnaire asks for the nationalities of the participants of the cross-cultural groups about which the respondents are asking questions.

For the sake of simplifying the research design, the group participants are assumed to be more or less typical representatives of their national cultures. Thus, from the cultural dimension values of the respective countries, the maximal differentials between the lowest and highest cultural dimension value in each group are counted, serving as the independent variables of the research.

2.2. Data collection

Data for the empirical part of the research were collected via an online questionnaire on the Qualtrics.com platform, developed for the students studying at BSc and MSc educational programs at the GSOM SPbU institute.

The questionnaire was held in April-May 2015. Among the students of the BSc programs the students of the 4th year of study were questioned as those who most probably have an experience of working in cross-cultural student groups; among the MSc program students, the students of both years of study were questioned, as due to the questionnaire being held in the spring semester, a cross-cultural group work could have been already achieved by the 1st year students.

The questionnaire consists of 16 questions.

The first four questions of the questionnaire are introductory, asking about the respondent's gender and age. The third question asks whether the respondent took part in the cross-cultural group projects while studying at the GSOM SPbU institute. In case of the affirmative response, the survey is continued, with the fourth question asking to list the nationalities of the participants of the project.

Questions 5-16 are dedicated to the dependent variables of the study. For each of the dependent variables there is a separate block of three questions, with the third question being a reformulated version of the first, thus making the questions in each block excessive for the purpose of obtaining more reliable answers.

The questions have the following formulations. Idea generation capability block: 1) New ideas generation in the team didn't face any difficulties; 2) The participants have always been ready to listen to each other's ideas; 3) The team members often suggested new interesting ideas. Tasks delegation clarity block: 1) While working on the project, each participant clearly knew what specific tasks she/he is working on; 2) While working on the project, each participant has been aware about the other participants' tasks; 3) Each team member's task has been clearly specified within the group. Tasks fulfillment timeliness block: 1) Each participant did her/his tasks on time; 2) While working on the project, the group could always adhere to the set deadlines; 3) The project has been completed and delivered to the professor on time. Information analysis depth block: 1) The team tried to use all the possible accessible information to do the project; 2) Information necessary to do the project has been analyzed by the group maximally thoroughly; 3) The team participants has been looking for additional sources of information (often visited the library, have been searching for rare editions, consulted with the professors or the business practitioners).

To increase the questions reliability, the order of following the questions in the questionnaire was changed by mixing the order of questions related to different dependent variables.

The questionnaire has been answered by 110 respondents; from these answers, 84 are valid.

2.3. Quantitative analysis methodology

Let us now turn to the description of the quantitative part of the research methodology. The main problem with the dataset collected is that it is heterogeneous. Thus, in order to increase the quality of further research, we had to introduce some segmentation. Moreover, to check the consistency of the respondents' answers we applied the principal components analysis. After that linear regressions were run in each of the clusters.

2.3.1. Principal Components Analysis

As it was mentioned before, the questions in each block of the questionnaire were excessive for the purpose of obtaining most reliable answers. Thus, to check whether the respondents' answers were indeed excessive, we ran a type of factor analysis called the *principal components analysis* (PCA).

The PCA is a statistical procedure that uses an orthogonal transformation to convert a set of possibly correlated variables into a set of linearly uncorrelated variables (called principal components or PC). The impact of these uncorrelated variables on the total variance of the set of variables is then analyzed. If the whole set of initial variables may be substituted by a subset of variables whose common variance covers a substantial share of the variance of the initial set of variables, then this reduced set of variables should be preferred. In our case, finding such a subset of variables would mean that the respondents indeed understood the

questions correctly and provided excessive answers. Thus we use PCA to find out whether there is indeed redundancy in the answers of the respondents (as it was intended).

For all the four blocks of questions the first two principal components (PC1 and PC2) explain at least 85% of the total variance. Thus, the three dependent variables in each block can indeed be replaced with only two variables. This confirms that the answers of the respondents were consistent.

2.3.2. Hierarchical Cluster Analysis

Since our whole sample of observations seemed to be heterogeneous, we applied a hierarchical cluster analysis to both sets of the independent variables: the social values and the social practices set.

Hierarchical cluster analysis is a technique for finding groups of similar (mathematically close) observations in a sample. The analysis is aimed at sample segmentation in order to reduce heterogeneity in the data.

Fig. 1. The Dendrogram of Social Practices Independent Variables

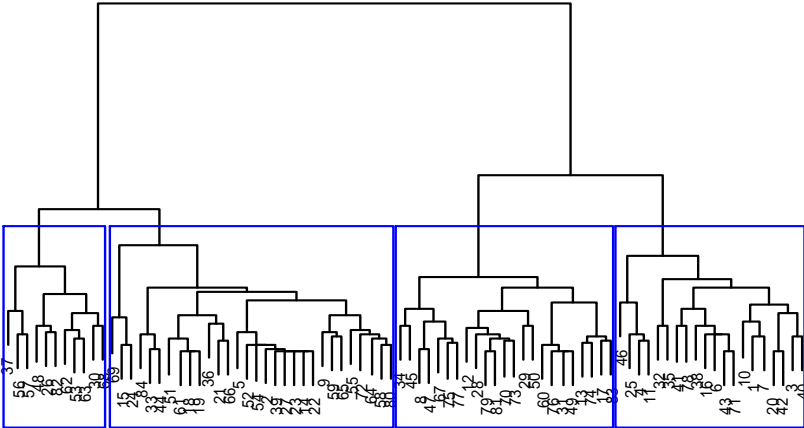
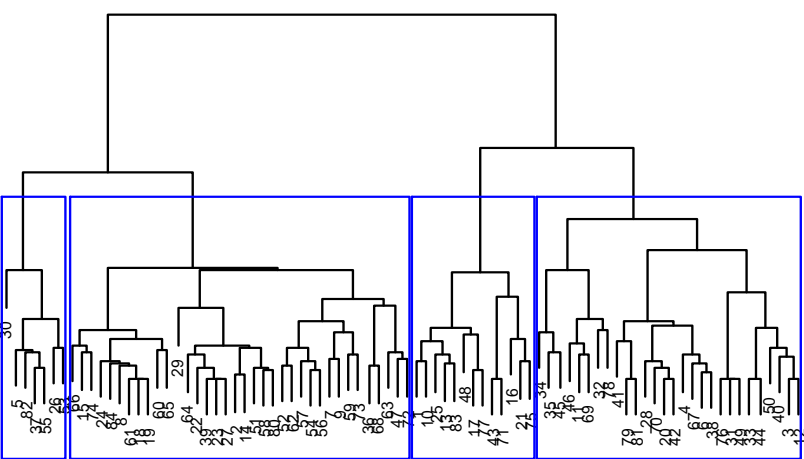


Fig. 2. The Dendrogram of Social Values Independent Variables



The resulting dendrograms are given in Figures 1 and 2. It can be clearly seen from this dendrograms that there are *four* prominent groups of observations (clusters) in our sample. Thus we proceed our analysis within these clusters.

2.3.3. The Linear Regression Approach

The main research technique that was adopted in this study is linear regression, which is run in each of the four clusters for both social values and social practices sets of variables. A typical equation in our study looks like this:

$$DV_i = \beta_0 + \beta_1 \cdot dGendEq_i + \beta_2 \cdot dInstCol_i + \beta_3 \cdot dInGroupCol_i + \beta_4 \cdot dPDI_i + \beta_5 \cdot dUAI_i + \varepsilon_i$$

Here *DV* stand for dependent variable which we have four: idea generation capability; tasks delegation clarity; tasks fulfillment timeliness; information analysis depth. The independent variables are the differentials of the following indicators: gender equality (*GendEq*), institutional collectivism (*InstCol*), in-group collectivism (*InGroupCol*), power distance (*PDI*), and uncertainty avoidance (*UAI*).

After estimation of each of the regressions, the necessary diagnostic tests were carried out. Specifically, we tested for heteroskedasticity of the residuals and, when necessary, robust standard errors were calculated. The main goodness-of-fit measure was the coefficient of determination (R^2).

3. Results and discussion

The results of running the above-described linear regression analysis are presented in Table 2.

Table 2. The results of linear regression analysis¹

Question №	Idea generation capability			Tasks delegation clarity			Tasks fulfillment timeliness			Information analysis depth		
	11	12	13	21	22	23	31	32	33	41	42	43
PDISV ²	+	-	-	-	-	-	-	-	-	-	-	-
	-	+	+	+	+	-	+	+	+	+	+	+
	+	+	+	+	+	+	+	+	-	+	+	+
	-	+	+	-	-	+	-	+	-	-	-	+
PDISP	-	+	-	-	-	-	-	-	+	-	-	-
	-	+	+	-	+	-	-	+	+	+	+	+
	+	+	+	+	-	+	+	-	+	+	+	+
	+	+	-	+	-	+	+	+	-	-	+	+
UAISV	-	-	-	-	+	-	-	+	-	-	-	-
	+	+	+	+	+	+	+	-	-	-	+	-
	+	+	+	+	+	+	+	+	+	+	+	+
	+	+	+	-	-	+	-	-	+	-	-	+
UAISP	-	-	-	-	+	-	-	+	-	-	-	+
	+	+	-	-	+	+	-	-	-	-	+	+
	+	+	+	+	+	+	-	+	+	+	+	+
	+	+	+	+	+	+	+	+	-	-	-	+
GenderSV	-	+	-	-	-	-	-	-	-	-	-	+
	+	+	+	-	+	-	+	+	+	-	-	+
	+	+	+	-	-	+	-	-	+	+	+	-
	-	+	-	+	-	-	+	+	-	-	-	+
GenderSP	+	+	+	+	-	+	+	+	+	+	+	+

¹ Green and red colours are marking respectively positive and negative coefficients that are statistically significant at the level of 0.20.

² “SV” in this table and further in the “Discussion” part is used as a shortened form of “social values”, “SP” as a shortened form of “social practices”.

	-	-	-	-	-	-	-	-	-	-	-	-
	+	+	+	+	+	+	+	-	-	-	-	-
	+	+	+	-	+	-	-	+	+	+	+	-
InstCollSV	+	-	+	+	+	-	-	+	+	-	-	+
	-	-	-	+	-	+	+	-	-	-	-	-
	-	-	-	+	+	+	+	+	-	+	+	+
	-	+	-	+	+	+	+	+	-	+	+	+
InstCollSP	-	-	-	-	+	-	-	-	-	-	-	+
	-	+	-	-	+	-	+	+	-	-	-	+
	-	+	-	+	+	+	+	+	-	-	+	+
	+	-	-	+	-	-	+	-	-	-	+	+
InGrCollSV	-	-	-	-	-	-	-	-	+	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-
	+	-	+	+	+	-	+	-	+	-	+	-
InGrCollSP	-	-	-	-	+	+	-	+	+	+	+	+
	-	+	+	+	+	+	+	+	+	+	+	-
	-	+	-	+	+	-	-	+	-	-	+	-
	-	+	+	-	+	+	+	+	-	+	-	-

The first noticeable result is a substantial excess of statistically significant SV coefficients quantity over the SP ones for nearly all the analyzed cultural dimensions except for the gender equality. This excess can be explained in the following way. Cultural dimensions as social values, in contrast to the cultural dimensions as social practices, can be interpreted as perceivably lacking traits of national culture (House et al. (ed.), 2004); thus, it can be suggested that the SP differentials increases can stimulate a positive effect of synergy of the cultural traits being sources of the national business cultures' effectiveness, while the SV differentials increase can cause the opposite effect of synergy of the traits that can be "problematic" for these cultures.

Thus, it can be supposed, that if the respondents due to the social desirability bias tend to characterize the described groups strongly positively in cases when their experience of working in these groups was not strongly negative (Bernardi, 2006), the detected dependencies between the respondents' answers and the SV differentials can really be explained by the above-described "negative synergy effect" that has more significant influence on the results than the "positive synergy", the signs of the influence of which can be distorted by this bias.

However, if such logic worked for all the cultural dimensions under scrutiny, among the statistically significant SV differential coefficients those with negative sign would be prevalent, showing the decrease in the cross-cultural groups' work effectiveness with increase in the cultural dimensions differentials.

As it can be seen from Table 2, this is true for such cultural dimensions as in-group collectivism and gender equality.

Speaking about the in-group collectivism cultural dimension, an interesting thing is that statistically significant negative SV coefficients are prevalent in all clusters except for Cluster 4, i.e., the cluster with the biggest average differential. This can be explained by a suggestion that for this cluster, SV differentials of other cultural dimensions exert strong influence opposite to that of the in-group collectivism differential increase. Looking at Table 2, the institutional collectivism SV differential seems to be the most obvious candidate for this. According to House et al. (ed.) (2004), in most cultures it is typical for institutional and in-group collectivism to be negatively correlated due to socially determined conflict of interests between the formalized social institutions and the small groups. It can be suggested

that the negative influence of the in-group collectivism SV differential on the cross-cultural collectives work effectiveness can be associated with the tendency of people comparatively low in in-group collectivism as a social value toward an opportunistic behavior in, e.g., student free-riding and relative forms, in groups consisting of people with different levels of this parameter (Ralston et al., 2014). Suggested opposite effect in Cluster 4 can be explained by the orientation of the people comparatively high in institutional collectivism toward following formal rules and regulations (Ching Gu et al., 2014), that in this cluster could be more important for the group's work than the "opportunistic" effect of the in-group collectivism SV differential increase.

Gender equality cultural dimension SV and SP statistically significant coefficient signs can be interpreted thuswise. According to House et al. (ed.), (2004), comparatively high level of gender equality as a social practice can be linked to predominant orientation on formal result achieving than on human relationships quality, which, conversely, can be linked to comparatively low gender equality level. Statistically significant gender equality SP differential coefficients can be seen in all the three questions of one dependent variable only for Cluster 2 and dependent variable of tasks delegation clarity. Consequently, it can be suggested that for this cluster the increase of comparative difference between the result and relationship orientation of the groups participants leads to decrease of the participants' mutual understanding levels, thus hampering the coordination of work. Analogous explanation can be suggested for statistically significant negative coefficients in particular questions of the "Tasks fulfillment timeliness" and "Information analysis depth" dependent variables due to these variables' dependence from the in-group coordination. Consequently, as the "Idea generation capability" variable depends on the in-group coordination least, all the gender equality SP differential statistically significant coefficients of this variable have positive signs.

It should be noted that for the "Tasks delegation clarity", "Tasks fulfillment timeliness" and "Information analysis depth" dependent variables, in various clusters positive statistically significant coefficients also exist, showing absence of significant influence of the above-described effect. Analogously to the relationships between the levels of institutional and in-group collectivism differentials in Cluster 4, it can be suggested that these are the results of different power of influence of various cultural dimensions for groups with different level of overall cultural diversity.

It is obvious that due to a great possible variety of such influences, the analysis of these calls for development of much more precise measurement instruments than the cultural dimension differentials analysis suggested in this paper; development of such instruments can surely be called an important direction of further research development in the field.

As for the gender equality SV differentials, an interesting result is that of presence of statistically significant negative coefficients at the questions of all the dependent variables in the clusters 1 and 4 and absence of such coefficients in Clusters 2 and 3, while having the statistically significant positive coefficients mainly in Cluster 2. As it was said above, SV differential increase can be potentially more strongly linked to in-group conflict situations than the SP differential increase due to the essence of SP cultural dimensions showing actually "strong" traits of national culture and SV cultural dimensions showing the lack of such traits. According to this, statistically significant negative coefficients of the gender equality SV differential in Cluster 1 can be interpreted as the results of a negative influence of the increase of this differential *ceteris paribus* in the groups culturally rather homogenous in other cultural dimensions. In more culturally heterogeneous groups this negative influence can be neutralized by other factors or even transform to a positive effect that can be demonstrated by statistically significant positive coefficients in Clusters 2 and 4; an in-depth inquiry into causes of such transformation also seems a potentially fruitful direction of further

research. Statistically significant negative coefficients in Cluster 4 can point to a higher in-group conflict potential and, thus, lesser results stability of the cross-cultural groups with overly high degree of diversity that can increase the group's sensitivity to the negative influence of *ceteris paribus* increase of the gender equality SV differential, as in Cluster 1.

For the cultural dimensions of power distance, uncertainty avoidance and institutional collectivism there is less statistically significant negative SV coefficients than SP ones, not supporting the suggestion of predominantly negative influence of the SV differentials increase on the groups work effectiveness.

However, the logic of signs distribution for these variables is close to that of the gender equality SV differentials, with prevalent distribution of the statistically significant negative coefficients in Clusters 1 and 4.

Thus, a proposition can be made that an optimal cultural diversity level for group work in various fields must be "moderate", not too small and not too large. To a certain extent this proposition can be called naïve and obvious; however, less obvious could be questions about specific "optimal levels" of different cultural dimensions for different types of group activity. Undoubtedly, this is one of the main directions of further development of the ideas of the research presented in this paper.

Among the coefficients of the "Power distance" independent variable, the most notable result seems to be the statistical significance of all the three SV coefficients for the "Tasks delegation clarity" dependent variable in Clusters 1 and 3. Interestingly, in Cluster 1 all the coefficients have negative signs (as well as several coefficients at the "Idea generation capability" and "Tasks fulfillment timeliness" dependent variables' questions), while in Cluster 3 all the coefficients have positive signs (as well as several coefficients at the "Idea generation capability" and "Tasks fulfillment timeliness" variables' questions).

For most clusters there is a visible trend of increase in the statistically significant positive coefficients quantity with the increase of cluster overall cultural diversity, but still negative coefficients can be seen in Cluster 4 at some the questions of the "Tasks delegation clarity" and "Tasks fulfillment timeliness" variables. So, the most significant result regarding the "Power distance" independent variable is that the SV differential increase for Cluster 1 has statistically significant negative influence on the tasks delegation clarity in the group, while for Cluster 3 the SV differential increase exerts statistically significant positive influence. In addition to the tasks delegation clarity, in Cluster 3 statistically significant positive coefficients are obtained for the questions of other dependent variables; it can subsequently be concluded that the most positive influence of an increase in the differential of power distance as a social value on the cross-cultural group work effectiveness is linked to the moderately high level of the group's cultural diversity.

As for the power distance SP differentials, there are no statistically significant coefficients for all the three questions of any of the dependent variables in each of the clusters; however, the presence of statistically significant negative coefficients in Clusters 1 and 4 and statistically significant positive coefficients at Cluster 3 can be noted, while Cluster 2 does not have any statistically significant coefficients. Such results, although with less quantity of the statistically significant coefficients, are rather close to the power distance SV differentials.

In both the SP and SV coefficients of uncertainty avoidance the first thing attracting attention is the excess of the statistically significant coefficients quantity in Clusters 1 and 4 over that in Clusters 2 and 3, analogous to that discussed above for other independent variables. In addition to that, a trend of having negative coefficients mainly in Clusters 1 and 4 while having positive coefficients mainly in Clusters 2 and 3 is also topical for this independent variable. Thus, it can be suggested that for uncertainty avoidance the above-described hypothetical mechanisms of positive influence of differential increase on the

clusters with moderate cultural diversity levels and negative influence on the clusters with both too low and too high cultural diversity levels can also work. However, as for the uncertainty avoidance there are no three statistically significant coefficients for all the three questions of any dependent variables in any of the clusters, detailed examination of this suggestion is a subject of research of a sample with greater number of respondents.

The institutional collectivism variable, finally, shows the following results.

Among the 14 statistically significant coefficients of the institutional collectivism SP differentials only two have negative sign: that at the first question of the “Information analysis depth” dependent variable in Cluster 1 and that at the third question of the “Tasks fulfillment timeliness” dependent variable in Cluster 4. Other statistically significant coefficients at Clusters 1 and 4 and the only one statistically significant coefficient in Cluster 3 (second question of the “Information analysis depth” variable) are positive. In Cluster 2 there are no statistically significant coefficients, like the power distance and institutional collectivism SP differentials, thus making it possible to suggest that the increase of these cultural dimensions differentials has the smallest influence on the group work effectiveness for groups with “moderately low” level of cultural diversity, somewhere close to the level of Cluster 2 in the presented research. Presence of the statistically significant coefficients in Clusters 1 and 4 both in the SV and SP differentials also supports the above-discussed suggestions about the positive effect of the moderate level of the cultural diversity.

4. Conclusion.

A goal of developing and testing a new methodology of analyzing in-group tensions in cross-cultural groups and these tensions’ effects has been reached in the paper by developing a methodology of analyzing the differentials of cultural dimensions values within cross-cultural groups. This methodology was tested on a sample of students doing projects in cross-cultural groups while studying at the GSOM SPbU institute. The analysis of the results allows getting an insight into the dynamics of intergroup tensions between group participants with different levels of cultural dimensions, and the influence of such tensions on the group work results; a number of suggestions about possible further research directions are also made.

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Vitaly Cherenkov
Graduate School of Management, St. Petersburg State University
cherenkov@gsom.pu.ru

Toward Conceptualizing International Logistics Management: Marketing Approach

Abstract: The academic disciplines – that are called as “International Logistics Management”, “International Management in Logistics Systems” or, in the most general case, “International Logistics” – are well-built now in BA and MA programs of universities/business schools. There is no doubt that the business actors and functions considered in the frame of the disciplines above play the key roles in managing international business. At the same time, our analysis of structure and content revealed in corresponding foreign and domestic syllabi and textbooks (teaching materials) has resulted in the following consideration – till now there is no any conventional and logically well-defined definition for the subject of International Logistics. The simplified formal approach dominates in such definitions. In most cases, functions of international logistics are considered as ones serving the supply chain that has its end points in different countries. Besides, the logistics always has been understood principally as an applied science. Perhaps, the said factors are the *raison d’être* that has made the international logistics not so well-conceptualized. In addition, some doubtful concepts could be found in the sources in Russian. For example, the logistics mix is understood as an equivalent of the well-known 7R mnemonic.

In the present paper, the genetic kinship between marketing and logistics is historically and logically justified. This justification is used to apply some marketing concepts for conceptualizing the international logistics management. The concept of marketing ecological balance is presented as the key one among them. Some appropriate models, substantiations, and definitions are given. The opportunity to rationalize structures/contents of relevant syllabi and textbooks (teaching materials) is considered as a practical value of the said conceptualization. Finally, taking into account the convenient understanding of marketing as technology and philosophy of business simultaneously, the said rationalization is expected to have a positive impact on formation of rational thinking of logistics managers in international companies.

Keywords: *7R-mnemonic, international logistics, logistics mix, logistics stakeholders, marketing approach, marketing ecobalance, target function*

1. Introduction

The prehistory of creating this paper has stemmed from the tasks the author was charged (2010-2015) as a member of working team in the Deutsche Bahn and Russian Railways Center for International Logistics and Supply Chain Management. These tasks consisted in developing teaching materials on International Logistics: corresponding syllabi (BA and MA levels), “International Logistics” section in the Internet-based “Encyclopedia on International Logistics and Supply Chain Management” (<http://ru.scm.gsom.spbu.ru/>), and the upcoming textbook – “Prolegomena of International Logistics”. While striving to search for the best precedent works to use them as patterns a lacuna of serious and rigorous conceptualization in the body of international logistics was revealed [Cherenkov, 2014]. This was the main reason for this painstaking and sometimes tedious work to find out more or less conventional (and rather well-argued) definitions, considerations, and opinions concerning to phenomenon of international logistics. First of all it was necessary to define the subject and nature of international logistics.

At the past GSOM-hold conference (2014), the following quotation – “The big problem is that so many do not actually understand what logistics is.” [Dzhingarov, 2014] – was included in my paper “*International Logistics Management: From Subject to Lean Syllabus and Effective Teaching*” [Cherenkov, 2014a]. It is necessary to say that this quotation seems to be valid till today. We are not so courageous to join absolutely without doubts to this very bold statement. However, as it seems to us, this statement could be fully applied to the case of understanding international logistics. They have very wide range of understanding international logistics. A mechanically straight approach gives, to our mind, a super simplified output: “International logistics involves the management of these resources in a company's supply chain across at least one international border” [What Is ..., 2015]. This addition – concerning to the obvious fact of crossing *at least one international border* – to the classical convenient CSCMP definition of logistics [ibid] can hardly internationalize the object defined for the purpose of better understanding scope and sense of international logistics. On the opposite side of the trial to understand international logistics a descriptive approach takes place [David, Stewart, 2010, p. 51.]. These authors having passed through a number of business functions took place in international trade operations gave an obvious evidence that the canvas of international trade and – in more wider context – international business is well-reinforced by international logistics functions. Factually, their textbook is about “The Management of International Trade Operations” – i.e., its subtitle could be considered as a body of international logistics. Finally, in accordance with the “consolidated and refined model of knowledge areas of logistics professionals” [Niine, Koppel, 2014] the subject of logistics covers all possible coins of business. Next step in this “logistics expansion” could be seen in the “meta-model of logistics knowledge areas” [ibid]. The processing of so significant number of curricula on logistics presented in this just cited work deserves our respect but, unfortunately, does not give any answer concerning the subject of international logistics. Nevertheless, we agree with one of conclusions – “differences between logistics curricula can be substantial” [ibid]. This conclusion is similar to our

one that was made after having analyzed about a dozen of syllabi on International Logistics [Cherenkov, 2014b]. Therefore, neither narrow nor wider approaches could explain and delimit the subject of international logistics.

Unfortunately, many of contemporary academics do not pay sufficient attention to methodology of their researches and their works often suffer from their empiricism. The last consideration has a pragmatic output – before to elaborate syllabus and/or textbook it was necessary to understand and define clearly (for himself or herself) the subject of the discipline under consideration and main concept to get started with.

To make this work done it was decided to begin from – very popular before in the home methodology – the principle of dialectic *unity of historical and logical approaches*. At first, the hypothesis of genetic proximity between logistics and marketing was formulated. *Historically*, the proximity if not identity between marketing and logistics existed. More than one century ago S. Sparling [Sparlig, 1906] – assistant professor of political sciences from University of Wisconsin [as they say – motherland of the “marketing” term as academic discipline] defined marketing as the “those commercial processes that are concerned with the distribution of raw materials of production and finished output of the factory... Their function is to give additional value to these commodities through *exchange* [made in italics by **V.Ch.**]” (quoted in [Gripsrud, 2004, p.192]). The content of this definition reminds the logistics definition, isn’t it? Then, the scrupulous analysis of the understanding distribution network evolution partly focused on the separation of marketing and logistics [Gadde, 2010] wherein it was stated that “integration between logistics and marketing remains an unresolved issue since ”marketing academics have been slow to rise to the occasion of combining logistics research into their studies of channel systems” [Alvarado, Kotzab, 200].

To finalize this passage concerning the genetic proximity of marketing and let us glance at the graphical presentation of the SCM evolution (Fig. 1) and read a couple of very old definitions of marketing(quoted in [Gripsrud, 2004, p.190] **with our bold font highlighting [V.Ch.]**. First one (left frame below) was coined by American Association of Marketing in 1935 and second one (right frame below) was published in 1958 [Holbæk-Hanssen, 1958]. At the end of this game with definitions compare this pair with one coined by CSCMP.

<p>Marketing is a series of activities which are involved in the flow of goods from production to consumption.</p> <p style="text-align: right;">[1935]</p>	<p>Marketing is the performance of business activities that direct the flow of goods and services from producer to consumer or user.</p> <p style="text-align: right;">[1958]</p>
<p>Logistics ... part of Supply Chain Management that plans, implements, and controls the efficient, effective forward and reverse flow and storage of goods, services and related information between the point of origin and the point of consumption in order to meet customers' requirements.</p> <p style="text-align: center;">as defined by The Council of Supply Chain Management Professionals (CSCMP)</p>	

1960s: Fragmentation	1980s: Evolving Integration	1990s: Total Integration	2000s and further
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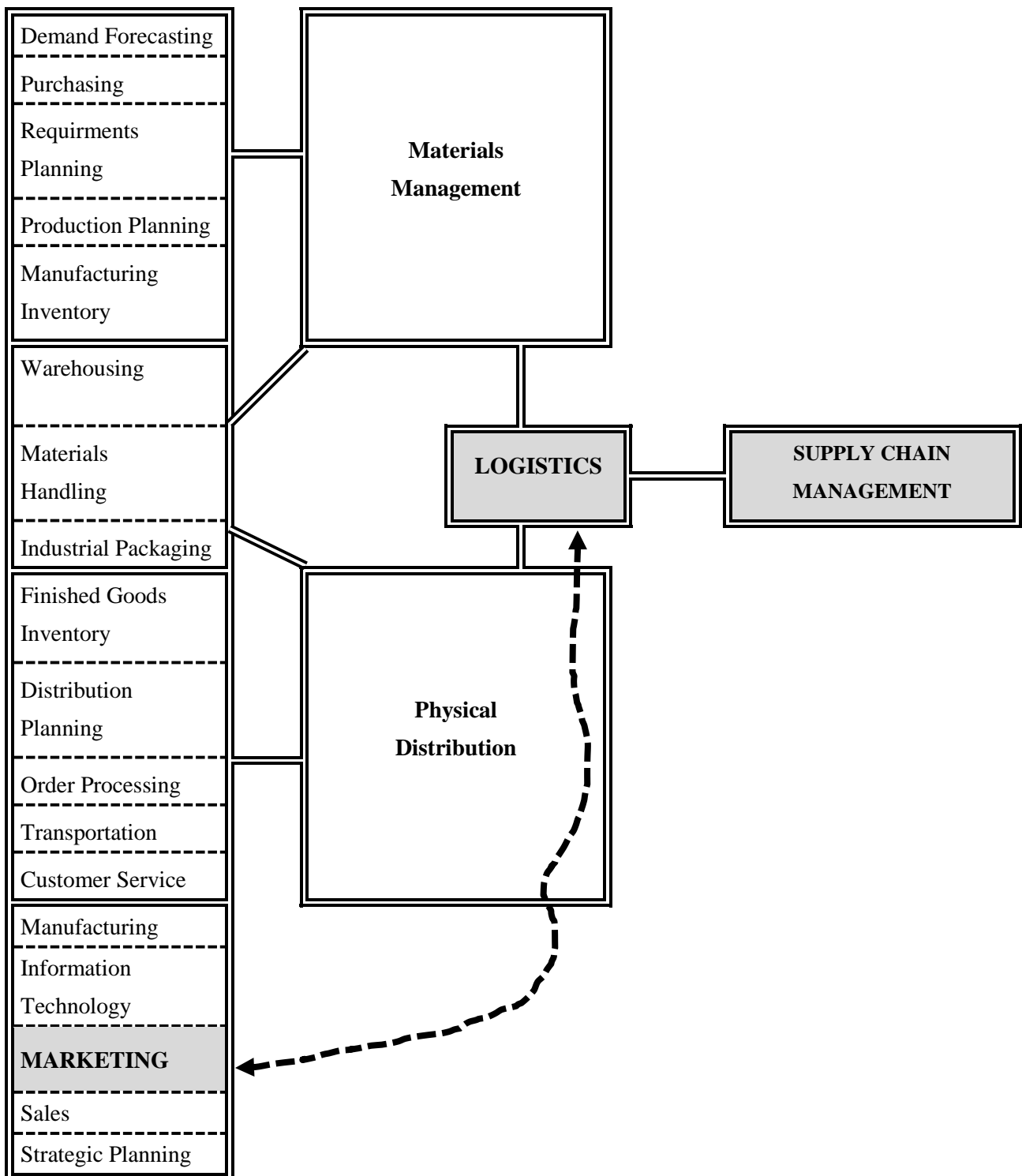


Fig.1. SCM Evolution

Source: [Battaglia,1994] (with our design)

Therefore, the history of marketing thought – in full conformity with the Gripstrud’s subtitle of his conceptual article (“*Time to regain lost territory?*”) [Gripstrud, 2004] – confirms the genetic proximity of marketing and logistics.

On the other hand, logistics and marketing have the exchange as their initial and basic category. The statement concerning the core place and meaning of exchange for the marketing theory – beginning from the cult article by Richard Bagozzi [Bagozzi, 1975], who has published 10 works concerning [marketing] exchanges till 2010 – was so many times discussed and justified [Cherenkov, 2013] that does not demand any additional considerations herein. It should be quite sufficient, in our mind, to conclude *logically* that marketing and logistics have the said genetic proximity or kindred. To support this conclusion we use the following survived for 40 years quotation [Bagozzi, 1975]: “It is not so much that the subject matter of marketing overlaps with that of other disciplines as it is that the problems of marketing are universal”.

1. Marketing approach to conceptualizing international logistics

Since the genetic kindred between marketing and logistics is proved above it is necessary to explain using of “marketing approach” in conceptualizing the subject field of international logistics. At first, it is necessary to say that the way to developing a conventional understanding of the marketing approach was long and hard not only in Russia but also abroad [Lynch, Whicker, 2008]. However, it is typical situation for processes of creating, coining and – the very main point – adopting any of conventional core definition. Nevertheless, the “marketing approach” collocation became “in vogue” in Russia. Sometimes they used this collocation with the only purpose to decorate an article “scientifically” [Belousova, 2011]. On the other hand, the marketing approach is understood by academics/practicians as the acceptance of the marketing concept by companies. This viewpoint could be found in some articles/textbooks in explicit [Filipović et al., 2000] as well as in implicit [Gontcharuk, 2001; Goldstein, 2003] forms. The main criterion of the marketing approach is considered as to be oriented on consumers.

At last, in one work [Asaul, Грaхов, 2007, p.4], we have found a constructive formulation of the marketing approach. The latter is considered as “a way to **adapt** real business actors to market characteristics (**marketing environment**), where the most important element is presented by a set of consumers – market demand carriers. The implementation of marketing approach principles into practices of management creates the marketing management system that could be identified as the management system using the **integration** principle [*bold font is made by V.Ch.*]. There are some items – namely, “adaptation”, “marketing environment”, and “integration” – that are could be considered, in our opinion, as reasonable contributions to defining subject and target function of international logistics. In spite of the critics on the marketing mix concept in the light of relationship marketing [Gronroos, 1999] we consider this old and solid tool of Cartesian marketing [Ambler, Styles, 2000, p.9-12] as a good framework for functionalistic solution where – on the way to building the logistics mix – the controllable variables of the marketing mix are to be substituted for logistics functions.

Turning to the marketing approach we propose – due to genetic kindred between marketing and logistics – to apply marketing concepts and tools to conceptualizing other business disciplines in the frame of this approach. Understanding marketing as philosophy and technology of any contemporary business is accepted in the world marketing community [Baker, 1976] including its Russian part [Cherenkov, 1998; Bagiev et al., 1999; Shevchenko, 2011]. This understanding also supports the application of marketing approach in the logistics. Besides, interdisciplinary connections between marketing and logistics [Grudney, 2002] promise to make this approach acceptable for the conceptualization of international logistics. This approach should be of use for such academic disciplines as “Marketing Logistics” [Kiryukov, 2006], “Theory of Innovations” [Cherenkov, Tolstobrov, 2007], “Supply Chain Management” [Kiryukov, Krotov, 2007; Krotov, 2010].

As a result, having omitted the chain of interim arguments and substantiations, we had made two trials to define the subject of international logistics to be understood as the keystone in the sought-for dome of international logistics concepts. The last revised version of this definition was constructed recently [Cherenkov, 2015] – where the concept of logistics stakeholders [Sustainable ..., 2002; Lumbert, 2004; Trade Logistics ..., 2010; Hult et al., 2011; Klaus, Müller, 2012]] is built-in – is the next one:

*The **subject of international logistics** covers a set of international logistics stakeholders and their actions and interactions focused on performing corresponding logistics functions/operations devoted to manage rationally the conjunct cross-border bi-directional movements of international contracted logistics flows (product, financial, information, and documentary ones) that could be achieved by matching the components of original (home) logistics mix with logistically significant dimensions of the host marketing environment with the aim of decreasing logistics risks and transaction costs.*

or – to concentrate an attention – more laconic one:

*The subject of **international logistics** – the discipline studying the efficient management of international movements of products, financial resources, information, and supporting documents, achieved by coordinating national shipping and communications systems to the logistics peculiarities of host countries with the aim of minimizing logistics risks and transaction costs.*

2. Main concepts of international logistics proposed

The “found right” to apply marketing approach to conceptualizing international logistics permits to transplant the marketing mix concept – and some other marketing concepts – onto the field of international logistics. However, first of all, it is necessary to define the said logistics mix. As a pair of precursors of the logistics mix concept we could mention a set of logistics functions [David, Stewart, 2010, p. 51.] and a set of LPI-indicators (Logistics Perfor-

mance Index) [Arvis et al., 2007].

It should be noted that there was revealed a sort of “semantic confusion” concerning the “logistics mix” term in Russia. Somebody has coined this term in full identity with the well-known in logistics community 7R-mnemonic. This understanding is now widely disseminated in Russia [e.g., Moiseyeva, 2008; Sterligova, 2008; Meshalkin, 2011; Introduction to Logistics ..., 2015; etc.]. However, we define the international logistics mix as an adjustable *dynamic* tool by analogy with the marketing mix that is the set of controllable marketing variables. 7R mnemonic, in its turn, represents a final result or static 7-dimensional “right constellation” (product, quality, price, quantity, place, time, and consumer). Nevertheless, there is an opposite and more suitable, in our mind, approach [Ferne, Sparks, 2004; Logistics in Russia, 2014; Lynch, 2014]. This approach and our own considerations result in the following definition:

International logistics mix – a set of logistics functions/operations that provides cross-border product movements in accordance with essential terms and conditions of international sale contracts adjusted to specifics of the logistically significant dimensions of marketing environment in the host (destination) country.

Taking into account a huge volume of the “paper work” supporting any international operation, the definition of the codified international logistics mix has following formulation:

Codified international logistics mix – a contract package and supporting documents/procedures that are necessary to realize legal, effective cross-border movements of complex logistics flows (product, financial, and information) providing to the integrity of corresponding global supply chain (branch of network).

Finally, it is proposed – in spite of the fact revealed [Cherenkov, 2015] of the synonymy between “international logistics” and “international logistics management” – to use the formal definition for the latter constructed on the basement of the marketing ecology concept [Majaro, 1993, p.41; Cherenkov, 2002], completed by our definition of the target function of international logistics:

International logistics management – intrinsic part of the global supply chain management consisting of planning, implementing, and controlling the components of international logistics mix to match them with logistically significant dimensions of marketing environment in the host country.

Target function of international logistics management –integrating cross-border parts of global supply chains provided decreasing international logistics risks and transaction costs.

When it comes to international or global logistics and supply chain management, there seems to be much less unanimity about the domain, concepts, and topics that should be included. Despite the growing importance of the topic, there are quite few textbooks on international or global logistics and/or supply chain management, and in some cases the books that claim to be international primarily deal with general logistics and supply chain issues. It is also not very easy to draw clear lines between the concepts and domains of international and global logistics – in international business literature there are also controversial definitions of these concepts present.

3. Conclusions and Implications for Future Research

This paper is presented to show a framework for conceptualizing the content of international logistics and supply chain management accumulated till today. We would like to state that this process is undeservedly underdeveloped and demands organizing future researches. One detailed study [Schramm, Juga, 2009] refilled by our own findings for recent years gives the following suggestion – there is, till now, much less unanimity about the domain, concepts, and topics that should be included into international or global logistics and supply chain management. “Despite the growing importance of the topic, there are quite few textbooks on international or global logistics and/or supply chain management, and in some cases the books that claim to be international primarily deal with general logistics and supply chain issues. It is also not very easy to draw clear lines between the concepts and domains of international and global logistics – in international business literature there are also controversial definitions of these concepts present” [ibid]. Supporting this conclusion, the following field of works is planned to be fulfilled:

- screening and analyzing similar works on topics related to conceptualizing scholar and practician papers/textbooks in the field of international logistics and supply chain management;
- redesigning appropriate syllabi and testing them in the real teaching process;
- continuing work on “Prolegomena of International Logistics” textbook supported by corresponding international logistics cases
- building the International Logistics terminology paradigm in form of glossary where English terms are presented per each Russian item.

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Natalia I. Cherenkova
Economic English Department #2
Saint-Petersburg State University of Economics
iflen3@finec.ru

Vitaly Cherenkov
Graduate School of Management, St. Petersburg State University
cherenkov@gsom.pu.ru

On the Development of a Method of Assessing and Improving Skills in Verbal-Communicative Management of Students Involved in Teaching in English

Abstract: The present paper is aimed to the method for decreasing in some degree the ambiguity that emerges in assessing performance of education in many of Russian economic universities and business schools where English has become a carrier in delivering knowledge how to arrange and manage [international] business. The method is based on using – well known in the cognitive psychology – the theoretical model of “filter of the mind”. The main purpose of the method presented herein is to try to separate teaching/learning quality assessments while professional and English competencies (quantum of corresponding knowledge/skill) are twisted together in delivering, for example, lectures on International marketing. Organizational outputs in the present research are concentrated in organigrams of coop between English department and professional discipline department where main technological flows and tasks are incorporated. In conclusion the initial results and main problems revealed are given as well as the directions for future researches. The said model was used to arrange the procedure of twice repeated testing that is coherently managed by the business discipline department and the English department in accordance with their collaboration plan. Test materials were presented by the content of mid-term exam and 4 topic quizzes included in the syllabus on International Marketing. Schemes of interaction between the said departments and corresponding procedures of processing test data are also presented. In our opinion, the preliminary outputs permit to conclude that the method proposed is basically suitable for assessing and improving student skills in the field of language management. Besides, the side effect of accelerated updating the joint teaching materials is noted. Some restrictions of the said outputs are given and directions of future researches are drafted.

Keywords: *assessing quality, cases, English, “in-parallel teaching”, improving skills, joint teaching materials, mind filter, pedosynergy effect,*

On the Development of a Method of Assessing and Improving Skills in Verbal-Communicative Management of Students Involved in Teaching in English

Natalia Cherenkova

Vitaly Cherenkov

“Knowing English is like possessing the fabled Aladdin’s lamp, which permits one to open, as it were, the linguistic gates to international business, technology, science and travel. In short, English provides linguistic power”.
[as cited in McKay, 2006, p. 117]

1. Introduction

English has been taught in Russian universities as the most common foreign language since the end of the Second World War. However, in the post-Soviet period, namely, English has become the medium of teaching in advanced Russian business schools and economic universities. Since the 1990s, both subjects of the present paper – teaching English in Russia [Proshina and Lawrick, 2009; Timin and Mileyeva, 2014] and teaching in English in Russia [Frumina and West, 2012; Wilkins and Urbanovič, 2014] – have attracted a great attention of both English Dpt. teachers [hereinafter referred to as the “teacher”] and learners. Sometimes, while including «real» English, the invited foreign instructors of Business Dpt. [hereinafter referred to as the “instructor”] are involved to teach Russian economic students in English [Students..., 2015]. However, the main part of courses taught in English is delivered by Russian instructors. For example, there are 42 courses delivered in English for BA students in Graduate School of Management [GSOM] of St. Petersburg State University in 2014-15 a.y. or about 26%. Only 4 of them were delivered by invited foreign instructors. The unique for Russia – having the 56 FT ranking [Business..., 2014] – GSOM’s “Master in Management” Programs (former Master in International Business) have been offered in English since 1997 [Fig. 1]. The program courses are delivered by 26 Russian and 9 foreign instructors (74% and 26%, respectively) in 2014-15 a.y. These programs are delivered according to the ECTS, that provides international comparability of educational programs, facilitates mobility and academic recognition of students across Europe. Besides, master students are given a unique opportunity to take an internship/summer employment experience at one of foreign corporate partners of GSOM. The case of GSOM is not a unique one in Russia. St. Petersburg State University of Economics (SPSUE) also has MA and BA programs delivered in English (http://www.finec-pskov.ru/news.php?id_new=161). Such programs are very attractive for students in the light of their future job and career. Therefore, – though two schools are only mentioned herein – teaching in English is a definite aim for many advanced schools of Russia [Voyevoda, 2013].

1 st Semester [30 ECTS]	2 nd Semester [30 ECTS]	3 rd Semester 30 ECTS]	4 th Semester [30 ECTS]
Focus on competencies in general and strategic management	Focus on professional competencies	Focus on developing knowledge and skills in the area of professional concentration	
MASTER IN MANAGEMENT			
General Track [no concentration]			
Introduction to Business and Management	General Electives, e.g., ⇒ Global Economic Environment ⇒ Supply Chain and Operations Management	Electives / Semester Abroad, e.g., ⇒ Marketing of Innovative Products ⇒ International Accounting and Analysis	Integrative Courses, e.g., ⇒ Strategic Leadership ⇒ Strategic Marketing
Core Courses in Management, e.g., ⇒ Corporate Finance ⇒ Organizational Behavior ⇒ Contemporary Strategic Analysis ⇒ Managerial Economics	Concentration Track [International Business, Information Technologies & Innovation Management or International Logistics & Supply Chain Management]		
	Semester Abroad in: e.g., ⇒ ESADE Business School, Spain ⇒ McGill University, Canada www.gsom.spbu.ru	General Electives and Specialized Electives, e.g., ⇒ Inventory Control and Management ⇒ International Marketing	Integrative Courses, e.g., ⇒ Advanced Supply Management ⇒ International Financial Management
Foreign Language - French, German, Russian, Spanish			
Research Seminar & Skills Seminars			
		Internship	Consulting Project
		Master Thesis	

Fig. 1 : Generalized Layout for GSOM Curriculum of MA Programs in English

Source: www.gsom.spbu.ru – reduced and redesigned by authors

Factually, English has become the real *lingua franca* [Hülmbauer et al., 2008; Pilkinton-Pihko, 2011; Cherenkov, 2011] for people involved in international business regardless of their nationality. Due to this fact an artificial or adopted bilingualism is now the reality not only in the Europe-

an Union but in Russia and without any doubt it represents an asset for Russian students on the labor market. Especially, if these students are going to work in international companies, joint ventures or, simply, have business communications with overseas counteragents, clients or partners. The main flow of international business knowledge (except Russian law norms and rules) is presented in English and contemporary advanced Russian business schools increasingly deliver lectures and moderate workshops using foreign visiting lecturers and/or English speaking Russian ones. While internationalizing Russian higher education system the share about 30% for invited foreign instructors is declared as a desirable performance parameter. Prestigious Russian universities have very high requirements to communication skills in English. For example, students of National Research University “Higher School of Economics” (Moscow) have to pass International English Language Testing (IELT) and Business English Certificates (BEC) exams since 2012 [Development..., 2012, p.28]. The communicative concept [Jendrych, 2011; Ahmad and Rao, 2013] of teaching English dominates now in many Russian universities [Kryukova, 2011; Ryabukhina, 2013] and this pedagogical view is fully shared by the authors.

Striving to inspire students’ learning activity and to help students to overcome their anxiety about learning and using English, teachers have developed a set of innovative pedagogical approaches to teaching English (now sometimes called as Globish). The said approaches differ from the multiple hi-tech innovations of the Digital Era (off-line multimedia teaching-learning facilities, adjusted to English web-sites, MOOCs, SKYPE, searching machines, Wiki facilities, Web-Quests, blogs, etc.). These innovations are based on smart combinations of newly designed and/or well-forgotten old pedagogical decisions [Cherenkova, 2006, 2015] and could be classified as low-tech innovations [Cherenkov et al., 2014]. However, taking into account – as it was said above – that the main part of lectures/workshops are delivered/moderated in economic universities/schools by such domestic instructors to whom English is not their mother tongue a common problem could be faced. This common problem is the quality of communication in “instructor-students” channels. Quantifying the quality of translation [Mossop, 2007] is rather hard to be executed. Quantifying the quality of knowledge transfer [as in the case of teaching-learning in English] is expected to be a more sophisticated task.

It is thought [Victor, 1992] that “language, if not the most important hurdle in cross-cultural communication, is probably the most obvious impediment to efficient international business communication”. The items concerning the role of language in the international communication system are in the body of the theory of so-called language management. Note that such term as “verbal-communicative management” [Danueshina, 2011] is considered by the authors as a more adequate one in Russian. The present paper is aimed at showing how to monitor and improve the process of teaching business disciplines in English from two viewpoints – English skill level achieved and business discipline knowledge retained by students. The main problem to be resolved is an initial and unavoidable deterioration of teaching quality due to the fact that English is the mother tongue for neither instructors nor students.

Therefore, permanent monitoring of teaching in English – based on recurrent testing business

knowledge retained – is of great interest. Poor business discipline knowledge being delivered in English is predetermined by poor English skills. However, it is important to find out what and where student weaknesses are – in English skills or in business discipline knowledge. The concept of “filter of the mind” – that is known in cognitive psychology – is used to design our model of two-stage mind filtering input information. Seeing the filter of the mind or mental filter has been adjusted by the earlier acquired knowledge, the band pass of the first stage of the said filter will have to be defined by student’s English skills and the band pass of the second stage – by his or her retained knowledge of a business discipline. It is expected that jointly [i.e., English and professional departments together] developed and applied teaching materials in English [e.g., cases] appeared a source of so-called “pedagogical synergy” [Cherenkova, Cherenkov, 2015] that resulted in increasing the teaching quality with the constant time budget.

2. A Brief Survey of Literature

Teaching business discipline in English has received a very wide development in advanced Russian economic universities and business schools for recent years [Chukhlomin and Chukhlomina, 2013; Legasova, 2015], partly it was done due to the Bologna process [Belov, 2005]. The same situation takes place in so-called newly independent countries [NIS] that were formed as a result of dissolution of the USSR and Yugoslavia in the early 1990s; there are approximately 1,000 newly opened business schools in the NIS [Keiser, 2013]. Russian experience in teaching in English has many problems similar to ones of NIS countries [Tender and Vihalemm, 2009; Zaščerinska, 2011; Tarnopolsky and Goodman, 2012]. As it is known [Mainela et al., 2005; Mattisson, 2010; Pilkinton-Pihko, 2011; Reddy and Phil, 2012], the natural and unavoidable consequence of the total globalization has created multiple problems for teaching in English not only in NIS countries but in many other non-Anglophone countries. However, while narrowing the said set of problems we have to be focused herein on existing till today “inadequate language skills and the need for training of indigenous staff and students” [Coleman, 2006, 6]. It should be clear, that not only a students’ level of English knowledge but also an instructor’s level of the “teaching in English” skill is crucial in achieving necessary/satisfactory level of learning in the field of business discipline delivered in English. When expecting the future benefits for students included in business education programs delivered in English it should be taken into account that the initial period of implementing such programs has a high probability of deteriorating their performance. A decrease in the content quality due to limitations in instructors’ and students’ English proficiency was found [Gustafsson and Räisänen, 2006, p.11]. Such scarce proficiency could be found in many Russian economic universities and business schools, where decreasing of the education quality is noted [Frolov, 2011]. And, the farther from metropolitan regions [Moscow and Saint-Petersburg], the less these proficiencies are. As a result, there is a share of pessimism concerning English as a carrier in delivering business disciplines in non-Anglophone countries: “This is true that a master program in English is ranked more higher on the market.

However, whether this program is the best one in terms of the quality of education?"[Currivand and Truchot, 2010]. Therefore, some benefits and caveats could be revealed in teaching business disciplines in English. And the teaching quality could suffer from a poor communication channel arranged where a knowledge carrier is presented by English but neither sender [instructor] nor receiver [student] are native Anglophone persons.

Assessing teaching-learning performance attracts permanently attention of supervising agencies [Teaching ..., 2014] and research organizations [Darling-Hammond and Falk, 2013]. However, the most popular tools for such assessments are presented by different assessment tables and/or assessment questionnaires. As it is easy to note using both these tools has the distinct subjective nature and hardly depends on interviewer/interviewee preferences and opinions. Putting aside long-life discussions concerning items of quantifying teaching-learning quality [Berk, 2005; Powell-Davies, 2012; Tumour, 2013] the authors have designed a complex procedure for assessment/adjustment of teaching business disciplines in English. To design the said procedure, the core concept of the "filter of the mind" [Lesikar and Pettit, 1989, p.20-21] was modified to realize the double filtering process that corresponds to two stages of processing messages comprising business discipline knowledge delivered in English. Besides, the old linear model of communication [Schramm, W., 1955; Shannon, and Weaver, 1962] was added by the "Two-Stage Mind Filter" (Fig. 2.).

Then, there is not only an academic opinion doubting that the education in English should be the best one [Currivand and Truchot, 2010] but the following practical/theoretical conclusion leads to the same suggestion. Indeed, any quantum of knowledge passing through chains of communication channel has losses at each chain unit. A simple model of "knowledge transmission process" [Joshi, and Salunke, 2006, p.8., fig.1.] shows that such losses are being accumulated in the communication channel due to instructor or teacher related factors at the sender's side and students related factors at the receiver's side, respectively. The subject of consideration herein is restricted by the receiver's side only.

Therefore, any "instructor-student" communication channel has a tendency to de-crease a knowledge transmission ratio created by both parties of communication (teaching-learning channel). Let the "ideal" transmission ratio (TR) be equal to 1,0. Neither instructors nor students being physical items could be assessed as the encoding-decoding units of the teaching/learning communication channel with $TR = 1,0$. Consequently, as it is well-known from the theory of electrical engineering [Reznikov, 2011] a general transmission rate (TRG) of a circuit composed from two stages with transmission rates TR_1 and TR_2 , respectively, is equal to $TR_1 * TR_2$. Therefore, even if both, an instructor and a student, have $TR = 0,9$ their general transmission ratio (TRG) has its theoretical maximum as 0,81. However, while instructors and students are communicating in English as Second Language (ESL) the said maximum could be never achieved. This simple example has to show that designing a system for assessing/adjusting teaching-learning process is a very important task for getting to high performance of education in English.

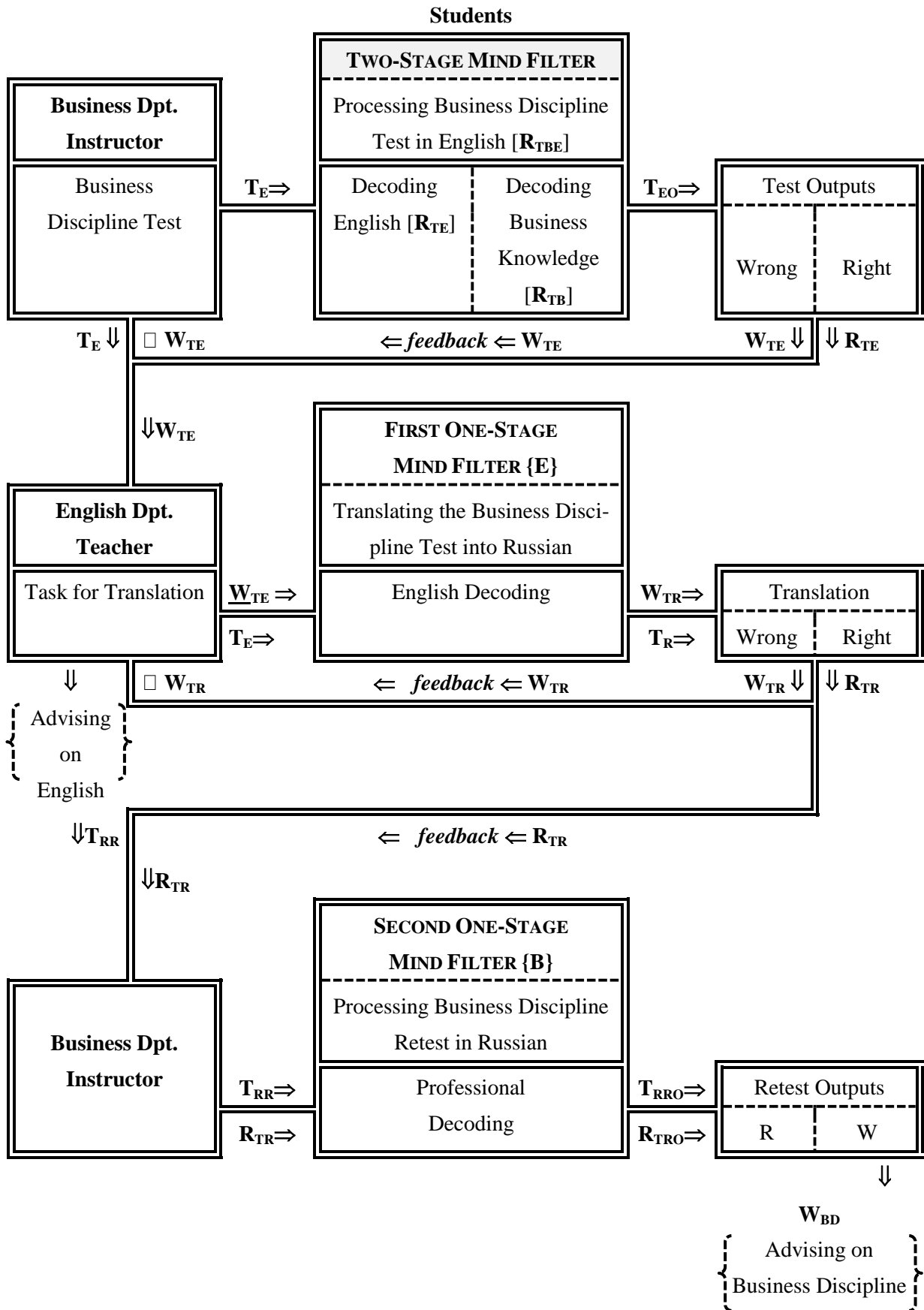


Fig. 2 : Decomposing the two-stage mind filter for separate assessing English and business discipline competencies while the business discipline is delivered in English

LEGEND for Fig. 2.:

- T_E - full set of Business Discipline Test items in English;
- R_{TBE} - transmission rate of “Two-Stage Mind Filter” while processing Business Discipline Test in English;
- R_{TE} - transmission rate of “First One-Stage Mind Filter” while Decoding English;
- R_{TB} - transmission rate of “Second One-Stage Mind Filter” while Decoding Business Discipline;
- T_{EO} - outputs of Business Discipline Test in English;
- W_{TE} - wrongly answered items of Business Discipline Test in English;
- R_{TE} - correctly answered items Business Discipline Test in English;
- \underline{W}_{TE} – reduced Business Discipline Test in English composed from wrongly answered test items (reduced option);
- T_E - complete Business Discipline Test in English (full option);
- $\{E\}$ – knowledge of English;
- W_{TR} – wrongly answered items of Business Discipline Test in English translated into Russian (reduced option);
- T_R - complete Business Discipline Test in English translated into Russian (full option);
- T_{RR} - reference Business Discipline Test in Russian (full option);
- R_{TR} - correctly translated items of restricted Business Discipline Test in English (reduced option);
- $\{B\}$ - knowledge of Business Discipline;
- T_{RRO} - outputs of Business Discipline Test in Russian (full option);
- R_{TRO} - outputs of Business Discipline Test in Russian composed from correctly translated but wrongly answered before items of initial Business Discipline Test in English (reduced option).

3. Methodology and Data

As usual *teaching English* is considered as just switching from Russian to English in artificial (classroom) or real communicative environment. However, *teaching business in English* is really “learning both the language and non-language content in the same learning environment” [Marsh, 2002]. Therefore, the subject of business knowledge delivered in English is factually twice-encoded by an instructor for Russian students receiving this knowledge. We consider herein a case where the communication channel described above has Russian persons both at the sender’s side [instructor] and at the receiver’s side (student). This is the reason why there is *twice-coding* and *twice-decoding*, respectively. Therefore, in the frame of the real teaching-learning process, business discipline knowledge (BDK) signal – twice-coded by an instructor – is received by students. Students have a reversed decoding process (“Two-Stage Mind Filter” – Fig. 2.): first, a Russian student has to translate this BDK-signal and, after this first “decoding” has been done as an adequate translation, and has to understand the sense and scope of the said BDK-signal (second-stage “decoding”). As a result, a student taught in English cannot theoretically receive a full volume of knowledge intended to be retained in accordance with a corresponding business discipline syllabus. This is true due to so-called “non-intentional inter-

ferences” that result in misunderstandings and/or errors in communications between an instructor and a student. The main pedagogical problem to be resolved is to find out the roots of the said misunderstandings and/or errors. Where do they stem from? What is more crucial, either a poor English skill or poor knowledge of business disciplines? Suppose students have a good or even perfect knowledge of English. Thus, the knowledge of a business discipline is the only decisive factor in deteriorating the quality of teaching/learning. However, in fact, students [we ignore an instructor’s impact for simplification] retain a quantum of business knowledge with losses the reasons of which are inseparable in perception of an instructor. However, in the process of teaching in English arranged in an economic university it is very crucial to reveal where weaknesses take place (English skill or business knowledge) and where adjustments are to be made first and foremost (English Dpt. or Business Discipline Dpt. – Fig.3.).

The mid-term exam (MTE) – e.g., included in the “International Marketing” (IM) syllabus – gives a good opportunity to apply the two-stage mind filtering tool being explained herein. A considerable part of the MTE-test consists of so-called “closed questions” well-correlated with the IM-knowledge delivered before the said MTE-test and is presented by such standard items as “Definition-Term”, “False/True”, “Multiple Choice”, and “Missed Words”. All MTE-test items (Table 1.) were extracted from many original, open access English/American sources. This fact permits to exclude the negative impact on the rest content from the side of an instructor’s poor English. Besides, the “closed” nature of MTE-test items demanding practically univocal answers helps to resolve the problem of quantifying the quality or searching for appropriate assessment metrics [Weiler, 2008; Turkan et al., 2012]. The course of initial MTE-testing is presented in Fig. 2. – See its upper part with “Two-Stage Mind Filter”.

Table 1:

Example of Item Classes included in MTE or Current Quiz

Mid-Term Exam or After Session Quiz Content		Quantity of Items	Time Exposure [seconds]
Class of Items	Example of Item		
Definitions [Lectures]	The behavior patterns, beliefs, and all other products of a group that are passed on from generation to generation.	10	20/200/200
False/True	Culture is the only portion of the human environment that is "man-made."	10	20/200/400
Multiple Choice	Which of the following "resources" is inexhaustible? [A – technology; B – petroleum; C – ore; D –gas]	10	30/300/700
Missed Words	Customers who purchase a camera are buying more than just a camera they are purchasing “WORD”.	10	40/400/1100
Definitions [Textbooks]	An organized network of agencies that combine to link producers with users	10	30/300/1400 = 23’20”

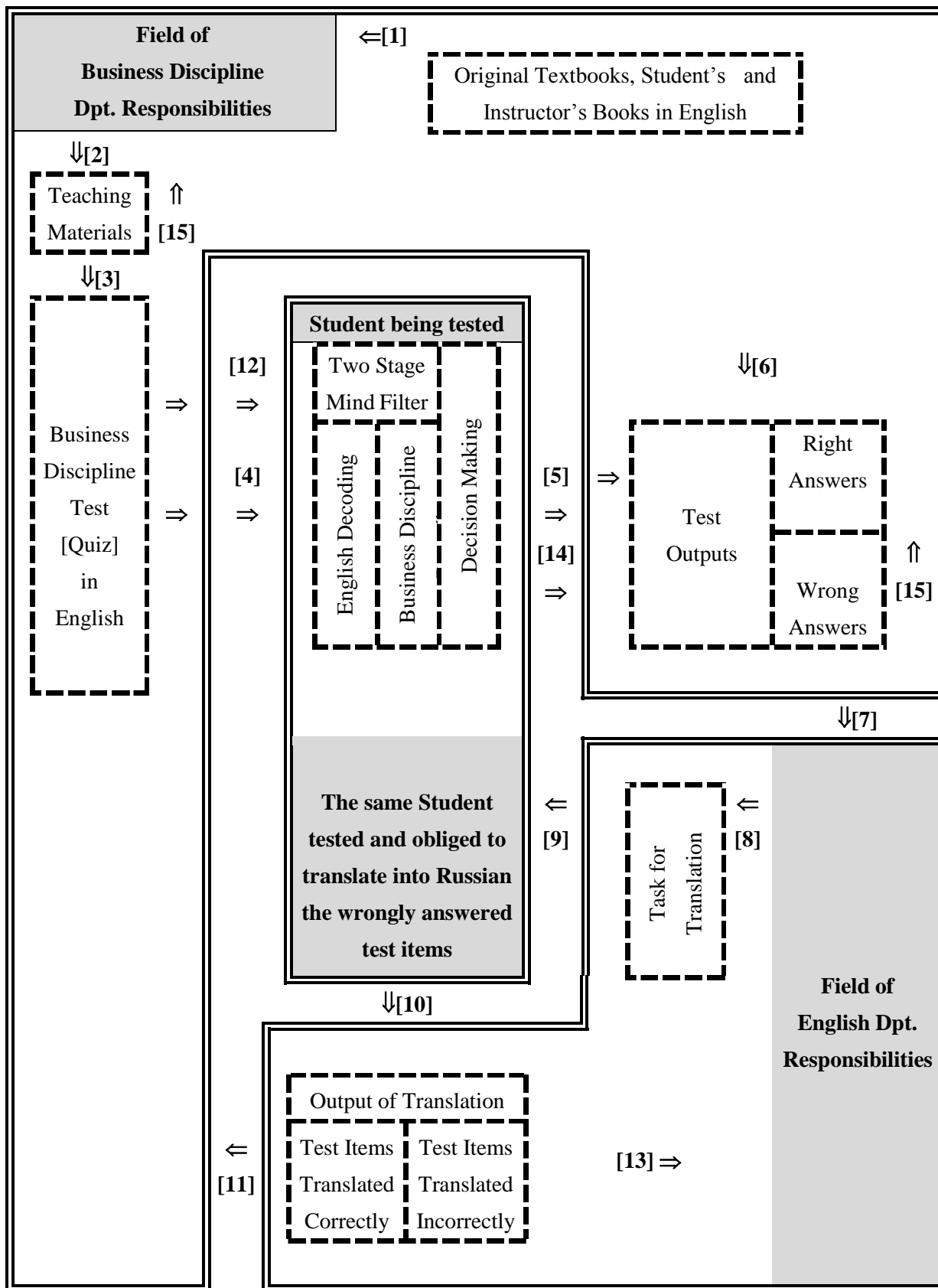


Fig. 3 : Technological flowchart of inter-departmental cooperation having the goal of monitoring English and professional competencies of economic students

LEGEND for Fig. 3:

- ⇐[1] Instructor is searching for original sources in English necessary to create a set of teaching materials to support a business discipline
- ↓[2] Teaching Materials are created.
- ↓[3] Business Discipline Test [Quiz] in English is compiled.
- [4] Conducting the said Business Discipline Test (Quiz).
- ⇒
- [5] Student test outputs are submitted to be assessed by instructor.
- ⇒
- ↓[6] Instructor checks the said Business Discipline Test.
- ↓[7] Wrong Answers [in the form of serial numbers of wrongly answered test items] are directed to a teacher.
- ⇐ Having used the said serial numbers of wrongly answered test items the teacher compiles an
- [8] individual Task for Translation.
- ⇐ The student under testing is obliged to translate the said individual Task for Translation
- [9] from English into Russian.
- ↓[10] Outputs of the said translation are submitted to the teacher to be checked.
- ⇐ Test Items Translated Correctly (in the form of serial numbers of the said items) are directed
- [11] to Business Discipline Dpt. to be used in retesting the said student.
- [12] Retesting the said student under control of Business Discipline Dpt.
- ⇒
- [13] ⇒ Receiving Test Items Translated Incorrectly (in the form of serial numbers of the said items) to be used by English Dpt. for:
- advising the said student on English skills; and
 - analyzing English teaching materials to improve them.
- [14] Student retest outputs are submitted to be assessed by instructor.
- ⇒
- ↑ [15] Receiving Test Items wrongly answered again (in the form of serial numbers of the said items) to be used by Business Discipline Dpt. for:
- advising the said student on Business Discipline knowledge; and
 - analyzing Business Discipline teaching materials to improve them.

Let a number of student's "Test Outputs" items correctly answered be equal to $(100 - N(WTE))$, where N – a number of wrong answers – is an integer less than 100. Then, to extract wrong answers resulted from a poor English skill we have to test the said student again under control of "English Dpt. Teacher" making the same student fulfil the "Task for Translation" in Fig. 2. – See its middle part with the "First One-Stage Mind Filter {E}". At this time, $P(WTR)$ of wrongly translated MTE-items is directed to "English Dpt. Teacher" for analyzing $P(WTR)$ and advising on English skill. On the other hand, $Q(RTR)$ of correctly translated MTE-items is di-

rected to “Business Dpt. Instructor” – the lower part of Fig. 2. – to use the “Second One-Stage Mind Filter {B}” where $Q(RTR)$ of MTE-items now in Russian is to be answered by the same student. Naturally, $P(WTR) + Q(RTR) = N(WTE)$. Corresponding student’s outputs (RTR0) are assessed by “English Dpt. Teacher” and wrongly answered items are directed to “Business Dpt. Teacher” for analyzing them and advising on the Business Discipline knowledge. Therefore, the procedure just described should help, as a matter of principle, to separate a set of wrongly answered MTE-items in two sub-sets: 1) wrong answers caused by a poor English skill – WTR; and 2) wrong answers caused by poor business discipline knowledge – WBD. Further development of this procedure could be found in advising students on English and Business Discipline by a teacher and an instructor, respectively (Fig.2.).

The procedure above, as it could be understood from the Fig. 2., has two options of application – a reduced one and a full one. Assessment of reduced options was arranged periodically [4-5 times per semester] at the sessions ended by the quiz announced in advance in the corresponding syllabus. The quiz content structure was the same as for the case of the MTS-test (table 1). To show quiz items for the time exposures as it is seen in the Table 1 a multimedia projector was used. Students had standard one-page 50-items paper answering forms. Their Wi-Fi networked notebooks could also be used. The full option was rather time-consuming and was applied only after this MTE-test once per semester when experimental testing the method under consideration. Formally received at the stage of experimental testing – in accordance with the flowchart of inter-departmental cooperation (Fig. 3) – assessment outputs were checked with the help of traditional vis-à-vis examination. Comparing assessment outputs received by means of the assessment method proposed and described herein and outputs received by means of traditional examination presented good repeatability and reproducibility were revealed.

3. Conclusions, Research Limitations, and Implications for Future Research

Using the concept of two-stage mind filtering for assessing separately the level of student business discipline knowledge retained and defining relative “weights” of the reasons for the loss of the said knowledge delivered in English – poor English skill and partly misunderstood and/or forgotten business discipline knowledge – seems to be a constructive approach to improving the performance of teaching-learning in English in economic universities. Since the time when this concept was firstly formulated [Cherenkova and Cherenkov, 2001] the authors strived to prove the statement above. The assessing procedure having the algorithms described with the help of Figs. 2 & 3 and corresponding legends was used almost each semester for the last seven years. The business discipline selected for the experimental check of the said approach was International Marketing. This choice was defined by two facts: 1) in SPSUE: Economic English Dpt. and Marketing Dpt. have been in the long-term academic coop relationship; and 2) in GSOM: one of the authors has been in charge of delivering International Marketing course in English for the last decade. The initial MTE-test and corresponding quizzes were initially designed and have been permanently updated since their creating. Other

details of testing the method described herein are given in Table 2.

We suppose that it is too early to make a final conclusion that statistically significant verification of an effective applicability of the concept of two-stage mind filtering for finding out weaknesses in teaching business disciplines in English has been achieved. Strictly speaking neither number of students fully involved in the assessing procedure (about 300 students for seven years) nor regularity of testing corresponds to convenient norms of statistic studies. However, some preliminary conclusions could be made. First, the fact that a part of wrong answers is got due to poor English is confirmed without any doubt (Pay attention to: the decreasing number of mistakes detected in business knowledge when comparing outputs of the test in English with outputs of retest in Russian in Table 2.). Then, slightly better performance of GSOM students could be explained by the facts that they study for a semester abroad in English environment and further in GSOM they are delivered lectures/seminars in English for two years – the 3rd and the 4th years of their BA programs (MA programs are excluded from consideration and comparison due to the lack of specially acquired SPSUE data). Besides, and it is true for both schools, the students that voluntarily agreed to be involved in this testing assessed highly the relevant advising received on International Marketing as well as on English (Fig. 3.).

Table 2

Some characteristics of tests, tested student groups, and preliminary outputs

Type of Test Materials	Assessment Option	Number of students involved		Average share of wrongly answered items		Average share of wrongly translated items [%]		Average share of wrongly answered items	
	Number of tests done			in English [%]				in Russian [%]	
		GSOM/SPSUE	GSOM	SPSUE	GSOM	SPSUE	GSOM	SPSUE	GSOM
MTE	full	30-60	12-15	28	33	19	23	14	16
	2/5								
Quizzes	reduced	30-60	12-15	30	42	21	30	14	21
	7/1								

Besides, one initially unexpected but a very interesting side effect was revealed. The fact of the matter is that the inter-department collaboration necessary for implementing the assessment procedure above (Figs. 2 & 3) has resulted in permanent updating teaching materials in English. And furthermore, this collaboration helped to create new teaching materials [Cherenkova, 2013]. The development of collaboration stimulate English department to be focused better on the key items of a corresponding business discipline (in our experimental case – International Marketing). Based on the findings of the present study, future researches on monitoring the performance of teaching/learning business disciplines delivered in English may

practically replicate the implementation of the same concept of two-stage mind filter and inter-departmental coop arrangements as is shown in Figs. 2 & 3. However, managing assessment processes and advising students on business disciplines and on English could be computerized. It is not too complicated supposedly for those who are skilled in the Art. The most important output of the said monitoring could be found in incremented improvements of joint teaching materials conducive to achieve the effect of pedagogical synergy (Cherenkov and Cherenkova, 1997). Finally, an acceptable on-line advising on business disciplines could be found in Internet. For example, there are Online Resource Centers in the Internet([e.g., Oxford University Press) where students being tested are given instructions (references to corresponding pages of textbooks) for retraining.

At the end of the paper we would like to highlight some difficulties faced with in the process of implementation. Firstly, there is a lack of the teaching time budget. For example only 2 hours are allocated for the MTE-test in the International Marketing syllabus and practically no time is allocated for analyzing the corresponding test outputs. However, the problem could be settled by analyzing the test outputs during tutorials. Secondly, not all students would like to participate in the assessment procedure. Thirdly, to our mind, the most serious problem is the coordination and synchronization necessary to be arranged between English and business discipline departments. The case of the authors is rather exclusion because it is presented in the form of a peculiar “family business”. Nevertheless, we see the perspectives for this method of finding out and managing the weaknesses of teaching in English for economic students.

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A. Daviy, Assistant Professor at Strategic Marketing Department, National Research University Higher School of Economics
adaviy@hse.ru

V. Rebiazina, PhD, Associate Professor at Strategic Marketing Department, National Research University Higher School of Economics
rebiazina@hse.ru

M. Smirnova, PhD, Associate Professor at Marketing Department, Graduate School of Management, St Petersburg State University
smirnova@gsom.pu.ru

Investigating relationship with partners on the Russian e-commerce market

Abstract: Exploring the relationship with partners is one of the fruitful topics for academic researchers. Although most of our knowledge in this field is based on researches conducted in offline sphere, doing research in online may provide the great source of new data and contribute to reassessment of established models and marketing practices. The Internet audience in Russia is 66.5 million and the Russian market has the largest online audience in Europe. However there is little research concerning relationship with partners on the Russian e-commerce market. That's why the main objective of this paper is to investigate companies' interactions with partners on the Russian e-commerce market. To identify main partners on the e-commerce market and forms of interactions between company and its partners, 30 in-depth interviews with representatives of Russian internet businesses were conducted.

Keywords: *customer interactions, supplier interaction, emerging markets*

1. Introduction

Studying emerging markets has become one of the most relevant questions on research agenda of marketing researchers. The claims are made that emerging markets require re-assessment and critical re-thinking of marketing theory, strategies and practices (Sheth, 2011), marketing tools and research approaches (Burgess, Steenkamp, 2006). More evidence should be collected from emerging markets, providing insights and generating new understanding of what is required for successful marketing outcomes (Pham, 2013).

Over the last 24 years Russia market has passed through several stages of transition and has occupied its place among other emerging markets (World Bank, 2014). Still, despite its status of emerging market, Russia has not yet attracted the much needed research interest, which results in the lacking evidence of what constitutes modern marketing approaches in Russia, what are the success factors and potential pitfalls for marketers, as well as what are the relevant research questions. The existing research on marketing in Russia can be described as fragmentary as it captures only some aspects of marketing development in the post-soviet transformation process. The limited amount of research focused on marketing in the Russian market outlines a poor level of marketing development with its simultaneous re-enforcement in business practice in general and external factors, such as economic crises and changes in the institutional environment (Rebiazina, Tretyak, 2014).

Nowadays, Russia is representing ideal conditions for moving from the vastly used in the past decade extensive ways to grow to reassessing the market realities and turning to exploring the market, investigating its hidden resources and opportunities. One of the fruitful topics for research is exploring partner relationship in the e-commerce market.

E-commerce practices can demonstrate what elements of market-driven approaches have been developed in the market, what aspects of running the business are truly developed to understanding the market and the customers. In other words, e-commerce practices can represent proxy indicators for the whole Russian market development. Investigating marketing in the emerging markets on the example of Russian e-commerce market can provide insights on the specifics of marketing approaches, firms' philosophies and evolution of understanding marketing potential. As for now, the Russian market has the biggest online audience in Europe (Internet World Stats, 2014; ComScore, 2013). The Internet audience in Russia is 66.5 million people – so many Russians over the age of 18 use the Internet at least once a month. 80% of users that is 53 million people go online daily (Yandex, 2014). Modern consumers are increasingly engaged in activity on the Internet and join to online shopping vigorously. Finally, another reason for concentrating on e-commerce in Russia, is the urgency for business that following customers, increasing convenience and understanding rationalized consumer preferences in the light of the current economic downturn and shrinking consumer income in Russia.

While research on the interaction with partners in off-line environment, is given enough attention in the academic literature (Doyle, 2001; Gruner, Homburg, 2000; Ballantyne, Varey, 2006; Grönroos, 2004), company's interaction with partners on the e-commerce market is poorly studied. Researching the topic has practical importance, because, for example, lack of interaction with potential clients, that can be seen as the main company's partner, in real time is the main obstacle for them the purchase in online shop (Yang, Jun, 2002). Thus, the main objective of this paper is to investigate companies' interactions with partners on the Russian e-commerce market.

2. Marketing Framework in E-commerce vs. Traditional Markets

Specifics of emerging markets context do not only influence the overall level of firm's strategic actions and responses, but also the whole marketing framework.

The dot.com (Whitson, 2015) crisis in 2000 resulted in a first critical academic reflection of the success drivers in the e-commerce marketplace. On the one hand, academics focused on strategic issues of e-commerce development. Christensen (2000) identifies the non-existent understanding of e-commerce industry competition as well as the incompetence to exploit new technologies on a sustainable basis as main reasons for failure. A general lack of strategic direction and subsequently a poor definition of objectives are also criticized by Porter (2001). On the other hand, e-commerce theoretical framework shows the inability of the traditional marketing mix to be applied to the context of e-commerce (Constantinides, 2002).

Severe differences between the conventional physical markets and e-commerce markets question the validity of the established models used for e-commerce. As the culmination point of the shift from the mass markets of the 1960s to more segmented, customized, interactive and global markets, e-commerce requires different marketing efforts. Individual, rather than collective needs have to be served and customer retention achieves greater importance than customer acquisition.

The concept of the marketing mix was developed by Neil Borden (1964) as a set of twelve controllable marketing parameters which would secure the profitability of a business. The model became rapidly embraced by practitioners after it was reduced to the four parameters product, price, placement and promotion by McCarthy (1964). Since then, the 4 Ps remained the sole fundamental marketing tool for decades. However, the 4 Ps framework is already subject to critique with reference to physical mass-market environments, being questioned with regard to its ability to scope with contemporary business environments. Among them, first of all, Ohmae (1982) focused his critique on the lack of strategic elements. Therefore, the previous research suggested building the marketing strategy around the cornerstones customers, competitors and cooperation – the tool was presented as the 3Cs. Second, Robins (1991 as cited in Kalyanam and McIntyre, 2002) introduced the 4Cs, short version for customers, competitors, capabilities and companies, in order to stress the external relevance of marketing efforts. Another variation, with focus on customers, are the 4Cs which are defined as convenience, cost to the customer, communication and consumer needs and wants. Third, Bennet (1997) developed the 5Vs, an approach to overcome the overemphasis on internal variables when using the 4Ps. The 5Vs stand for value, viability, variety, volume and virtue and are regarded as the main criteria for customer disposition. Others, such as Lauterborn (1990), Grönroos (1994) or Godin (2001) consider the 4 Ps as not enough customer oriented, as restraining the company as well as the customer and finally as an obsolete management tool (Constantinides, 2002).

Following the critics of the classic 4P approach, Sheth & Sisodia (2012) have suggested that modern market realities require reevaluation of marketing tools inventory to enable a better fit to the customer specifics. For emerging markets, for example, one of the most serious challenges is represented by the level of heterogeneity. Sheth & Sisodia (2012) have suggested an alternative model that would provide better opportunities for marketing to create value for customers. Thus the 4A concept includes the dimensions of acceptability, affordability, accessibility and awareness. Acceptability corresponds with the overall fact of whether the firm's offering meeting the customer requirements or exceeds them. Affordability represents willingness to pay for the offering, accessibility - convenience and availability of product/service for the target market. Awareness measures the level of information that target market has on the product and the brand. The dimensions themselves include further

subdimensions, for example, psychological and economic affordability. Value proposition of a firm in a market is shaped by the above mentioned dimensions. This aspect matters even more for the emerging markets with a higher level of market dynamics, consumer heterogeneity and first time users (Sheth, 2011). These strategic differences have impact on the tactical decisions the firms make, as well as on adjustment of marketing and customer relating capabilities and processes. Several aspects require a new marketing framework for e-commerce:

Interactivity is regarded as a major characteristic e-marketing (Evans and Wurster 2000). With respect to the latest fundamental development of the Internet, the shift towards the so-called Web 2.0, interactive elements appear to have become even more important. The internet as an information-rich, a “market-space in which buyers and sellers can meet, discuss and negotiate” (Robins, 2000, p.255). This characteristic distinguishes the internet from other electronic mass market media and simultaneously offers an alternative to personal selling.

Distinctiveness of parameters. In physical markets, customers usually experience the implications of decisions concerning the four Ps in different occasions, times and places. In contrast, in the virtual marketplace, the four parameters of the marketing mix are strongly interdependent. Moreover, they are simultaneously experienced by the customer during the visit of the homepage (Constantinides, 2002). Within the scope of this customer experience, the so-called Web Experience, all 4 Ps are strongly concentrated on the homepage.

Strategic and operational level. Marketing mix has always been regarded and applied as an operational tool. Strategic considerations, in terms of corporate strategy as well as the subsequent marketing strategy, are seen as an exogenous variable which is determined by the strategy-making processes. However, when the 4 Ps are used as the only planning tool for E-commerce, the concerned enterprise runs the risk to neglect the relevance of strategy-making. 4A approach, on the contrary, can be used for strategic planning of what should be the value the firm brings to the market and how the whole business model could be shaped to create and deliver this value successfully.

Speed of response. This aspect does not only refer to the technical capability to communicate quickly, but also to the flexibility to respond rapidly to changing customer behaviors and competitors’ actions (Robins, 2000). Instant price changes, the application of yield maximization pricing tools by airlines and “à-la-carte pricing” (Cortese and Stephanek, 1998) underline the need of a far more flexible understanding of marketing than in the traditional 4 Ps model.

Intermediaries. In physical markets, the value chain included intermediaries such as wholesalers, retailers or agents. In contrast, online marketplaces are characterized by the existence of a new form of intermediaries, in the form of portals, comparison tools and tracking agents (Peterson et. al., 1997). This setting allows sellers to have more direct access to buyers whereas new players emerge between them.

3. The Research Method and Sample Description

The objective of the empirical study was to investigate companies’ interactions with partners on the e-commerce market in Russia and to identify specific forms of these interactions. As the study was explorative, in-depth interviews with the representatives of Russian e-commerce market were chosen as the main method of gathering information. 15 in-depth interviews were conducted in 2012 and 15 in-depth interviews were conducted in 2015 using the same guide for the interview.

The first part of the qualitative phase was held in September, 2012, in the time of the economic growth; the second part was conducted in March, 2015, in the time of the economic

recession and crisis. This design of the qualitative research combined of two stages gives us the basis for the comparison of the form of interactions with clients and suppliers, marketing instruments used by the Russian e-commerce companies and marketing strategies applied in the time of the market growth and recession to analyze the development of the marketing tools.

Respondents were selected based on their knowledge and experience in the field of e-commerce in the company. In-depth interviews were conducted with the respondents from Moscow, St. Petersburg and some other large cities in Russia because Russian e-commerce market is Moscow-centered, with 40% of revenue generated in the capital, and St Petersburg brings in another 9% (Virin, 2014). Interviews with the respondents were done personally in Moscow and Saint-Petersburg and by telephone in the regions. The duration of in-depth interviews ranged from 30 minutes to 1 hour 10 minutes. The in-depth interviews were conducted in Russian language.

The guide for conducting in-depth interviews included questions concerning company's profile, the company's marketing strategy, company's interactions with the partners (including suppliers and clients), marketing instruments and tools used and specifics of e-commerce development in Russia.

As the empirical research was conducted using qualitative method, the sample of the companies is not representative in case of the whole Russian economy. The companies that composed the sample represent different size and industries. Table 1 shows the distribution of the companies from the sample of 2012 and 2015 by size. As we can see from the table, the majority of the companies from the sample of both 2012 and 2015 are SME representing the structure of the Russian e-commerce market (Euromonitor, 2014).

Table 1. Distribution of the companies from the sample of 2012 and 2015 by size

Company's size	Sample 2012, N = 15	Sample 2015, N = 15
SME	83. 3%	86. 7%
Large	16. 6%	13. 3%

Source: author's analysis

Speaking about the industry specifics, companies representing the main categories of e-commerce market were chosen paying attention to the categories that were more popular among Russian consumers in 2012 and 2015 (Table 2). It should be mentioned, that in 2015 more categories were chosen according to the list of the largest internet retailing categories in Russia (InSales, 2013).

Table 2. Distribution of the companies from the sample of 2012 and 2015 by industries

Industry	Sample, 2012	Sample, 2015
Cosmetics and perfume	-	13. 3%
Sport equipment	-	6. 7%
Apparel and Footwear	-	46. 6%
Consumer Electronics and related products	33. 3%	13. 3%
Books	-	6. 7%
Hand-made goods	-	6. 7%

Household appliances	33. 3%	6. 7%
Software	16. 7%	-
Auto parts and accessories	16. 7%	-

Source: author's analysis

The obtained data in the form of 30 in-depth interviews were analyzed by the content analysis. Analysis of the interviews was conducted with the respect to the content analysis technique provided by Krippendorff (2004).

4. Main Results of the Study

The results of the content-analysis will be presented below. However their summary can be shortly presented before we move to the results.

Thus firstly, networking can be highlighted as one of the ways to adjust to a changing institutional and marketing environment. By understanding the partners in the value chain, firms can overcome some market inefficiencies and develop some relational governance tools like trust, relational norms and reliance, thus moving away from transactional marketing perspective (Brodie et al., 2008). Interaction with partners has been at the heart of the firms in our sample when they described the way the run their business and the drivers which are relevant for the success.

Secondly, firms tended to talk about the measures they take to work with the market and achieve their results. We can highlight the focus at attracting the customers vs. retaining them, on one hand, and integrating marketing tools in interacting with the customers.

Next we will illustrate the practices the firms have mentioned in their interviews, which were revealed during the content analysis stage.

Firstly, indeed, the role of networking was strongly highlighted in the interviews. From the networking perspective firms have stressed interaction with partners in case of almost each interview. However, most frequently firms focus at the closest partners in the value chain (see Table 3), including clients and suppliers.

Table 3. Partners interactions

With whom companies interact	Sample 2012	Sample 2015
Clients	6	12
Suppliers	11	11
Other market participants	1	2

Source: author's analysis

The lack of professional knowledge in marketing field and insufficient experience in the field of e-commerce and Internet marketing, as well as the lack of qualified staff and financial resources forced the owners of the e-commerce companies to focus their activities on working with suppliers, not customers. Major suppliers usually provide smaller e-commerce companies with marketing and training materials to build personal relationship of trust with their distributors (Table 4).

Table 4. Forms of interactions with suppliers

Forms of interactions with suppliers	Sample, 2012	Sample, 2015
Studying courses from suppliers	6	2

Personal relations	5	4
Suppliers provide marketing materials	4	6

Source: author's analysis

Surprisingly, small e-commerce firms operating in the market are not particularly interested in building any relationship with their clients. For example, only six out of the 15 respondents mentioned that they tried to attract customers and only one said that their company tried to retain existing customers (Table 5).

Table 5. Marketing strategies applied by the companies

Marketing strategy	Sample, 2012	Sample, 2015
Attraction	6	6
Retention	1	4

Source: author's analysis

Economic recession started in the Russian market in the end of 2014 and forced e-commerce companies to reconsider the role of working with the clients, which is highly visible in the range of marketing tools used for customer interaction (see Table 6). Forms of customer interaction became diverse: forming personal relationships with client, developing the usability of the company's website, SMM and promotion in social networks. In addition, companies started to work with clients using a more targeted approach to advertising on the basis of statistical data, studying consumer behavior patterns and offering individual solutions for its customers. This trend illustrates increasing level of professionalism, as well as understanding that there should be clear strategic aims behind using the tools.

Table 6. Forms of interactions with clients

Forms of interactions with clients	Sample, 2012	Sample, 2015
Sales promotion (actions, competition)	1	6
Targeted offers and promotions to individual customers on the basis of data analysis	1	6
Interactions in social media through photos, videos, reviews, comments	0	5
Personal communication	3	5
Clients' consultation	0	4
Direct e-mail	0	3
Usability-friendly website	0	3
Advertising	0	3
Targeted advertising	0	2
Discount programs	1	2
Call centre	0	1
Mobile apps	0	1
Loyalty program	1	1

Word of mouth	0	1
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Source: author's analysis

5. Conclusion

The main goal of the current study was to investigate companies' interactions with partners on the e-commerce market in Russia. In this paper we have focused at one particular market segment on the example of Russian e-commerce market. Despite the fact that e-commerce market in Russia is still considered to be at the stage of formation with only 3,3% of the total retail market in Russia at the end of 2013 (Euromonitor, 2014), in 2014 only this sector of retail industry demonstrated positive growth and it is already obvious that e-commerce has increasing importance for the whole national economy. That's why a growing number of companies will operate on this market over the next few years and researches concerning the companies' relationship with partners on this market have the huge potential.

In this study two waves of collecting qualitative data were used. Such kind of design gives us the basis for the comparison of obtained results. One of the more significant finding to emerge from this study is that a change in economic situations has drawn firm's attention to revisiting the role of customers and a more careful approach to strategizing. Being frequently small businesses Russian e-commerce firms need to adjust many aspects of business model at the same time. As the interviews have demonstrated, improvement of the service quality is frequently the choice to learn and adjust to the customer needs. In 2012 when the Russia didn't face with the economic problems the role of suppliers was even more important for the respondent firms, then the role of the customer. But the new economic reality forced companies to be more interested in interacting and building relationship both with suppliers and clients. Also, it should be mentioned that the technology progress and increasing competence of employee on this market make the range of interactions with the client quite various.

The main weakness of this study was connected with the main method of gathering information. In-depth interviews as the qualitative research method are not representative, that's why we can't extend the obtained data on all companies operation on e-commerce market. Also, while we tried to control the choice of companies for interview we can't guarantee that interviewed companies were most typical, especially in the case of small companies.

Future research should concentrate on the creating the model of company's interactions with its partners and connect this model with the company's performance. It can help companies to assess the most valuable form of its interactions, create more focused marketing strategies and use the appropriate tools for its realizing.

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Christian Dreger,
German Institute for Economic Research (DIW Berlin), Berlin, Germany
cdreger@diw.de

Konstantin Kholodilin,
German Institute for Economic Research (DIW Berlin), Berlin, Germany
kkholodilin@diw.de

Dirk Ulbricht
German Institute for Economic Research (DIW Berlin), Berlin, Germany
dulbricht@diw.de

The Ruble between the Hammer and the Anvil: Oil Prices and Economic Sanctions

Abstract. The exchange rate fluctuations strongly affect the Russian economy, given its heavy dependence on foreign trade and investment. Since January 2014, the Ruble (RUB) lost 50% of its value against the US Dollar (USD). The fall of the currency started with the conflict between Russia and Ukraine. The impact of the conflict on Russia may have been amplified by sanctions imposed by Western countries. However, as Russia is heavily dependent on exports of natural resources, the oil price decline starting in Summer 2014 could be another factor behind the deterioration. By using high frequency data on nominal exchange and interest rates, oil prices, actual and unanticipated sanctions, we provide evidence on the driving forces of the RUB exchange rate. The analysis is based on cointegrated VAR models, where fundamental long-run relationships are implicitly embedded. The results indicate that the bulk of the depreciation can be related to the decline of oil prices. In addition, unanticipated sanctions matter for the conditional volatility of the variables involved.

Keywords: *Military conflict, sanctions, oil prices, RUB depreciation*

JEL Classification: C22, F31, F51

1. Introduction

The exchange rate fluctuations strongly affect the Russian economy, given its heavy dependence on commodity exports, foreign investment, and imports of consumer goods. Since January 2014, the currency depreciated from about 33 RUB for 1 USD to its lowest value of nearly 70 RUB at end of January. Thus, the RUB lost 50% or more of its value against the USD (Figure 1). The fall of the RUB might be related to economic sanctions against Russia implemented by Western countries to force Russia to return to the *status quo* before the conflict with the Ukraine. The strong linkages to the Russian economy can likely explain the subsequent decline of currencies of most countries belonging to the Commonwealth of Independent States.

However, the world prices for oil and other natural resources have also fallen since Autumn 2014, partially because of the modest expansion of demand in main industrial countries and lower growth perspectives in huge emerging markets, such as China and Brazil. Oil supply factors have also been crucial for the development, including the OPEC decision to maintain high production levels and the steady increase in oil production from the non-OPEC states, especially in the US due to technological advances. This paper investigates the relative role of political and economic factors in the deterioration of the RUB.

Russia is one of the leading suppliers of oil and gas in the world economy. At the same time, industrial diversification is not highly developed. Two thirds of its total exports and more than 50% of the budget revenues depend on oil and gas. The strong reliance on commodity exports makes the country extremely vulnerable to shifts in global prices. While GDP growth exceeded 7% in most years of accelerating oil prices before the financial crisis, the expansion afterwards was modest, due to lower prices for natural resources and increasing difficulties to attract foreign direct investment. Because of the depreciation of the RUB, growth prospects worsened further. The currency losses led to collapsing government revenues, lower public spending and increasing inflation spurred by higher import prices. Non-oil exports did not benefit much, as the manufacturing sector is still incompetent in international markets. Sectoral sanctions may have accelerated the downturn, particularly measures that dry up Russian banks' sources to refinance external debt. This also affects the Russian state, which has already started to tap the reserve funds built up during periods of resource price booms. If the oil price remains low and sanctions are maintained, a serious erosion of reserves is expected, with further consequences on the ability of the government to meet its obligations in a wide range of fields, including pensions and other social securities as well as the military budget. Restrictions on technology transfer in the energy industry endanger the ability of Russian firms to explore new oil fields and expand production. The Russian central bank raised its policy rate several times to fight inflation and capital outflow. This caused further downward pressure on domestic consumption and investment. International confidence that the Russian government can repay its debts eroded, pushing up the sovereign yields to new heights. Against this background, the economic outlook points to a deep recession in Russia for the years ahead. But it is still unclear to what extent the economic sanctions against Russia or the persistent fall in oil prices are the driving forces behind the evolution. Evidence on the relative role of the two factors is highly relevant for policy advice.

We will concentrate upon exchange rate movements. Based on impulse response analysis and variance decomposition, the results indicate that the bulk of the exchange rate depreciation can be attributed to declining oil prices. In addition, unanticipated component of sanctions matter for the conditional volatility of the variables involved.

2. Economic impact of sanctions

According to Hufbauer et al. (2007), several stages of sanctions can be distinguished. The weakest forms refer to diplomatic sanctions, such as the withdrawal of ambassadors and the suspension of international negotiations. The next stage includes measures targeting individual citizens and companies, such as travel bans, asset freezes, stop of development aid and obstacles to get credit

from international organizations. Sanctions against specific industrial sectors, such as trade restrictions and embargoes constitute the strongest form. Sanctions may include a smart component. For example, asset freezes and travel bans only hit a certain group of people or companies. All stages of sanctions have been implemented by Western governments starting from the annexation of the Crimea. As part of the diplomatic measures, Russia was excluded from the G8 meetings, while bilateral talks on cooperation agreements and visa regulations were suspended. With the ongoing conflict, measures against Russian and Ukrainian individuals and legal entities have been implemented. Restrictions to particular industries focus on banking, energy, and defence. For example, the USA prohibited any commercial relations between US citizens or firms and the sanctioned companies, most important Bank Rossiya, SMP Bank and Volga Investment. The USA also banned the export of certain technology goods that could be used for military purposes.

The empirical evidence on the effectiveness of economic sanctions is mixed. Trade restrictions can raise the costs for the target country, but may also harm the sanctioning country. Countries with strong economic ties are especially hit through lower growth perspectives. Thus, it is not surprising that the measures actually adopted appear to be ineffective in many cases. While some studies found that smart sanctions are effective (Morgan and Schwebach, 1995, Cortright and Lopez 2000), others found that only harsh measures may trigger a significant impact on policies (Lam 1990, Hufbauer and Oegg 2003). In addition, the process of designing sanctions is inherently shaped by powerful groups in the sanctioning countries that serve their own interest (Kaempfer and Lowenberg, 1988). Game-theoretic models suggest that the success of sanctions further depends on conflict expectations and the levels of commitment. Many sanctions end as a threat, without actually being implemented (Kaempfer and Lowenberg, 2007).

The impact of sanctions can be measured in terms of economic effects, but also in terms of their policy impact, i.e., sanctions are considered to be successful if they led to the desired policy change. By examining a huge set of sanctions, Hufbauer et al. (2007) concluded that about one third of them have been successful, at least partially. However, this number is likely exaggerated. If one controls for the direct or indirect use of military forces and for the fact that the target country does not make the concessions initially asked for, the share of successful sanctions is significantly lower. In addition, the success rate decreases if the aim of the sanctions is more ambitious, such as a major policy change. Kaempfer and Lowenberg (2007) stressed the role of the target size. Larger and self-sufficient countries are able to absorb sanctions more easily than smaller economies. Caruso (2003) reported negative effects of economic sanctions on trade. Sanctions may cause higher damage, if they are implemented multilaterally. In case of unilateral sanctions, the target might be able to sell or buy goods and raw materials from third, nonsanctioning countries. Further, sanctions fail more likely if there is substantial third party assistance to the target (Bonetti, 1998). Jing et al. (2003) argued that the success of sanctions is positively correlated with the degree of warmth in the relations between sanctioner and target prior to the sanctions, negatively with the size of the sanctioner relative to the target, and negatively with the economic health and political stability of the target.

3. Data

The analysis is based on macroeconomic series, actual sanctions and media information.

Macroeconomic time series

Macroeconomic data used here are daily time series on nominal bilateral exchange rates of the RUB against the USD, the oil price in USDs per barrel, and interest rates for overnight loans in RUBs (Figure 2). After achieving high plateau in the first half of the year, oil prices started falling since the beginning of 2015. RUONIA used to be relatively stable at about 8.5%, until December 16th, 2015, when Central Bank of Russia raised its policy rate from 10.5 to 17%.

Composite sanction indices

Based on the sanctions implemented against Russia and Russian sanctions against Western countries, two composite indices are constructed:

$$(1) \quad S_T^w = \sum_{t=1}^T s_t^w, \quad S_T^r = \sum_{t=1}^T s_t^r$$

where w denotes the sanctions implemented by Western countries, and r refers to the Russian sanctions. The composite indices are defined as the cumulative sum of individual sanction dummies, s^w and s^r . The dummies are equal to 1 if a sanction is in place in period t and 0, otherwise.

Two modifications are considered to ensure the robustness of the results. First, sanctions can differ in terms of their harshness. They can be directed against individuals, specific entities or, most serious, against sectors of the economy. Second, their impact may vary across countries. For example, the effect of sanctions from Albania might be almost zero, while EU sanctions could exert a non-negligible impact on the Russian economy. Hence, the weighted composite sanctions indices

$$(2) \quad S_T^w = \sum_{t=1}^T \sum_{i=1}^I \sum_{j=1}^J w_i^w w_j^w s_{ij}^w, \quad S_T^r = \sum_{t=1}^T \sum_{i=1}^I \sum_{j=1}^J w_i^r w_j^r s_{ij}^r$$

control for both the severity of sanctions (i) and the target country (j). The weights w_i and w_j are based on the type of sanctions and trade shares with Russia, respectively. Country weights reflect the share of the individual country in Russia's external trade, averaged over the 2009-2013 period. Trade is measured as the sum of exports and imports and obtained from the UN Comtrade database. Composite sanction indices based on unweighted and weighted data are shown in Figure 3. The weighted series have a much lower level, due to small trade weights with Russia in many cases.

Media indices

As a measure of expectations on sanctions a news based index is constructed and decomposed into anticipated and unanticipated effects. The index reflects the frequency of the items containing information on Russia-related sanctions in the international media. It is constructed by the number of daily occurrences of the words "Russia" and "sanctions" in major printed media of eight countries (France, Germany, Italy, Russia, Spain, Ukraine, UK, and USA).

To construct the composite news index the occurrences in national media are aggregated and normalized by the sum of occurrences. Then, scaled country-specific indices are aggregated to obtain a composite news index as a simple average. The resulting index is display in Figure 4. As seen, before March 2014 it fluctuates near zero. Then, it goes up substantially and remains at high level till the end of our sample. It attains two major peaks in March and July 2014, when main sanctions packages were put in action. This index is cumulated over time to be consistent with the index on actual sanctions. Since the combinations of "Russia" and "sanctions" are not necessarily related to the conflict before the annexation of the Crimea, the composite news index is set to 0 until the end of February, 2014.

The news index can be seen as a measure of expectations about future sanctions and opinions on sanctions already in place. Without having access to the full media texts it is impossible to identify the context. Thus, the overall news index might give rise to biased results. In order to extract expectations on sanctions from the complex mess, the news index is regressed upon the leads of the composite sanction indices, i.e.,

$$(3) \quad C_T = \beta_0 + \sum_{\tau=1}^{L^w} \beta_\tau S_{T+\tau}^w + \sum_{\tau=1}^{L^r} \theta_\tau S_{T+\tau}^r + u_T$$

where u is the error term. Leads τ for Western and Russian sanctions are included up to certain maxima L^w and L^r determined by the Schwartz-Bayes information criterion. The fit would be perfect in case when the sanctions have been correctly anticipated by the market. Therefore, the residuals are a measure of the bias introduced by the media. Both anticipated and unanticipated sanctions can exert an impact on the evolution of exchange rates. For instance, if the international press expects more extensive sanctions than decided, an overshooting of the RUB exchange rate might be implied.

4. Econometric analysis

The variables include the RUB exchange rate against the USD, the oil price, and composite indicators on sanctions against and from Russia. The unexpected component of the sanctions is constructed from the residuals of equation (3). Since the Central Bank of Russia reacted several times to soften the depreciation of the RUB, the RUONIA (RUB OverNight Index Average), which is the Russian interbank rate for overnight loans, is also included. The variables are reported at the daily frequency over the period from January 1st, 2014 to March 31st, 2015. Exchange rates and oil prices are transformed in logs. Sanctions are count variables, if they are unweighted and real numbers if weighted. Finally, the RUONIA is given as a percentage¹.

Inference is based on (generalized) impulse responses and variance decomposition. However, all variables are integrated of order 1, $I(1)$, except for the unexpected component of sanctions, which is stationary (ADF=-7.79, p-value=0.000). To rule out spurious effects, cointegration should hold between the $I(1)$ variables. According to the Johansen (1995) trace test, a single cointegration vector exists, see Table 3. The long run parameters are well signed. In equilibrium, a rise in the oil price and an increase in the RUONIA will lead to a decline of the RUB value, i.e. an appreciation against the US-Dollar. The implementation of Western sanctions is accompanied by RUB depreciation, while Russian sanctions can compensate this effect.

The exchange rate elasticity with respect to the oil price exceeds unity, underpinning the important role of the oil price. The impacts of the other variables appear to be of minor relevance and for sanctions only significant at the margin. This suggests that the oil price dominates the sanctions to explain the actual RUB evolution. Tests on weak exogeneity reveal a reasonable adjustment pattern. In particular, the feedback coefficient of the RUB is highly significant, and its negative sign indicates error correction behavior. Hence, the cointegrating relationship might be interpreted as an equation determining the RUB. Neither oil prices nor sanctions move to restore the long run. Oil prices are determined in international commodity markets and sanctions by the political process. The hypothesis of joint exogeneity of the three variables cannot be rejected ($\chi^2(3)=3.64$, p -value 0.303). After implementing the restrictions, the parameter estimates show only small changes.

Due to the cointegration result, the VAR can be evaluated in levels. In this setup, the long-run relationship is implicitly embedded (Sims, Stock and Watson, 1990). As a potential drawback, the multipliers are dominated by stochastic trends. Therefore, and to save degrees of freedom, unexpected sanctions are not considered in the impulse responses. But, as discussed below they can be relevant for the stationary VAR component. Because of multicollinearity, many of the VAR coefficients are insignificant at conventional levels. As suggested by Sims and Zha (1999), one standard error bands are preferred.

While a rise in oil prices and an increase in the RUONIA will trigger an appreciation of the RUB against the USD, the currency is quite robust against shocks arising from the sanctions series.

¹ The results shown in this section are based on the model version with unweighted sanctions. However, the evidence is very similar if weighted sanctions are used instead. The results can be obtained from the authors upon request.

There is a minor positive impact stemming from the Russian sanctions. Combined with the cointegration evidence, this might imply some overshooting of the exchange rate in the short run. However, the effect is significant only at the margin. As a response to a RUB depreciation, the oil price is expected to decline for a few weeks, putting less pressure on the RUB. Again, this response might point to some kind of overshooting of the exchange rate and error correction behaviour afterwards. In addition, a depreciation of the RUB causes an increase of the RUONIA, which is broadly in line with the policy pursued by the Central Bank of Russia. At least to some extent, the policy was successful, as shown by the response of the RUB to interest rate shocks. Moreover, as higher oil prices put less pressure of the RUB, monetary policy will become less tight.

The sanctions do not play an important role for the other variables in the system, even if standard errors are less tolerant than usual. Spillovers between different types of sanctions are most striking. Sanctions against Russia will cause the implementation of sanctions against Western economies. An escalation spiral is not visible, as a positive response of Western sanctions is not detected.

According to the impulse responses, the oil price is much more relevant than the sanctions to explain the exchange rate. This is consistent with the decomposition of the forecast error variance (Table 4). Own shocks account for a huge part of the forecast error, especially for the sanctions. As a rule, the weight of the own shock declines with the forecasting horizon. Oil prices explain 8% of the RUB after a week (5 days), but 12% after one month has passed. Only 1% of the variance of the RUB forecast errors can be traced to sanctions, even after one month has passed.

Although the sanctions do not significantly alter the course of the RUB, an impact may exist on exchange rate fluctuations. As the VAR length is optimized by the information criteria, the residuals of the system should fulfill the white noise properties or are at least stationary. Thus, the unconditional variance-covariance matrix is constant. This behavior, however, does not have implications on the development of the conditional moments. Conditional standard deviations could be related to unexpected sanctions, the latter generated according to equation (3).

Conditional moments can be estimated, if the cointegrated VAR is extended by a multivariate GARCH process, see Bauwens, Laurent and Rombouts (2006) for a survey of different specifications. Compared to univariate alternatives, the multivariate setup can control for spillovers across the equations. Besides the conditional variances, conditional covariances can be affected by unanticipated policies. However, the basic insights can be derived if the focus is on the variances.

Equations describing the dynamics of the conditional variances of the VAR residuals are exhibited in Table 5. In addition to the GARCH(1,1) structure, the media index is allowed to drive the volatility of the respective variables. In addition to the potential contemporaneous impact of the media, a delay up to one week (five lags) is allowed. To improve the readability, irrelevant coefficients have been omitted. Reported effects are significant, at least at the margin (20% significance level).

As a principal finding, GARCH effects are relevant in each case. The persistence is particularly striking for the RUB and the oil price errors. In addition, the media do have an impact. While it is hardly significant at conventional levels for the RUB and the RUONIA, the effects are more important for the oil price. If the sanctions turn out to be different than expected, additional volatility will be introduced in international commodity markets. As this might harm real economic growth, policy decisions should be as transparent as possible. Moreover, media affect sanctions positively in the aggregate. Thus, if media expect more (less) severe sanctions than actually decided, policymakers are less (more) reluctant to further sanctions. Therefore, media reports have a self-fulfilling component. The results underpin that sanctions are influenced by past forecast errors regarding the political process. This effect is especially visible for Western sanctions, but also relevant for the Russian sanctions.

5. Conclusions

Due to its relative openness, the Russian economy is heavily exposed to exchange rate fluctuations. Since January 2014, the RUB strongly depreciated against the USD. The fall of the currency started with the conflict between Russia and Ukraine. The impact of the conflict on Russia may be amplified by the sanctions imposed by Western countries. However, oil prices also declined since Summer 2014. As Russia is heavily dependent on exports of natural resources, the oil price decline can be another factor behind the deterioration. Using high frequency data on nominal exchange and interest rates, oil prices, actual and unanticipated sanctions, we provide evidence on the driving forces of the RUB exchange rate. The analysis is based on cointegrated VAR models. The results indicate that the bulk of the depreciation is caused by the decline of oil prices. In addition, unanticipated sanctions matter for the conditional volatility of the variables involved.

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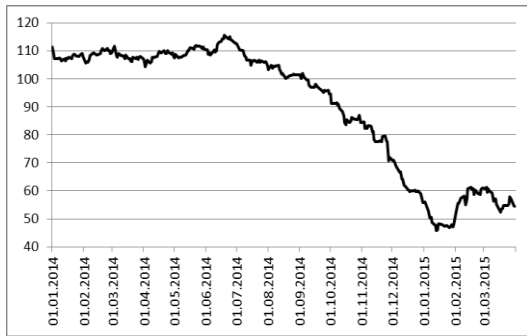
Appendix

Figure 1: Exchange rate of the RUB in the crisis period

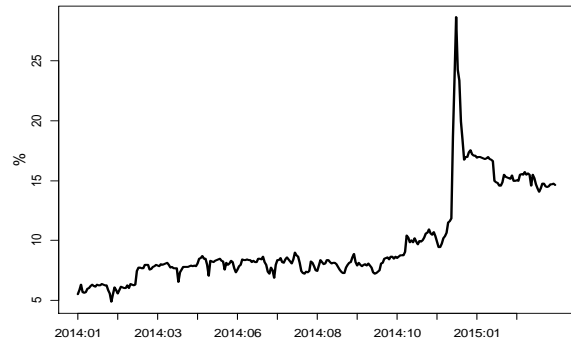


Note: Datastream. RUB per Euro (dotted line) and USD (bold line).

Figure 2a: Oil price and interest rates



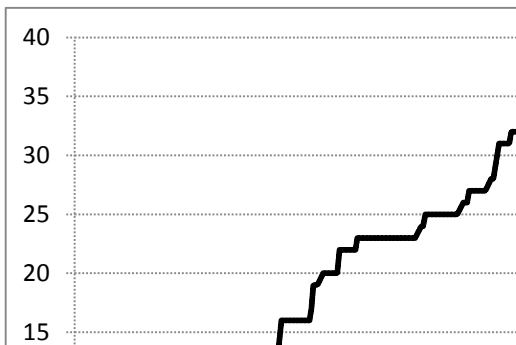
a) oil price



b) RUONIA

Note: Oil price (Brent) in USD per barrel taken from Datastream, RUONIA obtained from the Central Bank of Russia.

Figure 3: Composite sanction index



a) weighted



b) unweighted

Note: Construction according to equations (1) and (2). Dotted line sanctions from Russia, bold line sanctions against Russia.

Figure 4: International count media index (keywords “sanctions” and “Russia”)

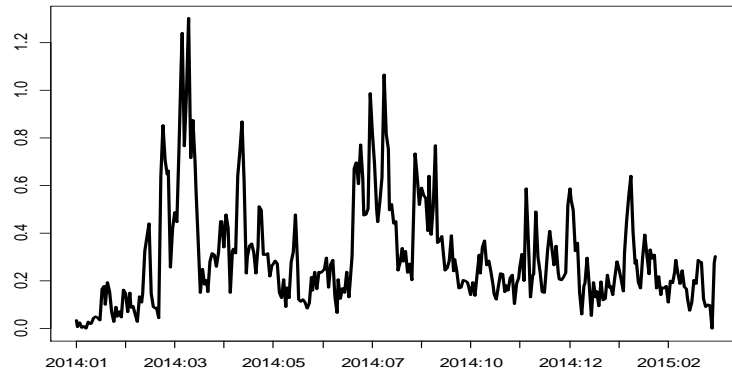


Table 3: Cointegration properties

	$H_0: r \leq 0$	$H_0: r \leq 1$	$H_0: r \leq 2$	$H_0: r \leq 3$	$H_0: r \leq 4$
Trace	71.85 (0.032)	34.08 (0.502)	13.40 (0.871)	4.78 (0.879)	0.81 (0.369)

	Unrestricted model		Restricted model	
	β	α	β	α
RUB	1	-0.049 (0.008)	1	-0.045 (0.008)
Oil price	1.853 (0.297)	0.002 (0.008)	1.937 (0.223)	0
RUONIA	0.072 (0.013)	-0.503 (0.293)	0.079 (0.014)	-0.515 (0.271)
Sanctions West	-0.006 (0.003)	0.379 (0.248)	-0.005 (0.003)	0
Sanctions Russia	0.018 (0.009)	-0.295 (0.268)	0.019 (0.010)	0

Note: Western (Russian) sanctions are unweighted indices. Lag selection in VAR model with unrestricted constant determined by the AIC and equal to 3. Bartlett corrected trace statistic, p -values in parentheses. β is the cointegration vector, α the feedback coefficients in the equations of the respective differenced variables. Cointegration vector normalized to the RUB. Numbers in parentheses denote standard errors.

Table 4: Variance decomposition of forecast errors

RUB shock

Steps	RUB	Oil price	RUONIA	Sanctions West	Sanctions Russia
5	77.8	8.1	13.7	0.1	0.3
10	61.5	11.0	27.1	0.2	0.2
20	49.2	12.0	37.9	0.2	0.8

Oil price shock

Steps	RUB	Oil price	RUONIA	Sanctions West	Sanctions Russia
5	6.7	93.0	0.2	0.1	0.0
10	6.6	92.8	0.3	0.1	0.3
20	5.7	92.3	0.2	0.0	1.7

RUONIA shock

Steps	RUB	Oil price	RUONIA	Sanctions West	Sanctions Russia
5	44.3	0.8	54.8	0.0	0.1

10	50.5	4.0	44.2	0.0	1.2
20	49.4	8.7	39.4	0.1	2.5

Western sanctions shock

Steps	RUB	Oil price	RUONIA	Sanctions West	Sanctions Russia
5	0.1	0.0	0.9	98.7	0.2
10	0.6	0.0	1.7	96.9	0.7
20	1.0	0.1	2.3	94.3	2.4

Russian sanctions shock

Steps	RUB	Oil price	RUONIA	Sanctions West	Sanctions Russia
5	0.1	0.0	0.4	1.8	97.8
10	0.5	0.1	1.6	2.7	95.1
20	1.2	0.1	2.7	5.6	90.5

Note: Numbers in %.

Table 5: Conditional variances of VAR errors

	RUB	Oil price	RUONIA	Sanctions West	Sanctions Russia
Constant	0.002 (0.001)	0.001 (0.001)	0.005 (0.042)	0.090 (0.061)	0.000 (0.001)
GARCH Lag	0.922 (0.013)	0.916 (0.022)	0.447 (0.047)	0.433 (0.034)	0.435 (0.025)
ARCH Lag	0.338 (0.031)	0.109 (0.043)	-0.584 (0.055)	1.284 (0.098)	1.699 (0.084)
Media		0.009 (0.003)		0.827 (0.080)	
Media(-1)	-0.005 (0.004)	-0.011 (0.004)			
Media(-2)	0.005 (0.004)	0.008 (0.004)	-0.254 (0.160)	-0.267 (0.114)	0.034 (0.027)
Media(-3)		-0.014 (0.004)	0.235 (0.169)	-0.737 (0.083)	
Media(-4)		0.014 (0.004)		0.716 (0.103)	0.053 (0.028)
Media(-5)				-0.371 (0.123)	0.133 (0.023)

Note: Conditional variances obtained from multivariate GARCH(1,1) model. Conditional covariance matrix estimated by BEKK method (Engle and Kroner, 1995). To foster convergence, preliminary simplex iterations are performed. Standard errors in parentheses.

Anna V. Ermishina
Southern Federal University
AVermishina@sfedu.ru

Maxim V. Zalizsky
Southern Federal University
zalizskijmax2014@gmail.com

Evaluation of Alternative Institutional Arrangements in Public Utilities

Since the early 2000s a policy of attracting private operators to public utilities, which should help to increase productivity, reduce costs, and as a result, reduce utility prices, takes place in Russia. The aim of the study is to identify the relationship between institutional arrangements and pricing of water and sanitation services.

Statistical and cluster analysis was applied to empirical data on water utilities in the 13 largest cities. There were the differences in the level and dynamics of prices for water supply and sanitation in the group of public utilities and public private water utilities. In 2011-2014 the level of prices and its growth were higher in the group of the public private partnerships than in the group of municipal water utilities. Thus, the involvement of private operators has not yet lead to the expected reduction in prices.

***Keywords:** public utilities; public private partnerships; water utilities; pricing for water and sanitation services; institutional arrangements; economic efficiency*

1. Introduction

Around the world a search for the alternatives to the institutional arrangements of the municipal economy, which are allowing to provide accessibility and affordability of public utilities services for the majority of the population and the economic efficiency of the utilities, remains relevant. Water supply and sanitation sector is one of the largest of Russia's public utility industries. At the end of XX - the beginning of XXI centuries the reform of the water supply was inspired by the world practices. The experience of the developed European countries in the sphere of production, financing and water provision services was used to form the basic tenets of the reform. The most famous models among Russian scientists and industry professionals are conventionally called "English", "German" and "French" models. They got the titles in accordance with the names of the countries in which these models were widely disseminated.

The "English" model of water supply, developed in the UK, involves the complete privatization of municipal infrastructure in combination with the state regulation of tariffs for water and sanitation services. The "German" model is characterized by a high participation degree of the local authorities as in the price control, so in the production and provision of these services. Municipalities create joint ventures with operators in the form of open joint stock companies (OJSCs). The water supply infrastructure is included in the authorized capital stock as a contribution of the municipality that controls the majority of shares. The "French model" has spread in France. It involves the transfer of the municipal property, owned by the municipality, from the local authorities to the management of a private company on the basis of long-term (30-35 years) concession agreement. Investor's ownership of property and newly created objects are terminated upon the expiration of the concession (Varnavskiy et al., 2010)

The ideologists of the Russia's water supply reform came to the conclusion that the most effective model would be the "French" one in Russia. This water supply organization attracts private business and private investment to the municipal economy and, at the same time, allows controlling the production of socially significant services through the infrastructure, which remains in municipal ownership. (Ermishina, 2010)

Each of the institutional alternative arrangements has its advantages and disadvantages. An indirect measure of economic and social efficiency is the cost of public resources and its dynamics. In the municipal economy many services (including water and wastewater services) are produced in conditions of a natural monopoly. The unregulated natural monopoly is a situation of the market inefficiency, which overestimates optimal prices and reduces the socio-effective production. The regulation of natural monopolies aims breaking the power of monopolies to set higher prices. These measures should, in general, improve the economic efficiency of the municipal economy. In addition, the regulated tariff for communal services is the most important indicator, which shows service's affordability for the majority of the population and ensures the effectiveness of the social sector.

In the last decade the regulated tariffs for housing and communal services are growing rapidly, many times ahead of inflation in Russia. At the same time the deterioration of networks remains high, that increases the risk of accidents and reduces the quality of service. To improve service quality and to attract investments a policy of attracting private operators to the industry is held in Russia from the beginning of the 2000s. More efficient operations in terms of public-private partnership should cause an increase in productivity in the industry, costs reduction, and as a consequence, reduction of tariffs for water and wastewater services.

2. Brief Literature Review and Goal of the Research

In the foreign literature the operation results of the various institutional alternative arrangements of the municipal economy are actively studied. However, only a small number of empirical studies are devoted to the study of the relationship between institutional options for municipal economy and water tariffs.

S. Garcia et al. (Garcia et al., 2005) examined the influence of technical factors, competition and company's strategy on the water prices in France. Their studies show that the strategy of the utility operator companies has a significant effect on the price level. D. Hall and E. Lobina (Hall and Lobina, 200, Lobina, 2005) empirically show that the privatization of the water supply companies sometimes leads to unjustified price increases. E. Chong et al. (Chong et al., 2006) have also shown the example of the water supply in France, where the choice of any form of public-private partnerships instead of the direct state / municipal government is likely to lead to an increase in the cost of the urban water supply services.

J. Kapentier et al. (Carpentier et al., 2006) compared the public and the private water utilities organization in France. He found that the prices are higher in the private management, because private operators are faced with a tough environment. In addition, this article concludes that the desire of the local authorities to privatize urban water supply services is driven by a technical complexity of their maintenance. R. Martinez-Espineria et al. (Martinez-Espineira et al., 2009) also found that privatization lead to an increase in the price of water in the large urban Spanish municipalities. S. Zschille and M. Ruester (Ruester and, 2010) examined the relationship between the forms of management in the water-supply German companies and prices paid by consumers (controlling economies of scale and technical and structural characteristics of the water utilities). The main conclusion of this study is the fact that the involvement of the private sector causes an increase in water prices.

Recent studies of Valinas M. Garcia and others (García-Valiñas et al., 2013) examined the relationship between the various institutional arrangements of municipal economy and the level of the urban water prices for the population. The experience of municipalities in southern Spain (province of Andalusia) is described in the article. The form of the water supply management, which leads to the lowest prices for water, was the provision of services by the municipality. The Urban Water Supply Company, managed by the private operators under contract, took the second place. But municipal enterprises, according to the study, charge higher prices than utility companies with the participation of the private sector.

In recent years Russia's state policy in the municipal sector, on the one hand, aims the formation of the business environment through the development of the privatization processes and the use of public-private partnership (PPP). On the other hand, issues in the tariff regulation are fixed at the federal level, while it is one of the major risk factors for attracting investment in the municipal sector. In Russia there are unitary enterprises with a state or municipal property and private operators (OJSC (LLC) with a share of private ownership), which exist in the form of the public-private partnership. The bulk of the production and delivery of the water services are provided by municipal unitary enterprises. The share of other forms accounts 26.6% of the total release of water to the population, more than two thirds is provided by private organizations, 1/5 of the water supply infrastructure and sanitation is in lease or concession (19.4% - in lease, 0.6% - in concession).

An analysis of the privatization process in Russia's water and sanitation sector reveals the following distinctive features:

- long-term leases (25-49 years) are close to the classic concession contract;

- private operators work mainly on the long-term lease contracts with investment liabilities;
- the absence of public debate during the competitions and determining the contract conditions;
- trade unions and social organizations of consumers are not represented as a part of the negotiating parties;
- large interregional companies, which are affiliated with the businesses in other sectors, act as tenants;
- tenants are interested, as a rule, in large facilities of cities;
- tenants carry out a significant part of the investment from the state budget (Ermishina 2013).

In addition, according to experts, the PPP in the water supply is characterized by the following facts:

- indicators have improved, but there is no conclusive evidence of the private operators benefits compared to the water supply services as a whole;
- institutional and legal conditions of the organizations are improving, but they are still insufficient for the implementation of concession agreements;
- there are still high barriers to entry into the market of international private operators (Rodionov, Sivaev, 2011).

The problem needs more qualitative empirical studies of the economic and institutional changes during the reforming process of housing and communal services. Studies on the influence of institutional factors to the results of the tariff policy in the industry are completely absent.

The aim of our research is the development and testing some methodological approaches for the empirical evaluation of the effectiveness of various institutional alternative arrangements. The main purpose is achieved by identifying the relationship between the forms of management and the tariff policy in the water supply sector in Russia.

3. Methodology and Data Sample

Thirteen major cities of Russia (with a population of over one million people) were chosen to investigate the influence of the management utility on the level and dynamics of tariffs for water supply¹. The leading manufacturers of the water supply services in the cities are the country's largest water utilities, in fact they are local monopolists in megacities (Table 1)

On 1 January 2014 the municipal water utilities served six of the largest cities of Russia, and the seven largest cities were served by the water utilities organized as a shared ownership with private operators. In all cities at different periods of time private capital was involved. Krasnoyarsk and Perm were ones of the first in Russia, where the private management of water and wastewater networks is carried out since 2003. In Rostov-on-Don, Omsk private operators manage the infrastructure of the water supply services since 2004-2005. Cities with the little experience of the private operating in the water supply are Samara (since 2011) and Voronezh (since 2012). Thus, for more than five years there are private operators in most of the largest cities in Russia.

¹ Moscow and St. Petersburg are excepted from the largest cities in Russia, because the sample of the studied water utilities is composed to avoid economies of scale, which are essential in the water supply sector, and Moscow's and St. Petersburg's population far exceeds the population of the rest major cities in Russia.

Table 1. The Russia's largest water utilities on the January 1, 2014

№	City	Population on January 1, 2014	Name of the water supply organization
1	Novosibirsk	1 547 910	MUP ² "Vodokanal"
2	Ekaterinburg	1 412 346	MUP "Vodokanal"
3	Nizhny Novgorod	1 263 873	OJSC "Nizhny Novgorod Vodokanal" (since 2006)
4	Kazan	1 190 850	MUP "Vodokanal"
5	Samara	1 172 348	MP ³ "Samaravodokanal" (until 2011); LLC "Samara Municipal Systems" (since 2011)
6	Chelyabinsk	1 169 432	MUP "POVV"
7	Omsk	1 166 092	OJSC "OmskVodokanal" (since 2005)
8	Rostov-on-Don	1 109 835	OJSC "PO Vodokanal" (since 2004)
9	Ufa	1 096 702	MUP "Ufavodokanal"
10	Krasnoyarsk	1 035 528	LLC "Colors" (2003)
11	Perm	1 026 477	LLC "Novogor-Kama" (2003)
12	Volgograd	1 017 985	MUP "Gorvodokanal Volgograd"
13	Voronezh	1 014 610	MUP "Vodokanal Voronezh" (2012), LLC "RKS-Voronezh" "(since 2012)

Source: the authors' compilation according to the official pages of companies and the Federal State Statistics Service. The population of the Russian Federation municipalities on January 1, 2014.

http://www.gks.ru/free_doc/doc_2014/bul_dr/mun_obr2014.rar

For the research the tariffs for water supply and sanitation over the past five years in the cities, which are served by the water utilities with a variety of institutional options for utilities is needed to compare. Table 2 shows the tariffs for the water supply and sanitation in the dynamics in major Russian cities for the last five years.

Table 2. Water and sanitation tariffs in the major cities of Russia in 2010-2014, Rub/m³

	2010	2011	2012	2013	2014
MUP "Gorvodokanal" (Novosibirsk)	14,22	21,3	20,09	23,78	23,78
MUP "Vodokanal" (Ekaterinburg)	27,52	31,56	35,52	40,05	40,05
MUP "Vodokanal" (Kazan)	22,78	23,51	26,06	27,13	29,61
MUP "POVV" (Chelyabinsk)	18,87	20,46	21,7	24,3	27,57
MUP "Ufavodokanal"	14,77	17,04	22,51	24,05	24,05
MUP "Gorvodokanal Volgograd"	21,36	20,92	23,18	25,18	29,1
MUP "Vodokanal Voronezh"	21,69	23,34	27,54		
LLC "RKS-Voronezh"				30,25	40,79
MP "Samaravodokanal"	17,56	21,64			
LLC "Samara Municipal Systems"			23,15	27,45	27,45
JSC "Nizhny Novgorod Vodokanal"	16,14	22,38	20,38	23,94	23,94
JSC "OmskVodokanal"	19,51	20,95	25,58	30,23	32,72
OAo "PO Vodokanal" (Rostov-on-Don)	29,35	44,69	48,6	58,12	58,03
Ltd. "paint" (Krasnoyarsk)	16,42	18,14	20,39	22,59	22,59
Ltd. "Novogor-Kama" (Perm)	43	33,77	31,23	33,19	36,12
Correlation	0,22	0,28	0,19	0,25	0,28

Source: Calculated by the authors according to the official pages of the companies

² MUP - Municipal Unitary Enterprise

³ MP – Municipal Enterprise

4. Results

In 2010-2014 in the group of the municipal water utilities Yekaterinburg was a leader in terms of tariffs. And Vodokanal of Rostov-on-Don with the tariffs higher by 41-56% than tariffs in Yekaterinburg took the first place in the group of non-public operators. In the group of private operated water utilities average tariffs were also higher by 11-19%. During the 2010-2014's there was a positive moderate correlation (0.19-0.28) between the forms of the management utilities and tariffs for services. In the group of private management utility prices are higher on average than in the municipal unitary enterprises. The results of the tariff dynamics analysis in the Russia's largest cities are shown in Table 3.

Table 3. The dynamics of water and sanitation tariffs in the largest cities of Russia in the period from 2011 to 2014, %

	2011/2010	2012/2011	2013/2012	2014/2013	2014/2010
Municipal Unitary Enterprises					
MUP "Gorvodokanal" (Novosibirsk)	49,79	-5,68	18,37	0	67,23
MUP "Vodokanal" (Ekaterinburg)	14,68	12,55	12,75	0	45,53
MUP "Ufavodokanal"	15,37	32,10	6,84	0	62,83
MUP "Vodokanal" (Kazan)	3,20	10,85	4,11	9,14	29,98
MUP "Gorvodokanal Volgograd "	-2,06	10,80	8,63	15,57	36,24
MUP "Vodokanal Voronezh"	7,61	17,99			
MUP "POVV" (Chelyabinsk)	8,43	6,06	11,98	13,46	46,10
MP "Samaravodokanal"	23,23				
Operators with a share of private property					
LLC "RKS-Voronezh"			9,84	34,84	88,06
OJSC "PO Vodokanal" (Rostov-on-Don)	52,27	8,75	19,59	-0,15	97,72
OJSC "Nizhny Novgorod Vodokanal"	38,66	-8,94	17,47	0	48,33
LLC "Samara Municipal Systems"		6,98	18,57	0	56,32
LLC "paint" (Krasnoyarsk)	10,48	12,40	10,79	0	37,58
LLC "Novogor-Kama" (Perm)	-21,47	-7,52	6,28	8,83	-16,00
OJSC "OmskVodokanal"	7,38	22,10	18,18	8,24	67,71

Source: Calculated by the authors according to Table 2.

In cities with a municipal form of management there was the highest growth of rates in comparison with the previous year in Novosibirsk in 2011 (it amounted to 49.79%). The following year rates decreased 5.68%, however the overall increase in tariffs for the water supply services for five years was 67.23% in Novosibirsk. And it was also the highest in the group of municipal water utilities.

In the group of the cities where the water and wastewater services are provided by operators with a share of private ownership, the greatest increase in tariffs compared to the previous year took place in Rostov-on-Don: water utility service tariffs were raised by 52.28% compared with the previous 2011 year. Rostov-on-Don is the leader in rising tariffs for five years (97.72%). In Voronezh the significant growth of tariffs for the water supply services was observed after changing the form of management to a private operator LLC "RKS-Voronezh". In Voronezh overall 5-year growth of rates was more than 88%. However, there is a water utility in Perm in this group, which has reduced tariffs by more than 21% in 2011.

And tariff reduction of LLC "Novogor-Kama" has amounted to 16% for five years. It is the only enterprise tariff dynamics which differs from all other water utilities in both groups. Overall, however, during 2011-2014 a faster increase in water tariffs was observed in the non-public water utilities than in the municipal water utilities in the largest cities of Russia.

5. Conclusion and Discussion

Thus, the involvement of private capital to the Russian utility sector has not yet led to the expected positive change of the tariff policy. In 2010-2014 the level of tariffs and their dynamics in the group of the water utilities, which are involving private capital was higher than in the water utilities with the municipal form of management in Russia's largest cities. Perhaps tariffs for services of the water utilities managed by the private operators increased due to the development and implementation of investment programs in the largest Russian cities. Other factors should be taken into account, so that creates prospects for the further research. It may be interesting to investigate the results of the private capital, which is attracted to the Russian communal economy, and the effectiveness evaluation of the various institutional arrangements in the municipal economy. However, Perm's example gives a hope for the formation of positive expectations regarding the tariff policy of the water utilities controlled by using a model of public-private partnership.

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Joaquim Rubens Fontes Filho
Getulio Vargas Foundation – FGV/EBAPE

Felipe Buchbinder
Getulio Vargas Foundation – FGV/EBAPE

Corporate governance practices in public utilities companies in emerging countries: agency problems or legitimacy?

Abstract: This article aims to identify the effects of regulation on corporate governance practices in public companies in Brazil, characterized by concentrated ownership. Based on the assumptions that business contexts and institutional environments differ significantly among countries and industries, we compared governance practices between utilities and non-utilities firms, considering that the former face less agency problems. We used a dataset of indicators of governance, including practices and executive compensation. The results confirm that institutional theory is an alternative to explain the adoption of governance practices by firms than agency theory, indicating that this process should also be reflected at the country level.

Keywords: *Corporate governance; Brazil; utilities; regulated sectors*

1. Introduction

The governance codes, whose production began in the 1980s and 1990s, have spread worldwide so that now almost every country has a code to orient corporate behavior. Started in the United States and Hong Kong, it was from the drafting of the Cadbury Report in the UK, in 1992, that the governance codes were continually being adapted and revised by public market supervisory bodies, private agents of governance, and international organizations like the World Bank and the Organisation for Economic Co-operation and Development (OECD).

The three codes that started this movement, US, HK, and the Cadbury Report, had as a cornerstone dealing with governance problems occurring specifically in companies listed on these markets. It happens that these markets are made up primarily of companies with dispersed control (corporations), which makes the agency problem as identified by Berle and Means, in 1932 and later formulated by Jensen and Meckling (1976), the critical issue to be addressed by the corporate governance framework.

However, this international dissemination of codes follows similar paths traveled by those ideas and management methodologies such as total quality management (TQM) and business process reengineering (Enrione, Mazza & Zerboni, 2006). If the central issue of governance is the agency problem, and the codes are aimed at minimizing the problems of governance, then in contexts where these problems are less significant the codes and governance practices could be more flexible, as in sectors subject to strong regulation or where the presence of a controlling shareholder creates incentives for greater supervising of the agent.

The purpose of this article is to analyze whether in contexts of lower intensity of agency problems - regulated sectors or with the predominance of companies with defined control - the governance codes and practices are different. In this sense, we analyzed executive compensation and governance practices of a number of listed companies in Brazil, an emerging country characterized by a high concentration of ownership in listed companies.

2. Corporate governance codes: does one size fits all?

Since its beginnings corporate governance refers to the agency problem arising from the ownership-control separation when the governance efforts are geared to reduce the information asymmetry problems, monitor and encourage the behavior of managers. Originally, therefore, corporate governance refers to a situation in which the main stakeholder of the company is the shareholder, leaving little space to the influence other stakeholders. It is the right of the shareholder to guide the company's goals to their own interests because as the holder of the residual claims of the company to attend their financial interests (shareholder value maximization) would bring benefits to all stakeholders.

It is no accident the main discussions on corporate governance have emerged in Anglo-Saxon countries, where the pulverized nature of ownership encouraged the free rider and created suitable conditions for managerial opportunism. The growing power of executives ahead of big companies in conjunction with the discovery of widespread illicit payments by US corporations to foreign officials, in the mid-1970s, directed the attention of the SEC for issues related to corporate governance (Cheffins 2013).

In 1991, concerns about the governance of corporations come to the UK, in the midst of an economic recession permeated by numerous problems of lack of accountability on the part of top executives in big British public companies. The answer to the problem came when the accountancy profession, the London Stock Exchange and the Financial Reporting Council established a committee to evaluate the corporate governance practices of listed companies.

The recommendations were consolidated in the Cadbury Code, 1992. Therefore this Code would serve as models for many other codes in several countries (Cheffins 2013).

Success in spreading these codes, evidenced by the fact we already in 1999 almost all developed countries had provided a code of corporate governance (Şahin 2015), creates the effect of encouraging the other countries to also develop their governance codes. Two theoretical perspectives can explain the international diffusion of governance codes and homogeneity of proposals (Zattoni and Cuomo 2008): theory of efficiency and institutional theory. For the theory of efficiency, the codes seek to make up for deficiencies in the legal systems in relation to investor rights protection, and increasing the efficiency of governance practices contributes to encourage investors, especially international, to invest their funds in a country. From the perspective of institutional theory, the adoption of certain practices becomes a desired pattern and its socially expected adoption, legitimizing a system of governance.

Thomsen (2006) argues that an alternative proposal to explain the rapid international dissemination of codes would be that "the codes reflect rent seeking by institutional investors in the bargaining game with other stakeholders, including investment banks, auditing firms, incumbent owners, managers and employees". Such a hypothesis could explain the great similarity of the codes and its general use ('one size fits all'). Anyway, as noted by Tricker (2009), governance codes are quite similar across countries, showing mutual influence, and reasons as convergence in the regulation of securities markets, international accounting standards, globalization of businesses and exchanges of values, and the role of major international institutional investors seeking to understand and compare corporate governance practices of companies among those operating in different countries and markets.

However, this movement sometimes seems to distance the solution from the original problem, following an isomorphic process of implementation of the codes instead of a thorough examination and response to the local problems of governance. Recommendations of governance practices applicable in the US and UK have been developed to deal with agency problems which occur in diffuse ownership environments, low regulation, and legal system based on common law. Instead, in most other countries there is a different context, built on a companies with concentrated ownership, weaknesses in the institutional environment, and distinct from the common law systems. In addition, more recently there has been a big change in listings from developed to emerging markets, so That concentrated ownership is becoming the dominant form of ownership in listed companies worldwide (Isaksson & Çelik 2013)

Besides a potentially uncritical transposition of governance codes between countries, it is possible that this failure is also occurring in the use of codes in different sectors. In this sense, sectors subject to state regulation, or low potential for diversification, offer smaller spaces for managerial opportunism. In addition, state supervision of regulated activities significantly reduces information asymmetries between shareholders and managers.

Thus, despite the international spread of Governance Codes and likeness of the recommendations and proposals (Thomsen, 2006), one can see evidence pointing to the existence of a correlation between the nature of business, industry, and the degree of freedom from regulation with preferences for certain governance practices (Joskow, Rose & Wolfram, 1996; Kawaura, 2004; Bongjin, 2005). In particular, the effects that state regulation introduces between investors and managers are studied (Rennie, 2006). By introducing the action of regulatory bodies and supervision in the governance system, there is a change in agency problems, transferring part of investors' control to the state. In this sense, empirical evidence on the effects of deregulation in governance pointed to the increase in remuneration of directors, with significant increase in variable compensation portion (Bongjin & Prescott,

2005; Kole & Lehn, 1997), indicating the increased use of incentive financial mechanisms to the alignment of interests.

3. Formulating the Research Hypothesis

The effects of regulation on governance were the subject of several studies. Kole and Lehn (1999) examined whether the governance practices suffer changes in deregulation events. They observed that deregulation in the US airline industry resulted in increased concentration of capital structure, the growth of compensation of the CEO from the growth of benefits based on stock options, and brought reductions in the size of the board. To Kawaura (2004), deregulation changes the variables that determine the level of monitoring and supervision that shareholders should exercise over managers. By removing the role of the regulator, deregulation allows expand opportunities for diversification of business, increases the potential for opportunistic activities or behaviors disinterested managers, and reinforces the need for executive monitoring activities.

Examining the electricity sector, Joskow, Rose and Wolfram (1996), and Dietrich, Krafft and Ravix (2008) converge in the evaluation that the monopolistic nature that characterizes this sector has implications on corporate governance. Its strong link to the promotion of social welfare, the role in the implementation of public policies, and also the importance of customers and interested parties (stakeholders) in the performance of companies in the industry point to the need for specific governance structures. As Cambini, Rondi and De More (2015), the nature of the regulated sector introduces a new stakeholder in the company's relationships: the regulator. In its work, the body contributes to minimize problems arising from managerial opportunism or information asymmetries, as it reduces the discretion of the CEO.

Based on this references, we propose four hypothesis, namely:

H1: Companies in regulated industries offer smaller variable compensations than companies in non-regulated industries.

H2: Companies in regulated industries are less likely to offer variable compensation schemes than companies in non-regulated industries.

H3: The percentage of independent directors in the board of directors is smaller in companies in regulated industries than in companies in non-regulated industries.

H4: Adherence to Corporate Governance best practices is smaller in companies in regulated industries than in companies in non-regulated industries.

4. Methodology

4.1 Data collection

Brazilian law obliges listed firms to annually publish a report called the Reference Form, wherein firms disclose information concerning their economic situation, administrative structure and practices, risk and board of directors' compensations. In this study, we have used the Reference Form to collect data on compensation structure for the board of directors as well as information on the minimum, average and maximum wages of the board's members. We have also employed the Reference Form to collect information on the number of employees in each firm.

Data on employee pay was gathered from another document called the Value Added (DVA) which shows the value of the wealth generated by the company and its distribution among the agents that contributed to its generation. Other governance variables, though they were available in the Reference Form, were collected from special issue of *Capital Aberto* magazine, which brings this information already organized. Our sample was composed of a grand total of 272 firms, 38 (14%) of which belonged to regulated industries. Our sample comprised firms with different control forms including public companies (33%), family-owned businesses (47%) and state-owned companies (9%), among others. The companies' annual revenues ranged from less than 500 million to over 10 billion Brazilian Reais.

5. Analysis

To test hypothesis H1 and H3, we begin by analyzing descriptive statistics and subsequently performing a mean comparison t-test whereby we compare regulated and non regulated industries. Since the variable of interest in H2 is categorical, we assess it by employing a χ^2 independence test. A similar approach will be adopted for assessing hypothesis H4, as we shall further detail.

We further perform a multiple regression in H1, H2 and H3 where we control the effects of firm revenue, number of employees and form of control. We take the decimal logarithm of the firm revenues in order to correct for excessive asymmetry in the independent variables. Furthermore, we capture the effects of control form by creating a dummy for state-owned business and another dummy of family-owned business. Finally, our variable of interest in these regression models is a dummy which assumes unit value for regulated industries and zero otherwise.

We perform a Tobit regression for our hypotheses on the amount of variable compensation paid (H1) and on the percentage of independent board members (H3), and a logistic regression for our hypothesis on whether variable compensation is employed or not (H2). The reason we employ a Tobit rather than a linear regression to test H1 and H3 is that a significant proportion of our sample does not offer any type of variable compensation (24%) nor has independent board members (37%). Whenever there are inflated zero counts such as in our case, linear regression may yield biased results (Wooldridge, 2002). These biases are corrected by Tobit regression, wherefore we employ them in our paper. All regressions were performed in Gretl 1.10.1.

As for our last hypothesis, which posits that companies in regulated industries should be less eager to adopt corporate governance practices than companies in non-regulated industries (H4), we count the number of companies which adopt each of 13 corporate governance practices in each kind of industry and perform a χ^2 independence test to assess whether these distributions dependent on whether the industry is regulated or not. In other words, we evaluate whether adoption of governance practices as a whole is significantly different between companies in regulated and non-regulated industries.

Next, we address each corporate governance practice individually, by testing whether the proportion of firms which adopt each one of 13 corporate governance practices varies between regulated and non-regulated industries. This is done by means of a proportion-comparison z-test among independent populations. In all tests, including regression models, we adopt significance level of 5%.

- Hypotheses 1 and 2: Variable pay

We begin by assessing our first hypothesis that variable compensation should be less employed in regulated rather than in non-regulated industries. Table 1 suggests our

hypothesis holds. Indeed, the mean, the median and the maximum values of variable compensation were all found to be smaller in regulated industries rather than in non-regulated industries. A mean comparison t-test further suggests this difference is significant with a p-value of 0.17%.

Table 1 - Variable compensation statistics and mean comparison test

	<i>Non regulated industries</i>		<i>Regulated industries</i>	
Mean	R\$	7,523,070.09	R\$	2,734,599.12
Median	R\$	1,861,672.20	R\$	720,752.00
Maximum	R\$	143,884,472.33	R\$	40,221,857.73
Standard deviation	R\$	18,135,964.14	R\$	6,677,250.65
p-value for the one-tailed mean comparison test				0.17%

In order to evaluate whether the differences in variable compensation between regulated and non-regulated industries remain statistically significant when one controls for companies' revenues, number of employees and form of control, we perform the Tobit regression whose results are shown in Table 2. In it, the dependent variable is the decimal logarithm of the variable compensation shed to board members and the variable of interest, denoted Regulated, is a dummy variable which is unity when the industry is regulated and zero otherwise. Table 2 shows that the industry being regulated is a highly significant ($p = 0.006$) variable in explaining differences. Statistically significant need not mean economically significant. The coefficient's value of -0.96 suggests that an industry regulation alone accounts for variable compensation being almost a digit less in regulated rather than in non-regulated industries. Hence, Table 2 adds to Table 1 and yields further evidence in favor of hypothesis that regulated industries need offer smaller variable compensations than non-regulated industries.

Table 2 - Tobit regression for variable compensation (log-transformed)

	coefficient	std. error	z	p-value
const	5.679388702	1.846012145	3.076571688	0.002093959
Regulated	-0.956659814	0.350152	-2.73212723	0.006292684
log Revenue	0.455750433	0.08790324	5.184682962	2.16E-07
Employees	-2.36E-06	5.61E-06	-0.421673169	0.673263591
State-owned	-2.576452197	0.432280993	-5.960132971	2.52E-09
Family-owned	-0.777151657	0.242388574	-3.206222328	0.0013449
Chi-square(5)	94.44136592	p-value	7.83E-19	
Standard deviation of residuals		1.558594755		

Closely related to this hypothesis is our second hypothesis. Whereas our first hypothesis asserts that variable compensation should be smaller in regulated industries, our second hypothesis theorizes that regulated industries should also use variable compensation less often. We found the use of variable compensation is practiced among 39% of firms in non-regulated industries and in only 13% of regulated industries. A χ^2 independence test performed on count data confirms this difference to be statistically significant ($\chi^2 = 9.7$; p -value = 0.18%), meaning there is a difference between the use of variable compensation schemes between regulated and non-regulated industries.

In order to evaluate whether this effect is not due to other explicative variables such as form of control or firm size, we perform a logistic regression where the adoption of variable compensation is the dependent variable coded unity and the explicative variables are the same we employed in Table 2. Results to this regression are shown in Table 3. Table 3 yields

further support to our hypothesis that the use of variable pay is less often employed in regulated industries, as verified by the highly significant ($p = 0.0009$) negative coefficient of our explicative variable of interest.

Table 3 - Logistic regression for use of variable compensation

	coefficient	std. error	z	p-value
const	-8.312430784	2.376286241	-3.498076385	0.000468627
Regulated	-1.906197822	0.577624761	-3.300062515	0.000966633
log Revenue	0.412486954	0.114520862	3.601849877	0.000315961
Employees	-4.37E-06	8.08E-06	-0.541194471	0.588373548
State-owned	-3.185415234	1.113279232	-2.861290449	0.004219203
Family-owned	-1.185714542	0.309217277	-3.834567564	0.000125785

- Hypothesis 3

We now turn to evaluate our third hypothesis. Unlike our two previous hypotheses, it does not concern variable pay, but rather the number of independent board members. It argues the percentage of independent board members should be smaller in companies in regulated industries when compared to similar firms in non-regulated industries.

Table 4 shows this percentage may be almost as high as 89% in non-regulated industries but was never found to exceed 50% in regulated industries. Despite this striking difference, other statistics on board member composition are fairly similar in regulated and non regulated industries when compared to the samples standard deviations. Indeed, the mean comparison test yielded a p-value which is only marginally significant ($p = 4.13\%$).

Table 4 - % of independent board members statistics and mean comparison test

	Non regulated industries	Regulated industries
Mean	21.15%	16.01%
Median	20.00%	16.23%
Maximum	88.89%	50.00%
Standard deviation	19.95%	16.02%
p-value for the one-tailed mean comparison test	4.13%	

When we control for companies' size and form of control, industry regulation ceases to be deemed significant in explaining differences between the proportions of independent members in the board. Stated otherwise, we have found no evidence that the proportion of independent members in the board is any smaller in regulated industries than it is on non-regulated industries. This is shown in Table 5 by the non-significant coefficient of our explicative variable of interest ($p\text{-value} = 0.28$). The differences suggested by

Table 4 were truly accounted by other factors such as differences in companies' revenues and number of employees.

Table 5 - Tobit regression for proportion of independent members in the board

	coefficient	std. error	z	p-value
const	-0.864476666	0.269542703	-3.207197441	0.00134035
Regulated	-0.066731147	0.061627698	-1.082810964	0.278892338
log Revenue	0.051951113	0.012911102	4.023755177	5.73E-05
Employees	-2.17E-06	9.69E-07	-2.237621591	0.025245742
State-owned	-0.277007861	0.078131677	-3.54539761	0.000392021
Family-owned	-0.072768946	0.039446097	-1.844769212	0.065071118

- Hypothesis 4

Our final hypothesis concerns the adoption of governance practices among companies. We have theorized that firms in regulated industries are less eager to adopt governance practices than firms in non-regulated industries.

We list 13 corporate governance practices listed in the Reference Form and count how many firms adopt each practice. This produces a distribution of firms among best practices given that for any best practice one has the number of firms which adopt it. We do this for both regulated and non-regulated industries. Then we perform a χ^2 independence test to evaluate whether these distributions are alike or whether they are statistically different. We obtain a χ^2 statistic of 12.08 with 12 degrees of freedom, corresponding to a p -value of 0.44.

This suggests companies in regulated and non-regulated industries are equally likely to adopt corporate governance practice. This counters our hypothesis and suggests agency theory alone cannot account for the adoption of corporate governance practices. A possible explanation as to why companies are equally likely to adopt corporate governance practices regardless of industry regulation may lie in isomorphism. This hints that maybe firms do not adopt corporate governance practices solely as a means to counter the principal-agent problem, but highly due to isomorphism, as bases of legitimacy. (Şahin 2015; Enrione, Mazza and Zerboni 2006).

It is interesting to note, however, that though companies are equally eager to adopt corporate governance practices in spite of industry regulation, the choice of which practices are adopted is different on whether the industry is regulated or not. To be more precise, some practices are preferred by companies in regulated industries and these firms are therefore more prone to adopting these practices than firms in non-regulated industries. Indeed, it is striking that companies in regulated industries are therefore eager to engage more into corporate governance good practices by adopting some practices that companies in non-regulated industries are not so eager to adopt.

To verify this, we assess whether the proportion of companies which adopt each practice is significantly different in regulated and non-regulated industries. To this end, we perform a z-test for comparison of proportions from two independent populations. We perform one such test for each practice. We find that two practices are differently adopted among companies in regulated and non-regulated industries and that companies in regulated industries are more eager to adopt both such practices. These practices are disclosing a policy for making donation to candidates in an electoral campaign (p -value = 0.01%) and disclosing the values of such donations (p -value = 0.01%). Each practice is adopted by 16% of companies in regulated industries but only by 3% of companies in non-regulated industries. The question to be asked here may not be why companies in regulated industries are more likely to adopt these two practices, but rather why are companies in non-regulated industries less eager to disclose their policies to making donations to candidates in electoral campaigns or to disclose the values of these donations?

6. Final remarks

Why do companies adopt corporate governance best practices? Zattoni and Cuomo (2008) offer two potential answers to this question. The first answer is that the adoption of corporate governance best practices acts as a “soft law”, guaranteeing the protection of investors’ interests when such protection is not granted by the law itself. The second answer is that the spreading of corporate governance codes is due not to efficiency but due to isomorphism: adopting corporate governance best practice is socially desirable.

In this paper, we theorized that if Zattoni and Cuomo’s (2008) first answer is correct – that is, if corporate governance best practices complements the law where it is deficient – then corporate governance should be more weakly adopted in regulated industries than in non-regulated industries. Arguably, the more regulated an industry, the lesser the need to complement the existing legislation by adopting corporate governance best practices. We therefore theorized four hypotheses which should hold if the adoption of corporate governance practices truly sought to compensate for deficiencies in legal systems. We found two hypothesis to be confirmed. Companies in regulated industries are less likely to employ variable compensation schemes than companies in non-regulated industries. Even when variable compensation is employed, it is employed to a lesser extent in regulated than in non-regulated industries. This holds even when we control for company revenue, number of employees and form of control.

As regards to the percentage of independent directors in the board, however, we found no significant difference due to regulation. Similar results are found for the adoption of governance practices, though some practices were curiously found to be less often employed by companies in *non-regulated* industries (those related to the disclosure of information regarding donating to candidates in electoral campaigns).

These findings suggest that the adoption of governance best practices can be explained only in part by Zattoni and Cuomo’s (2008) first answer. Specifically, the idea that corporate governance enhances investors’ rights not granted by law seems to apply to variable compensation policies but not to other best practices in corporate governance. The remaining best practices whose adoption we found no difference between companies in regulated and non-regulated industries, must therefore be explained by Zattoni and Cuomo’s (2008) second answer: that adherence to corporate governance best practices is largely due to isomorphism.

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**O. L. Garanina, Graduate School of Management, Saint-Petersburg State University,
o.garanina@gsom.pu.ru**

**N.N. Pokrovskaia, Saint-Petersburg State University of Economics
nnp@ya.ru**

Industrial policy design, innovations and quality of institutions: the case of Russia

Diversifying domestic economy on the basis of natural advantages in extracting sector is of prime importance for many resource rich economies, it helps to avoid “resource curse” and middle-income trap. R&D and educational system, with the public or corporate spending, can be efficient way to develop the “high-road” competitive advantages of national economy through the institutions' modernization and transparent model of resources' allocation.

The present article sheds light on the effectiveness of industrial policies in oil-rich economies. The results demonstrate the importance of institutions in frames of industrial policies of a “vertical” type (that is, policies built primarily to support selected strategic industries). The qualitative methodology on the basis of the case-study method and experts' interview is related to the exploratory nature of the research.

Key-words: *industrial policy, energy sector, innovations, institutions, Russia,*

Introduction

On August 9, 2014, the Russian oil giant Rosneft and the US ExxonMobil announced the start of drilling in the Kara sea, at Russia's northernmost well Universitetskaya-1¹. The drilling was carried out by ExxonMobil and North Atlantic Drilling specialists from Norway² with the West Alpha oilrig, designed and built by Norwegian company. Although the US and the EU sanctions announced on July 29, 2014 halted technology transfers for Arctic offshore drilling. As a result, on December 1, 2014, Rosneft made the decision to delay the works on Arctic wells for the year 2015, and confirmed it in the company's official plan of offshore drilling in the Arctic, presented on April 4, 2015 to the Ministry of Natural Resources.

This case witnesses to the high level of dependence of Russian energy companies on the foreign drilling technologies. Current low oil prices accentuated the difficulties of the Russian extracting sector and emphasized the impact of American and European restrictions on exports of technologies and knowledge sharing. The economic sanctions exposed vulnerability of Russian economic model, given the huge part of the energy resources in Russian national income: oil and gas sector accounts for about 70% of Russia's exports, 25% of GDP and 50% of budget revenues.

The national development priorities declare the need of modernising Russian economy and implementing import substitution policies, especially for the categories of manufactured goods that are knowledge and technologies-intensive, for providing high tech complex equipment and machinery. The energy sector noticeably reflects the importance of these trends.

The present article aims to shed light on the effectiveness of industrial policies in oil-rich countries, in particular in the context of Russia. The novelty of the paper consists in explaining the role of institutions for industrial and innovation policies on the example of the energy sector. The study is based on two series of interviews, carried out in 2007 (N=12) and in 2015 (N=29). The results show the need of a complex approach aiming to build a framework for interplay between private and public strategies, as well as between national and international regulatory measures, in order to promote energy sector modernisation. Secondly, the surveys point to the role of quality of the institutional environment for active implementation of innovation policies.

The paper is organised as follows. The first section discusses the specifics of institutions and innovation policies for oil-rich emerging economies. The second section analyses modernization challenges of Russia's energy sector as well as innovation policies in the sector. The third section builds on interpreting results of a qualitative study and emphasizes the role of institutions for effective implementation of innovation policies. Last section concludes.

1. Theoretical background

1.1. Resource richness and institutions in economic theory: a blessing or a curse?

The theory of the "resource curse" emphasizes negative longer-term impacts of the "Dutch disease" (Corden and Neary, 1982) on the country's technical progress, mainly in manufacturing, caused by the diversion of financial resources from productive, growth-oriented use, due to rent-seeking behavior. Resource richness negatively affects economic growth, as demonstrated by Sachs and Warner (2001) who explored the linkages between the

¹ Reported at the website of Rosneft: <http://www.rosneft.com/news/pressrelease/09082014.html> .

² Gardner, T. (2014, September 9) Exxon winds down drilling as U.S. sanctions hit Russia, Reuters. <http://www.reuters.com/article/2014/09/19/usa-exxon-russia-idUSL1N0RK1HA20140919> (access 04.09.2015).

real Gross Domestic Product (GDP) growth per capita and exports of natural resources as a per cent of GDP. Deceleration of growth can be explained by a variety of political factors including weak institutions, rent-seeking behavior of empowered sectors, strategies of state-owned enterprises of extracting sectors or policymakers' shortsightedness (Ross 1999, Auty 2001, Torvik 2002).

However, several resource-rich countries (like Australia, Canada, Iceland, Norway, New Zealand and the United States) were able to turn the resource curse into a blessing thus denying the "resource curse" paradigm. It supports the idea that resource richness can contribute to economic development in a favorable institutional context, if the exporting sector is closely linked to other domestic industries. The case of Norway provides evidence of developing competitive advantage in oil and gas equipment based on the discovery of hydrocarbon fields.

Finally, Wright and Czelusta (2004) argue for adoption of a longer-term analytical perspective, in order to analyze the natural resource sector as a sector intensive in technologies and innovations. In turn, the resource dotation can be increased via introducing innovative exploration and production technologies.

2.1. Middle-income trap and the role of R&D

As argued by Eichengreen et al. (2013), the so-called emerging economies (BRICS) are concerned with the specific effect of the "middle-income trap", where the dynamics of Gross Domestic Product (GDP) per capita at purchasing power parity (PPP) demonstrates a slowdown.³ Despite the fact that Russia is excluded from the dataset due to the low income per capita and dependency on oil and gas, the analysis is interesting for understanding the complex systemic importance of the industrial innovative development.

According to Drobyshevsky (2015), the Russian economy is in the middle-income trap. In 1999-2007 the Russian GDP per capita annual growth exceeded 5%, and after the oil price plunge of 2008-2009, the GDP growth has decelerated to about 1.3% in 2013 and 0.6% in 2014.⁴ Russia meets number of indicators considered by Eichengreen et al. (2013) as the determinants of economic slowdown. These are, in particular, demography (high old-age dependency ratios), capital outflows (in 2014 the capital outflow in Russia has achieved 8,3% of GDP⁵) and exchange rate devaluation.

Among the factors helping to avoid the middle-income trap, Eichengreen et al. (2013) emphasizes, firstly, the level of the high and higher education. In particular, the quality of human capital provides more possibilities for the high-value-added sectors expansion and for the development of innovative technological solutions. Explaining this from the other side – the lower is educational level of the population, the more the country tends to specialize in the low and middle level of manufacturing based on low labor costs. In this field, Russia has traditionally been a strong player, with 54.6 level of the education and 46.0 of the Tertiary education (28th and 30th places out of 143 countries), according the Global innovation Index.⁶ Secondly, another indicator describes the correlation between the growth rates and the share of high-tech exports. The higher is the share of high-tech manufactured exports, the less the economy is susceptible to deceleration. Therefore, in Russian case, developing domestic R&D in the energy sector could be the first step to move up the technological ladder, improve country's technological security and promote sustainable growth rates.

³ In particular, Eichengreen et al. (2013) show that, after reaching the level of \$15,085, the growth of per capita income slowed on average from 5.6 to 2.1 per cent per annum.

⁴ Source: <http://databank.worldbank.org/data/>

⁵ Calculated on the basis of the World Bank data and the Central Bank of Russia data for the outflow of capital (form http://www.cbr.ru/statistics/credit_statistics/bop/bop_est.xlsx).

⁶ Source: <https://www.globalinnovationindex.org/>

2. Modernising Russian energy sector: between public and private governance

In this paper, the industrial policy is interpreted in its broad sense (Ishihara, 2002), that is to describe the systemic approach of the State to the strategic programmes and measures, intended to support the development of market conduct, infrastructure and the resource allocation for industries. This system preserves and strengthens the market “high-road” competitiveness (Aiginger, 2014) and, at the same time, supports the national producing sector with creating additional competitive advantages in the form of public goods or services, the regulative context and the easier access to the making decisions procedures, information and communication channels.

2.1. Energy sector modernization needs

Strategic goal of diversifying national economy, spurring innovations and modernizing energy sector has been reiterated in several strategic documents including the Energy Strategy of Russia for the period up to 2030 (ES-2030) and its revision to 2035 (ES 2035).⁷ According to the latest available version of ES (published in 2014), energy complex is expected to provide stimulating infrastructure for country’s economic development, as well as numerous synergies in terms of investment, innovations and institutional transformations in the energy sector and connected industries. The current sanctions regime only reinvigorates the importance of technological independence in energy-related industries.

At present, Russia’s energy complex is facing substantial challenges. The transition crisis led to underinvestment, with the degree of fixed assets depreciation in the fuel and energy complex being close to 60%. Investments in the fuel and energy complex amounted to 62% of the volume specified for the first stage of implementation of the ES2030 (ES2035, part 2). In relation to this, technical progress is lagging putting in question long-term oil and gas production prospects given the necessity to develop new production zones in geologically difficult and remote areas. Drilling equipment deterioration rate is about 70%, therefore adding to the lifting costs in next years.⁸

Analysis of the current market context demonstrates unfavorable trends for domestic firms. In recent years most of commands in oil services (65% to 75%) have been realized by foreign companies. The share of Russian firms decreased by a factor of 2.5 in past 12 years.⁹ In fact, large international companies dispose of strong advantages in terms of developed technological and innovation base, as well as broader financial capacities.

Russia’s ES supports import substitution: in perspective to 2030, the needs of the energy complex are to be satisfied by Russian equipment. The share of imports in purchases of equipment should not overpass 12% by 2013-2015, 8% by 2020-2022, and 3%-5% by 2030, according to ES2030.¹⁰ These objectives are also reiterated in the revised document, therefore postponing the final objective of 95-98% technological independency from 2030 till 2035.

⁷ Russian Energy Strategy for the period up to 2030 (November 2009, with a revision to 2035 expected in 2015); Strategy for Innovative Development of the Russian Federation to 2020 (December 2011); Concept of Long-term Socio-Economic Development of the Russian Federation for the Period up to the year 2020 (November 2008), State Program on Energy Efficiency and Energy Industry Development (April 2014).

⁸ Pyzhianova V. Kogda pridet den’ nezavisimosti [When comes the independence day]. *Expert-Ural*, 15.06.2015. <http://expert.ru/ural/2015/25/kogda-pridet-den-nezavisimosti/> (access 03.09.2015)

⁹ Pyzhianova V. Kogda pridet den’ nezavisimosti [When comes the independence day]. *Expert-Ural*, 15.06.2015. <http://expert.ru/ural/2015/25/kogda-pridet-den-nezavisimosti/> (access 03.09.2015)

¹⁰ ES-2030. Part VII.2.

2.2. Innovation policies in Russia's energy sector: a top-down approach

Russian approach towards energy technology research and deployment (R&D) is dominated by a top-down logic, where small and medium-sized enterprises (SME) are not sufficiently involved. According to different estimates, 75-80% of Russia's R&D spending is carried out by publicly funded or directed institutions, and most funds are provided by the federal budget (IEA, 2014).

It can be argued that Russian case proves weaknesses of top-down policies. Firstly, government's bureaucracy may impede its implementation because of difficulties of coordination among various federal, regional and local authorities, administrations and private stakeholders (IEA 2014). For example, several technology platforms and innovation clusters have been created to foster innovations, however the private sector engagement remains relatively low (IEA, 2014).

On top of that, in contradiction to the stated goals, the policy roadmap in R&D does not find substantial place within the text of the ES. The declared long-term objectives are not supported by the elaboration of the corresponding policy measures either by an exhaustive monitoring system that are not elaborated in an extensive way in ES2030, or in the project of ES2035. The content analysis of the ES reveals that, besides the statement of objectives, the issue of developing national oil service industry does not appear in the text of the document. In such a way, implementation of positive spillovers between the extractive activities and connected manufacturing technology-intensive sectors is left to free market forces.

Moreover, Russia is facing a lack of framework conditions to kick-start a vibrant and effective R&D network. In fact, the economic crisis of the transition period drove away numbers of scientists out of the country (IEA, 2014), because of low salaries in R&D sector and underinvestment in research infrastructure. Despite the fact that Russian expenditures in R&D have substantially increased during the past decade, this growth is not sufficient to compensate the transition gap: in 2013, Russian expenditures on R&D represented about 1.5% of GDP, compared to more than 2% in 1990 (IEA, 2014). According to the objectives set in the Strategy for Innovative Development 2020, Russia's R&D spending should reach 2.5-3% of GDP by 2020. This is slightly more than the average OECD R&D spending of 2.2%. According to the same document, over 50% of R&D should be financed by the private sector. The latter appears as ambitious objective given low indicators demonstrated by most state-owned enterprises (SOEs) in Russia (IEA, 2014).

2.3. Bottom-up innovation strategies

Energy sector companies understood in the late 1990s the problem of lack of knowledge and technology. For developing their own capacities in the field of R&D and human resources, since 1998-1999 Russian energy sector companies initiated their corporate technology and innovation strategies. The companies were carrying out an active search for collaboration with academic institutions and creating corporate research centres, laboratories and corporate universities.¹¹ Rosneft and Surgutneftegas were among the first companies to create in 1999 their corporate Universities, followed by Gazprom in 2000. However, corporate research institutions don't have sufficient capabilities to move forward the modernization of Russia's energy sector, raising the issue of public policies in this domain.

Improving competitiveness of Russian firms in the domain of oil and gas technologies can hardly be expected. In 2010-2012, Russian energy companies (data from Gazprom, Rosneft and Lukoil) spent only about 0.2% of their annual revenues in R&D, compared with 2% to 3% in most foreign companies (IEA 2014). Weak incentives to innovate can have

¹¹ Myazina, E., Babickii, A. Reiting RBK: 15 liderov korporativnogo obrazovaniya [Rating RBC: 15 leaders of corporate education]. *RBC*, 27.04.2015. <http://daily.rbc.ru/special/business/27/04/2015/552c5adf9a7947ba47f95877> .

several explanations. Firstly, reserves-to-production ratio of Russian energy companies is much higher compared to international oil companies (IOCs). Rosneft has 20 years of oil production ahead as of end 2013, compared to 12 years in average for most IOCs. Secondly, state companies are viewed as not very innovative per se. According to an assessment by the World Bank and the Higher School of Economics, Russian firms operating in a more competitive environment spend significantly larger amounts on R&D, while monopolistic firms innovate the least (Goldberg, 2006) as they lack market incentives.

Statistics on patent applications confirms relatively poor results of Russian science and technology policy in energy complex. In fact, the leading industries in patent applications are Food chemistry (11.15% of patent applications in 1999-2013) and Medical technology (8.43). At the same time, Schlumberger appears at the fourth position among the top applicants in 2013.¹²

3. Institutional framework for industrial and innovation policies

3.1. Networks for innovations

The transfer of knowledge plays the core role in the sustainable growth, and according to the study of Branston et al. (2016), the governments have to lead more intensive public strategies in the education and research. Spurring innovations also requires interaction of various actors. The latter is measured by the UN Industrial Development Organization (UNIDO) Connectedness index, which builds in the unique ranking the quality, availability and transparency of the public institutions and of inter- and intra-organisational networks. According to this indicator, the leaders are Switzerland, Sweden and the Netherlands, while Russia has quite low ranking: in 2014, it took the 76th place, well behind Brazil and China (ranked 33rd and 34th respectively) and between Turkey and Cambodia.

Low degree of interconnectedness within the national innovation system is reflected in globally weak linkages between academia and industry. In this domain, a study led by the authors in 2007 revealed the lack of qualified personnel in the sector (see fig.1).

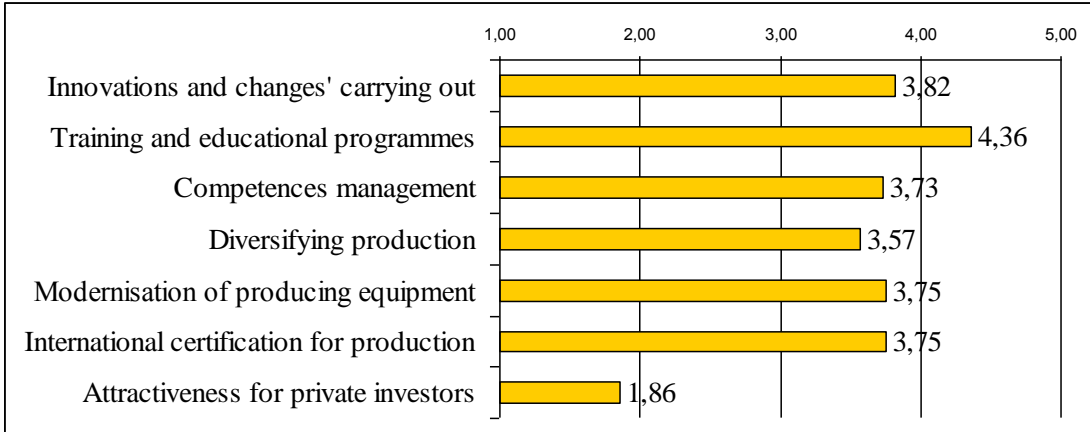


Fig. 1. The main institutional concerns for the organisational development management in companies of the energy sector, according to the experts' appraisals, 2007¹³.

The evaluation was based on twelve interviews with top-managers in Russian oil service companies performing geological research and exploration, drilling and maintenance of wells and producing drilling equipment. Interviews revealed serious concerns related to the

¹² http://www.wipo.int/ipstats/en/statistics/country_profile/profile.jsp?code=RU (access 04.09.2015)
¹³ The research revealed many problematic fields in the management, the fig. 1 represents only the mentioned opinions concerning the societal and macroeconomic institutional basis for the sector development.

availability of competent, trained and high-qualified personnel (4.36 points out of 5) for providing the innovative development of energy companies.

In 2007, the importance of the private investment was not common and got the score of 1.86, but later, in the spring 2015, the competition and the involvement of the private business (including small and middle enterprises and research, design and deployment (RD&D) labs) took higher places (see fig. 2 below).

3.2. Institutional framework for innovation policies

Russia's energy strategy is oriented towards increasing energy output. In particular, in the oil sector, increasing production volumes are expected from developing technologically complex tight oil and offshore fields. In this way, sustainability of Russia's oil production is dependent on technological progress, especially under the current sanctions regime.

In order to shed more light on this issue, twenty-nine semi-structured interviews were performed with top-middle managers of energy companies. All interviews were held in April 2015. The research question was to explain whether current policies were sufficient to reach the objectives of ES2035 in terms of developing new difficult production areas (tight oil, Arctic offshore). The drawback of the adopted methodology is related to subjective evaluations based on individual experiences and perceptions. Relatively large number of interviews allows attenuating this problem.

The results are presented below (see table 1). Several experts pointed to the "declaratory character" of the ES, lack of detailed action plan and monitoring system. The current policy framework based on fiscal stimuli for energy companies (introducing flexible tax on value added instead of the mineral tax) so that to support the economics of most complex projects received approval from most experts. On the contrary, the R&D policy bloc received negative feedback from respondents.

Table 1. Promoting innovations in Russian oil and gas industry

	Strengths	Weaknesses
Fiscal policies	Fiscal advantages granted for continental shelf and tight oil fields including for mineral tax, property tax, VAT, and export tax Zero import tariffs on imported equipment	Excessive tax burden in the oil industry Low differentiation of fiscal burden among different fields that stimulates exploitation of sweet spots (tax on revenue added instead of mineral tax is under discussion) Lack of public co-funding or public guarantees in the context of restricted access of oil companies to capital markets
Technology and R&D	Restoration of full innovation cycle "fundamental research – applied research – product design – production" is declared as priority in ES2035 Development of shipbuilding cluster in the Far East in order to provide for the hydrocarbon transportation needs	Lack of real measures aiming to promote domestic technologies for projects in tight oil and Arctic shelf. As noted by one expert, the situation in the oil service industry is "catastrophic": "almost no competition, low level of technological development, lack or total absence of domestically produced equipment, low qualifications of staff" Import substitution policy is not specified in ES2035, while at current stage, domestic technologies are less performing compared to western ones Lack of funding of R&D programs, especially important in low-price context, in the domain of exploration and drilling technologies Lack of public support for oil service companies, although the latter need to proceed with high upfront investments for technological upgrading

Regulation	Liberalization of LNG exports	Priority given to state-owned companies is not always beneficial to all players in the industry Only Rosneft and Gazprom are authorized to develop the Arctic shelf. According to several respondents, Lukoil could also have been admitted to the Arctic shelf given company's experience in developing Caspian offshore Quality of the investment climate
International cooperation		Lack of cooperation projects between Russian companies and technology leaders (internships, joint programs with foreign companies)
Human resources		Lack of qualified workforce in Eastern Siberia and Far East. Lack of programs for qualified workforce migration from Western Siberia towards new production areas Need to motivate and train workforce for modern oil and gas technologies Need to import workforce to develop new technologies

Source: interviews held by the authors.

Respondents expressed a clear preference for the “governance instead of government”, flexible fiscal policy (the absolute leader among the recommended improvements – 72.4% of experts mentioned this requirement) and the stable institutional framework that could create the necessary “field for the fair play” (fig. 2).

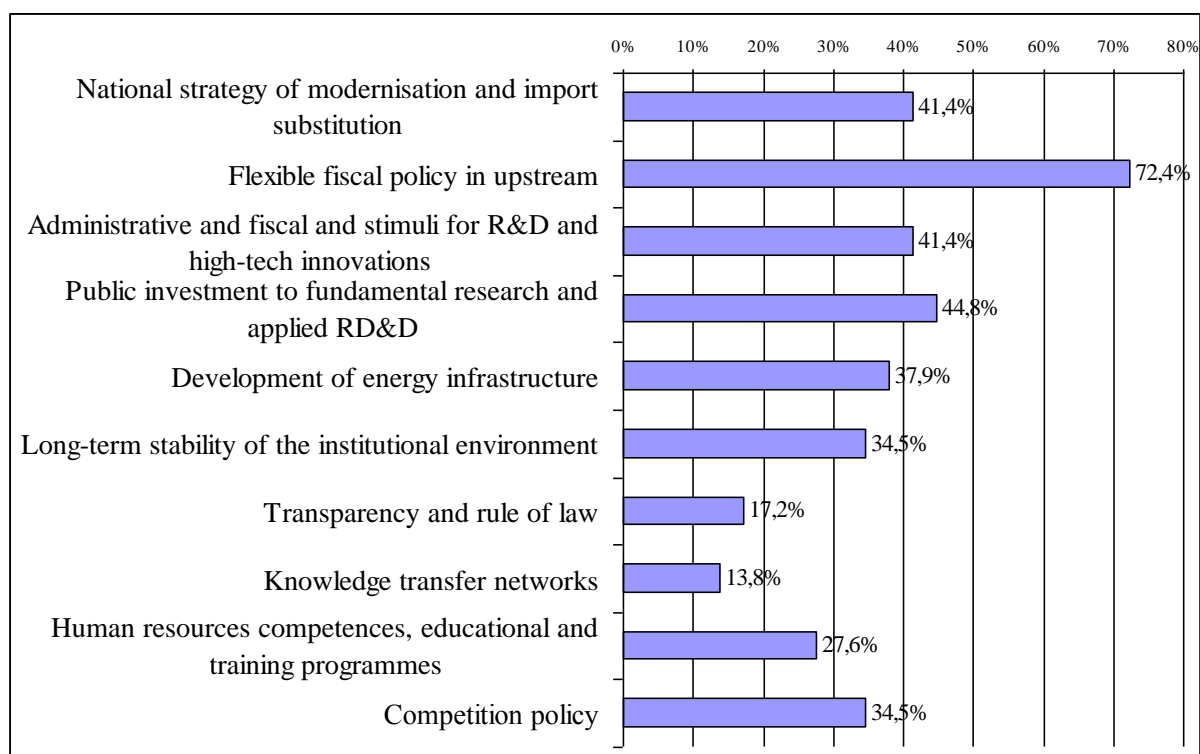


Fig. 2. Policy improvements required for the companies of the energy sector, according the experts' appraisals, 2015.

We found it important that 4 from the 10 essential axes concern the institutional background: the rule of law, the long-term stability, the human capital development and the competition policy directly describe the institutional context.

Economic sanctions provided a strong signal for all market players to enhance efforts aiming to reduce technological vulnerability of Russian oil and gas industry. For example, in

2014 Rosneft actively invested in drilling activities (it consolidated the oilfield service assets of Weatherford and the Orenburg Drilling Company), in line with its strategic goal to develop in-house drilling and oilfield service business (Rosneft, 2014). Also, many large state-owned energy companies have developed their research centers and collaborate with external research institutes and participating in technology platforms. However, despite these positive steps, it may take a long time to reverse the situation in Russian oil service industry. As argued by an energy company representative¹⁴, firstly, Russian newly elaborated oilfield technologies may become more expensive and less performing compared to western competitors, and secondly, their development will take time. According to Russian Academician and member of the Rosneft Board, N. Laverov, Russian companies need at least 10-15 years to create the new technologies for the specific under-water conditions of moving ices¹⁵ of the Arctic seas.

Conclusion

Russia's case provides evidence of vulnerability of national economies based on extracting sector and technological independence aspects of providing energy security. However, innovative structures in Russia meet several challenges. Firstly, these are related to an insufficient public support within a policy framework dominated by top-down approach. Moreover, top-down policies are generally associated with heavy bureaucracy and administrative procedures.

The better inter-connection of private sector and public policies is crucial for both energy sector successful expansion and modernisation of the national economy. The results of the interviews show the importance of institutional factors in implementing innovation policies. The corrupted model distorts the resource flows, take for example the distribution of licenses among companies "more or less close" to the source of authority. The theoretical economics emphasizes the State's function to guarantee the fair competition to support the efficiency-seeking business models of the private sector. Unstable regulative model leads to the lack of reliability concerning the private property as a fundamental ground therefore creating negative incentives for investment in long-term projects in the domestic economy.

Lastly, the middle-income trap analysis emphasizes the role of tertiary education as a determinant for the continued growth. Fostering national R&D requires availability of qualified workforce, the latter being achieved by permanent interactions between academia and industry.

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Margarita Gladkova
Graduate School of Management, St. Petersburg State University
gladkova@gsom.pu.ru

Grigorii Bykov,
Graduate School of Management, St. Petersburg State University;
OOCL (Russia) Ltd.
grigorybykov@gmail.com

Perspectives of Container Infrastructure Development in Russian North-West Region in Times of Crisis

Abstract: The purpose of the research is to provide a scenario-based forecast of infrastructure development, depending on external and internal market forces. The research presents a deep overview of container terminals and corresponding infrastructure elements, including potential development and growth. The forces, influencing cargo flows in the past and in current crisis are examined and several scenarios of cargo flow and infrastructure development, depending on economic and political situation, are suggested.

Keywords: *container infrastructure development, forecasting, North-West region, Russia*

1. Introduction

Nowadays sufficient container infrastructure is extremely important for sustainable economic growth of any country or region. Moreover, it is sensible to judge how a country is developed economically by looking at how important for its economy containerized cargo flows.

However nowadays there are significant challenges for infrastructure development, such as crisis and competition with neighboring countries. The purpose of the research is to provide a scenario-based forecast of infrastructure development, depending on external and internal market forces.

The Russian bunkering market is still rather small. In 2013 it operates 10 million tons which is 5 billions USD dollars. If we compare this data with other countries, we may see that for Singapore this figure is 29 million tons, while in Netherlands (Rotterdam) it is 20 million tons.

2. Overview of Container Terminals

In 2013 Russian ports handled over 5 million TEU (twenty-foot equivalent unit) compared to 0.6 million TEU in 2010. Key drivers that contributed to the growth in global container throughput over this period were sustained growth in global trade, increased global sourcing and manufacturing, a shift from transporting cargo in bulk to transporting cargo in containers and growth in transshipment volumes (Global Ports. Market Overview [2]). Our task is to analyze how the situation changed in recent year taking into account political situation, namely tough relationship with western countries and lack of inland terminal facilities.

There are three main regions: Baltic Sea Basin, which in Russia represented by St. Petersburg, Far East region and Black Sea Basin. North-West region of Russia, including St.-Petersburg and Ust'-Luga, is the most developed in Russian Federation in terms of container infrastructure and is most important due to proximity to Moscow.

Proper development of the region might significantly influence on intensive and extensive national economic growth. The Baltic Sea Basin processes the majority of Russia's inbound and outbound container volumes, including transit cargo via Finland and Baltic countries. Over 60% of all TEU is handled by ports of Baltic Sea Basin, 25% is handled by Far East ports and the rest by Black Sea ports.

Container terminals of the Baltic Sea Basin are located in proximity to the key transshipment hubs serving Russia's inbound and outbound containers, such as Hamburg and Rotterdam. Using those transshipment hubs for Russian dedicated cargo originated in Asia has proved to be economically efficient in view of significant economies of scale that can be achieved via such transportation route (Global Ports. Market Overview [2]).

There are currently five major terminal operators around St.-Petersburg. The Russian Ports segment in Baltic Sea Basin consists of Petrosport (PLP), First Container Terminal (FCT), and Moby Dik (MD) container terminals in St. Petersburg, Ust-Luga Container Terminal (ULCT) in the Ust-Luga port cluster and Container Terminal St. Petersburg (CTSP).

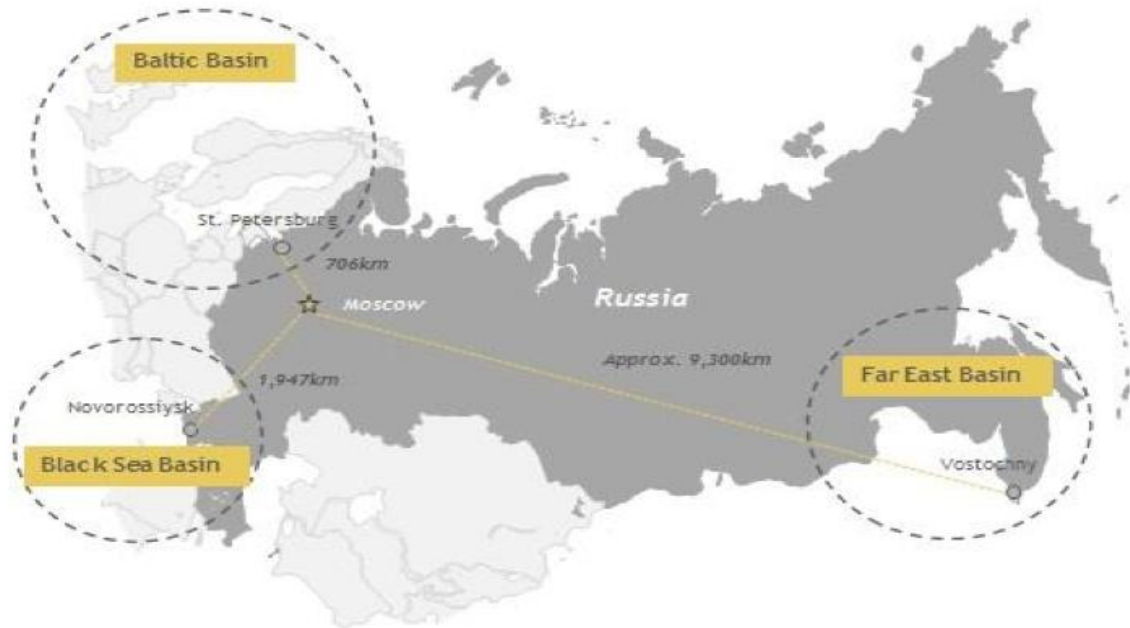


Figure 1. Key Russian container gateway. Source: Global Ports [2].

Total turnover of the Russian-related cargo in the region in first half of 2014 is 1,576,000 TEU. However, Russian Baltic terminals were utilized by 64%: 1,237,244 TEU were transported, with the capacity level of 1 937 500 per half a year. Table 2 presents the basic information on container terminals that was compounded by authors from terminals websites [5, 7, 8, 9]

Currently two container terminals are significantly developing in St. Petersburg, Ust-Luga Container Terminal and Bronka Container Terminal which will be open in a couple of months. Both terminals are remote from the city center. ULCT has poor highway and railroad infrastructure, efficient ones to be finished no sooner than 2018.

Table 2. Major container terminals around St. Petersburg

	FCT	PLP	ULCT	CTSP
Operating since	1998	2007	2011	2011
Throughput, 2014 (TEU)	940,770	657,752	103,503	388,646

Capacity, 2014	1,350,000	1,000,000	440,000	600,000
Potential capacity	1,500,000	1,400,000	2,600,000	1,200,000
Cntr yard capacity (TEU)	28,800	26,950	15,000	12,114
Reefer plugs	2,905	5,500	420	1,120
Quay length (m)	780	2,201	440	479
Depth	11.0	11.0	13.5	13.5
Operating Liners	OOCL, Maersk, MSC, CMA, Evergreen, Unifeeder, APL, FESCO and others	Maersk, CMA, Evergreen, Unifeeder, APL, FESCO and others	OOCL, Maersk, CMA, Unifeeder, APL, FESCO and others	MSC, Unifeeder

3. Throughput Forecast

In order to forecast the situation on the market we analyzed the main available information on throughput at the container terminals in St. Petersburg area.

Despite the fact that it was observed increase in throughput the last several years [6], we focus on the last 19 months when the political and economic situation in Russia dramatically changed. To do that the data on throughput information was compounded by authors. Generally, as we may see from the graph presenting the throughput dynamics in total (Fig. 3) and by terminal (Fig. 2), the throughput is descending during the last 2 years crisis period.

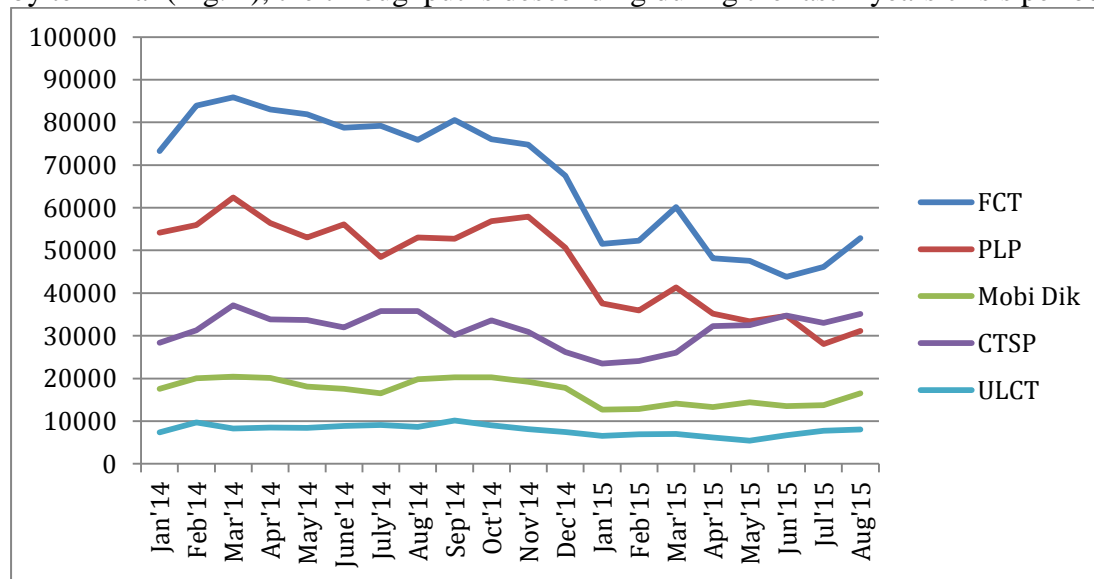


Figure 2. Throughput dynamics by terminal. 2014-2015.

Let's consider the total throughput for GPI terminals and forecast future dynamics. It was found that from January 2014 the minimum throughput was equal to 95 665, and the maximum

achieved the value of 176 960, while the average monthly throughput was equal to 138 752 with standard monthly deviation of 28 938.

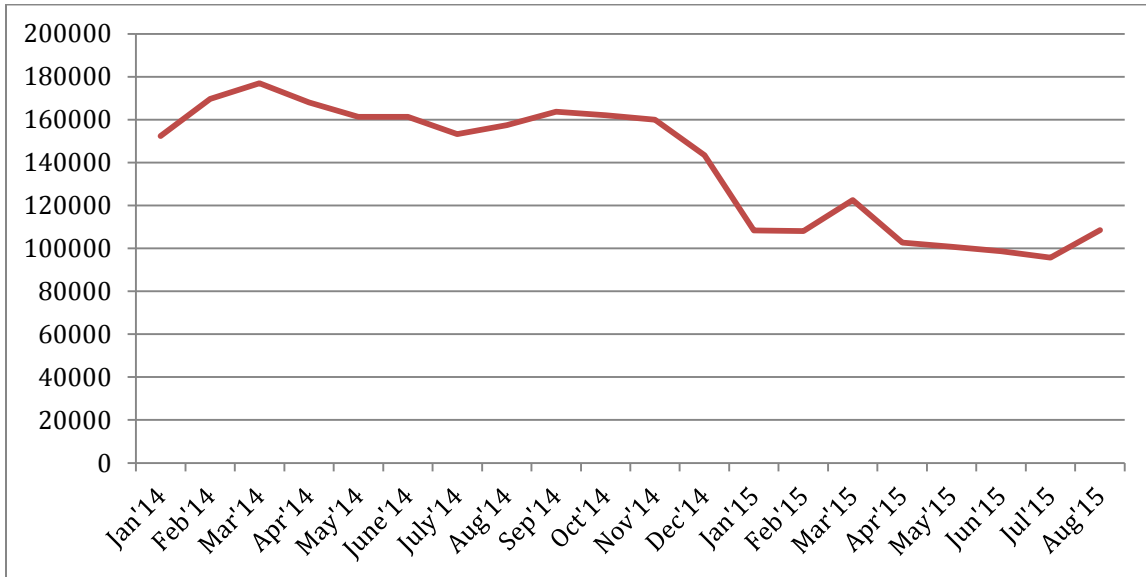


Figure 3. Total throughput 2014-2015.

We can see that there is descending trend in the data and that why for forecasting we can use exponential trend. The model quality is high enough with $R^2 = 0.83$ (in comparison with $R^2 = 0.7$ for linear and quadratic trends). The model was built and evaluated using Microsoft Excel.

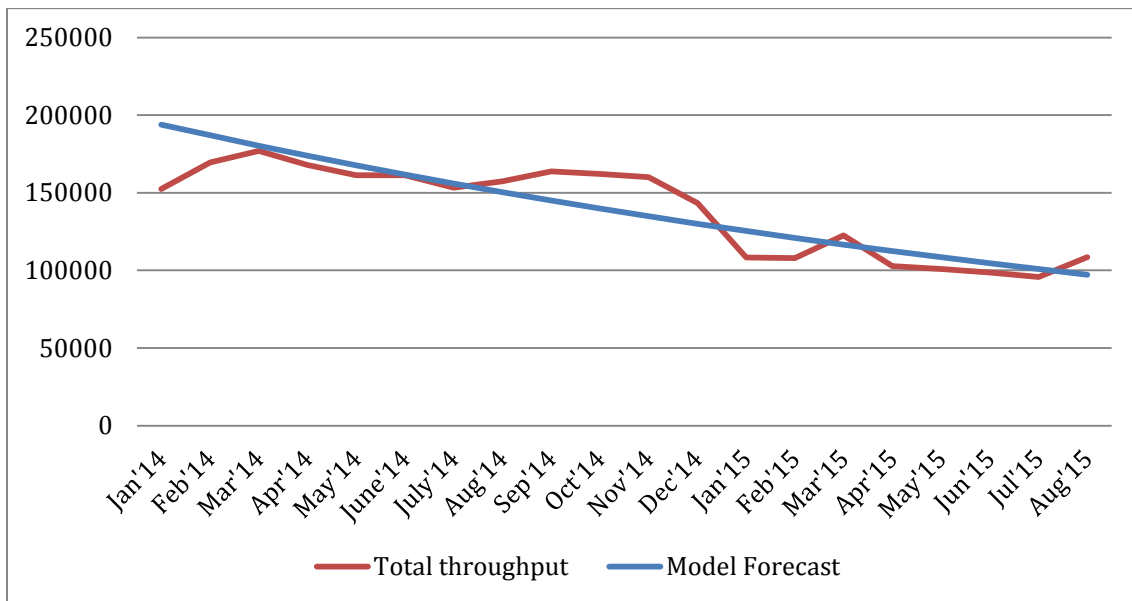


Figure 4. Model forecast for throughput, 2014-2015

Therefore, using the model we might be able to predict the value of throughput in St. Petersburg terminals for the next months.

Table 3. Throughput forecast.

Sep'15	Oct'15	Nov'15	Dec'15	Jan'16	Feb'16	Mar'16
93787,06	90441,27	87214,84	84103,51	81103,18	78209,88	75419,79

However container shipping market is a little bit more difficult, than it seems. First of all we should consider, that amount of exports hardly decline, while import cargo is being hit severely. Moreover there is no real reason for containerized export to decline, but the lack of containers. That means that in nearest future we most probably will see Russian export to become more expensive both in terms of final price and in terms of nature of cargo (replacing metal scrap or coal by more or less finished or semi-finished product).

4. Conclusion

As we can see, crisis hits Russian container transportation market severely, which can't be a good sign, as all developed and developing countries use containers as major type of cargo transportation. Declining number of containerized cargo is another sign of poor situation in Russian economy.

Specific political structure doesn't allow providing reliable forecast of Russian development in line with the development of the world economy. Although its unique access to natural resources still gives hope that further development will take place due to worldwide demand for those resources. Further terminals development will take place in the nearest future, which most probably means increasing of competition and better market conditions for maritime carriers

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**Olga Golubeva, Ph.D., School of Social Sciences,
Department of Business Administration,
Södertörn University, Sweden ¹**

**“Strategy under uncertainty: empirical evidence from Swedish companies
operating in Russia”**

The objective of this paper is to describe and explain company strategies under uncertainty. It attempts to examine more closely the interaction of research on strategic management with internationalization theory and the dimension of uncertainty. This study builds on the empirical data from a survey conducted in 2015 among 73 Swedish companies operating in Russia. The findings support several concepts of strategic management and internationalization theory, but also reveal some phenomena that would require further investigation. These include a domination of expansion strategy chosen by Swedish firms during the current escalation of uncertainty in Russia.

Keywords: *Company strategy, Uppsala internationalization process model, Uncertainty, Risk, Commitment, Survey method, Foreign (Swedish) investors, Russia*

¹ The author would like to thank Business Sweden for providing the empirical data from its “Business Climate Survey 2015” for research purposes. Business Sweden, the Swedish Trade & Invest Council, was founded on January 1, 2013, to facilitate the growth of Swedish companies abroad and investment opportunities in Sweden. Business Sweden is owned by the Swedish government and has representation in 50 countries. I am also indebted to Dr. Alan Wood for proofreading assistance. However, I remain solely responsible for the paper’s errors and omissions.

1. Research problem and purpose

In the present environment firms are increasingly exposed to the disturbances of a global marketplace and an escalation of uncertainty. A recognised expert in strategic management, Michael Porter (2006), emphasized the importance of uncertainty for company strategy, suggesting that a firm might have to re-assess substantially its strategy if there are major changes in the level of uncertainty. There have been several attempts to link company strategy and uncertainty (Wernerfelt and Karnani, 1987; Wiltbank et al., 2006; Kaplan 2008). Complexity of the phenomena and data limitations, however, have impeded such development and discussion is far from being concluded.

Internationalization of companies, including expansion into emerging economies, is another distinguished feature of the modern economy. Compared to developed countries, markets in emerging countries are often exposed to a higher level of uncertainty. Only a few scholars, however, have included a risk dimension in their analyses of internationalization process. (Figueira de Lemos, Johanson, and Vahlne, 2011; Bengtson, Ljung and Hadjikhani, 2013; Figueira-de-Lemos and Hadjikhani, 2014).

Despite the fact that uncertainty and turbulence provide an increasingly common framework for the elaboration of international company strategy, the field of strategic management and research on internationalization of companies have tended to develop relatively separately. Any particular impact of the escalation of uncertainty on foreign companies' strategies also remains unclear. This study attempts to address some of these short-comings.

The objective of this paper, then, is to describe and explain foreign companies' strategies under the influence of uncertainty. The study attempts to examine closer interaction between research on strategic management and internationalization theory. The article's ambition is to search for a dynamic relationship between companies' strategies and uncertainty and explore why these strategies have been chosen by firms.

All companies operate nowadays under conditions of environmental uncertainty and high turbulence but the degrees of disturbance differ. Emergent post-socialist markets of Central and Eastern Europe (CEE), often labeled as transition economies, represent a pattern of uncertain and turbulent environment. It is pointed out by several researchers that transition economies are characterized by a higher degree of uncertainty, turbulence and ambiguity. (See Golubeva, 2001; Michailova and Worm, 2003; Vasyechko, 2012).

The success of transition is often related to the progress of market reforms that decrease uncertainty and reduce turbulence. Courtney, Kirkland and Viguerie (2000) stated, for example, that foreign companies considering investments in Russia in 1992 faced a true ambiguity with an unpredictable range of future outcomes for different scenarios. Since that time, greater political and regulatory stability have lowered the uncertainty level for strategic decisions of foreign companies entering the Russian market. Russia has been demonstrating successful reduction of the uncertainty level for over ten years.

There are several reasons, however, to believe that both economic and political uncertainties have recently escalated. Firstly, for the first time in a decade, the credit ratings agency Standard & Poor's downgraded Russia's sovereign debt from an investment grade

BBB- to a junk grade BB+, reflecting weakened prospects of economic growth.² Secondly, relationships between Russia and the EU / USA have recently deteriorated. Introduction of sanctions against Russia by the EU and the USA, and counter-sanctions by the Russian government, have created challenges that were not on the agenda only a couple of years ago. Business Monitor International (BMI) views the current escalation of conflict between Russia and the West as being based on a long-term geopolitical competition and therefore likely to prevail for the next few years.³

Several scholars have pointed out that joining the EU - or even the prospect of joining the EU - by transition economy countries promotes foreign investors (a halo effect). It has also been suggested that a multinational enterprise (MNE) may perceive a decrease of uncertainty if a transition country in which that MNE carries out foreign operations, integrates into the European Union market. (See Globerman, Shapiro and Tang, 2004). One might expect, therefore, that an escalation of conflict between Russia and the EU/USA in combination with economic recession will be reflected in a strategy of foreign companies operating in Russia.

This paper also aims to present and analyze the recent empirical survey data on the subject. While the entry strategies of MNEs into emerging markets and transition economies have been investigated by several scholars (Hultén, 2009; Arslan and Larimo, 2011), the possible impact of an increased uncertainty on companies which are already established on the market is still an under-researched phenomena. The present study is limited to an analysis of strategies chosen by Swedish companies currently operating in Russia.

2. Methodology

The study uses the empirical data from the “*Business Climate Survey 2015*” (BCS) that was conducted by Business Sweden during March-April 2015. The survey presents the reaction of Swedish companies operating in Russia to the recent escalation of turbulence and uncertainty in the market. About 168 firms, approximately half of the Swedish companies operating in Russia, were asked to provide answers on 27 closed questions. Additionally, several questions allowed respondents to write comments and recommendations. The questions range from general information about the company to forward-looking strategy in Russia. 73 companies, or almost 43% of Swedish firms that had been randomly chosen to participate in the survey, provided answers. The actual respondents were experienced top executives, mainly Swedish nationals.

Many scholars in international management apply a longitudinal case study methodology, which allows them to follow the changing strategy of MNEs during a certain period of time. (Johansson and Johanson, 2006; Bengtson, Ljung and Hadjikhani, 2013; Figueira-de-Lemos and Hadjikhani, 2014). In contrast, this study uses empirical data received through a survey investigation. Such an approach excludes the possibility of following the changing pattern of company strategies over the long term. On the other hand, *a survey method does allow the mapping of different strategies undertaken by numerous MNEs during a certain period of time, and searching for better understanding of why these strategies have been chosen by those companies.* Analysis of different strategies chosen by MNEs at a particular point in time

² Andrianova, A., & Galouchko, K. (2015, January, 26). Russia credit rating is cut to junk by S&P for the first time in a decade. *Bloomberg*. Available from <http://www.bloomberg.com/news/articles/2015-01-26/russia-credit-rating-cut-to-junk-by-s-p-for-first-time-in-decade>

³ Russia and the West: not a new cold war, but a cooler period (2014, November 11), *Business Monitor International (BMI)*, A Fitch Group Company. Available from <http://www.businessmonitor.com/news-and-views/russia-and-the-west-not-a-new-cold-war-but-a-cooler-period#sthash.V7JM1eVj.dpuf>

can eventually provide grounds for a more holistic view of the decision-making under conditions of increased uncertainty.

The research method applied during the study is primarily abductive, implying switching ‘back and forth’ from theoretical concepts to empirical data instead of processing according strictly sequenced steps. (See Dubois and Gadde, 2002; Morais, 2010). Relative to deductive and inductive approaches, abductive methodology is still seldom applied by scholars, although the approach has the advantage of being an instrument of theory-building rather than of theory-grounding or validation.

The research presentation follows a standard pattern. Firstly, a theory review is provided. Various frameworks can be applied to the analysis of international company strategy under uncertainty. *The study limits the theoretical foundation to selected strategic management theories* relevant for the purposes of this research *and the conceptual framework of Uppsala internationalization process model*. Thereafter, empirical data is analyzed and compared to findings of other researchers. Finally, topics regarding theoretical frameworks and empirical investigations on the subject are suggested for forward-looking research.

3. Theoretical framework

3.1. Strategy under uncertainty

Strategic management theory introduced numerous approaches to a company’s strategy.⁴ Hoskisson et al. (2000) suggested the following theories to analyze strategy in the emerging markets: institutional theory, transaction cost economics, and the resource-based view of the firm. They argued that different theoretical perspectives can provide useful insights into enterprise strategies in emerging economies. For firms operating in the uncertain environment scholars often suggest two main directions: the *classical planning approach* and the *adaptive learning approach*. The classical planning school, the oldest one in strategic management, suggests that rational strategy can guide companies to better performance even in uncertain situations. Although predictions are too inaccurate to be useful under uncertainty, the systematic nature of rational planning is a valuable tool for a company strategy’s development (Szulanski and Amin, 2001). On the other hand, several scholars have suggested that changes in the turbulent and uncertain environment are bottom-up driven, emergent, and incremental, rather than formulated and implemented as assumed in the older classical strategic frameworks. (See the discussion between Mintzberg and Ansoff, 1994). The basic strategic principles of the emergent approach are incrementalism, experimentation and adaptation to the rapidly changing environment (Schoemaker, 2002). Based upon the advice of these two schools, a company’s strategy under uncertainty should either try harder to predict better (*rational strategies*), or move faster to adapt better (*adaptive or emergent strategies*) (Wiltbank et al., 2006).

Company strategy which is subject to uncertainty also involves a trade-off between acting early or waiting until the uncertainty is resolved. (See Wernerfelt and Karnani, 1987). There are many arguments for managers operating under uncertainty to retain the status quo in the commitment (Pureza and Laporte, 2008) and pursue a ‘*wait and see*’ strategy (Lowell, 2002). Sull (2005) advises companies that have chosen such a strategy to be ready to act as soon as it becomes possible to estimate the risks and rewards of the different scenarios, so-called ‘active waiting’. An increased level of uncertainty might lead companies to choose a *de-commitment*

⁴ We refer to a comprehensive work by Richard Whittington (2006) for review of the main approaches to strategy, namely the classical school, the evolutionary and processual perspectives, and the systemic approach.

(reduction) strategy (Petersen et al., 2008). Reported cases of de-commitment (Bianchi & Ostale, 2006; Freeman, Edwards & Schroder, 2006) explain the logic of strategy to decrease the foreign commitment due to the knowledge loss under unfavorable changes of the environment. Research specifically focusing on *exit strategy* is relatively rare, although there have been some valuable contributions. (For example, see Bianchi and Ostale, 2006; Decker and Mellewig, 2007; Havila and Salmi, 2009). In this position, companies are unable to cope with increased uncertainty and completely leave the foreign market. There is very little research on companies that have chosen an *expanding (or growing) strategy* under uncertainty. Expanding strategy presumes additional commitment by a company to the foreign market despite the increased uncertainty. The empirical evidence is quite rare, as companies prefer to wait before making further commitments until the risk level has become more acceptable.

Based upon several important theories and concepts of theory of strategic management, the paper will focus on: (1) whether rational or adaptive strategy has been applied by companies operating under uncertainty; (2) how the choice between ‘wait and see’, de-commitment, exit and expanding strategies has been made and why these strategies have been chosen.

3.2. Internationalization process and Uppsala model

The classical economic model assumes that MNEs systemically engage in a cost-benefit analysis of different internationalization strategies and select the optimal one (Rugman & Verbeke, 1992). Growth is a core perspective in generating an understanding of reasons for internationalization of firms (Dunning, 2004).

The behavioral approach to analyzing foreign investment decisions has been developed by economists from Uppsala University in Sweden. The incremental behavior, defined by Cyert and March (1963), is realized through the increase of commitment against the decrease of uncertainty induced by knowledge accumulation (Johanson & Vahlne, 1977). Based on Scandinavian experience, the model explains an increasing commitment in foreign countries from export to joint venture representation, then to sales subsidiary, and, finally, to resource development of the subsidiary. Furthermore, the model explains entry into the new markets with successively greater ‘psychic’ distance. Companies’ increased knowledge about these foreign markets changes the perception of uncertainty, and investments previously assessed as risky become acceptable. In subsequent study, Johanson and Vahlne (2009) revised the Uppsala internationalization process model to emphasize environmental dynamics and to include knowledge gained through relationships in networks.

It is conceptually assumed in the framework that radical events escalate the uncertainty, and, consequently, the risk level. According to Jones (2007), uncertainty can be formulated as an event that might occur and can be planned for, i.e. addressed, in a set of contingency plans. Compared to ‘pure uncertainty’, reflecting unpredictability of future, ‘contingent uncertainty’ may be reduced through learning processes. A symmetrical relationship between ‘contingent uncertainty’ and knowledge has been established by Forsgren (2002), suggesting that acquisition of a certain amount of knowledge will reduce the same amount of ‘contingent uncertainty’. Johanson and Vahlne (2009) explain the incremental commitment process during favorable developments. The question of what happens when the situation suddenly deteriorates, and ‘contingent uncertainty’ increases, needs further analysis and empirical testing. There is some evidence that unstable (and uncertain) environments require a tenuous compromise between knowledge and commitment decisions (Johanson & Johanson, 2006).

Since the introduction of Uppsala model there have been limited contributions to develop risk formula. Figueira de Lemos et al. (2011) redefined risk as a function of commitment and uncertainty, $R = f(C; U)$. Although no empirical evidence accompanied the report, scholars formulated several hypotheses of possible decisions for different levels of commitments and uncertainty. The argument rests on the fact that firms do not avoid risk (Autio, 2005) but manage risk by balancing the levels of commitment and knowledge. Recent work of Figueira-de-Lemos and Hadjikhani (2014) contributed an understanding of the mechanism of commitment decisions within crisis environments. Scholars analyzed empirical data collected through interviews with nine Swedish MNEs involved in foreign operations in Iran during the period from 1960 to 1992. The longitudinal analysis shows that when environmental changes are perceived as detrimental, firms tend to decrease their tangible assets and commit in a more intangible way. The study presents internationalization as a process of involvement which sometimes flows within incremental commitment and at other times with de-commitments.

For our study, we apply a framework of the Uppsala internationalization process model enhanced by a risk formula (Figueira de Lemos et al., 2011) and the contribution by Figueira-de-Lemos and Hadjikhani (2014). Our paper puts three interconnected variables - uncertainty (knowledge), commitment and risk - at the center of analysis. Risk is assumed to be the analytical product of two independent variables – commitment and uncertainty. Graphic 1 illustrates the impact of escalated uncertainty from level u_0 to u_1 on risk level while the companies' commitment remains at the same level c_0 . An increase in risk can be depicted by formula $\Delta R = \Delta U * c_0$. The risk level rises with an increased uncertainty accompanied by a comparable decrease of knowledge that might be insufficient due to the new environmental challenges. Regarding the framework variables, we disregard for the moment the distinction between tangible and intangible commitment.⁵ We use the conceptual framework depicted on Graphic 1 to map the empirical data on strategies chosen by Swedish companies under the increased uncertainty.

4. Empirical data presentation and analysis

4.1. Descriptive statistics and some findings regarding emergence of strategy

73 companies answered the questionnaire. Swedish firms that participated in the survey are engaged in sales (47%), service sector (29%), trading (9%) and production activities (15%). Five percent of companies entered the Russian market during the 1980s, 35% - during the 1990s, 41% - during the 2000s, and 19% after 2010. Approximately half of the companies have a global turnover exceeding 500 MEUR, 20% have a global turnover between 50 and 500 MEUR, and 28%, less than 50 MEUR. Sales in the Russian market are moderate with only four percent of these companies generating a turnover above 500 MEUR, 20% between 50 and 500 MEUR, 21% between 10 and 50 MEUR, and 53% less than 10 MEUR. The main customer groups of the Swedish firms in Russia are: private companies (B2B) which represent 76% of sales, private consumers (B2C) for 12% of revenues, and governmental organizations (B2G), also for 12%. The majority of companies that participated in the survey (60%) are limited liabilities companies, the rest being opened joint-stock companies, closed joint-stock companies, branch and representative offices. The group of companies that

⁵ We refer to Hadjikhani (1997) who suggested to separating tangible commitments, for which it is possible to plan or calculate both the input cost and output outcome, from intangible commitments, where input costs and output outcomes are impossible to estimate.

participated in the survey is rather diverse. These companies represent almost 20% of Swedish companies established in Russia.

Managers admitted that the current situation in Russia is characterized by a high level of uncertainty and faces significant volatility.

Companies reflected the challenges of the business environment in Russia:

- 91% of companies noticed no improvements in conducting business in Russia during the past two years;
- 63% of firms were negatively affected by the political tensions of 2014;
- 42% of companies have been directly affected by the sanctions, trade embargos and import substitutions of foreign goods by locally produced items;
- 46% of companies had a negative turnover growth in 2014.

On the other hand, the survey demonstrated several positive signs. Firstly, the Swedish brand continues to be strong in Russia. 84% of companies assess that Sweden has a positive or very positive image in the Russian society. Secondly, profitability of Russian operations remains satisfactory. In 2014, 54% of firms had a turnover according to, or better than, had been budgeted. Thirdly, despite the increased uncertainty and turbulence, Swedish executives expressed intentions to grow in Russia. Fourthly, Swedish executives expect that a reduction in uncertainty and economic recovery will happen in the short-term.

The following figures illustrate the current status:

- 16% of companies expanded their footprint in Russia in 2014;
- 40% of companies made investments in 2014;
- 37% of firms plan investments in 2015;
- 59% believe that the recovery will happen already in 2016-2017.

Executives were able to provide exact answers to diverse questions posed in the survey. We found the answer “do not know” only in 5 out of 27 questions, and the proportion of managers that were not able to provide a response for these five items never exceeded 10%. These response rates are all reasons to believe that managers have a clear view on business developments.

“It is important to have an informed agenda for Russia based on your individual situation,” explained a manager.

There are strong indications that Swedish companies have carried out extensive work elaborating and evaluating different scenarios of developments in Russia both for short-term and long-term perspectives. Variables that have been included in the analysis are diverse and range from prognoses regarding currency fluctuations and inflation trends to pricing strategy and salary developments. *The current strategy employed by companies seems to be normative and rational although flexibility is allowed according to different scenarios.* It is impossible to draw a conclusion about the effectiveness of these planning efforts due to the absence of long-term observations. Our analysis, however, suggests that predictions are commonly used as a strategy formation tool even under escalated uncertainty. The business goals are clearly translated into action and implementation plans. Although information is incomplete, it is good enough to be incorporated into strategic management plans.

“The business climate in Russia is definitely not easy. It might get worse before it will get better, but even in the toughest times there is business to be made,” commented an executive.

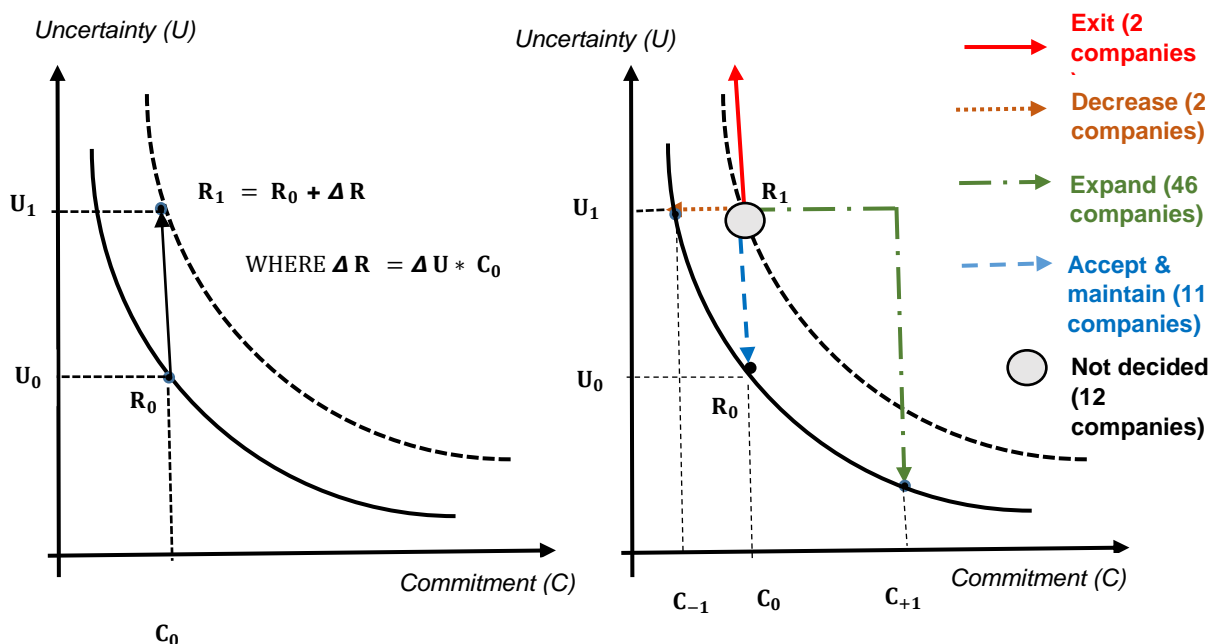
Experimentation and ‘trial and error’, on the other hand, also have a place on the executives’ agenda. Although targets are clearly defined, there is room for flexibility of implementation. We observed that several companies’ investment plans can be postponed or even cancelled under unfavourable circumstances. During 2015, about 12% of firms have revised their investments plans due to the changing assumptions.

Courtney, Kirkland and Viguerie (2000) argue that company analysis under uncertainty is highly qualitative although managers can gain a valuable strategic perspective. To the contrary, in our study we formed an impression that besides general perspectives, managers assess upcoming trends, evaluate major risks and elaborate alternative scenarios. Our findings are more in line with conclusions made by Baum and Wally (2003) who advocated scenario-based, but rational decision-making under uncertainty. Kennedy and Avila (2013) also suggest improving decision-making under extreme uncertainty through dynamic blending of quantitative modelling and scenario planning.

Rational or emergent strategy? Recent contributions in strategic management attempt to bridge the gap between the planning and learning schools. Based upon some empirical evidence, Grant (2003), for example, suggested that companies under increased uncertainty de-emphasize partially their planning approach in exchange for creating more adaptive solutions. A balance of rationality prediction and learning adaption is labeled as ‘*planned emergence*’. The empirical data from our study provides some support for Grant’s suggestion.

4.2. Empirical data on strategies chosen by Swedish companies

The empirical data on strategies chosen by Swedish companies under escalated uncertainty is depicted on Graphic 2. After an increase in uncertainty, the risk level has shifted from R_0 to R_1 , which encourages the companies to elaborate a new strategy that should allow them to achieve the initial tolerable level of risk. An increase (or reduction) of foreign commitment arises as a possible strategy in order to balance the escalated uncertainty.



Graphic 1. Risk increase (Uncertainty)

Graphic 2. Strategy under Uncertainty – empirical results

In our study, 12 companies had not yet been able to make a decision. In Graphic 2, this point is shown by the grey circle. Sooner or later, companies have to evaluate the available options and choose a suitable strategy.

Two firms decided to decrease the commitment, which would allow these companies to adjust the risk to the tolerable level. In Graphic 2, this strategy is shown by the brown arrow. *De-commitment (reduction) strategy* was explained by the necessity of adjusting to the increased uncertainty and turbulence currently being experienced by the Russian market. “Slim organization, reduce footprint, outsource and out-staff,” suggested a manager.

Two companies decided to leave Russia. In Graphic 2 this strategy is shown by the red arrow. According to managers, an *exit strategy* is always an extreme outcome as it is expensive to re-establish. “Once you are gone, it is difficult to come back”, acknowledged a manager. Despite the difficulties associated with re-establishment, their decision seems to be final as the uncertainty has exceeded the acceptable level. Unfortunately, no deeper explanation was given for the reasons that had pushed those companies out of the market. Scholars often point out that lack of a long-term strategy pushes MNEs towards exiting foreign markets. Benito (2003), for example, argued that subsidiaries established as part of a global strategy are expected to be the least likely ones to be divested in the longer term. Bianchi and Ostale (2006) studied four multinational retailers in Chile and came to the conclusion that there was a lack of clear direction and targets for operating in the new market which led to the exit strategy. Epstein (2014) researched Western bank’s strategy in CEE after the credit crunch in late 2008. According to the study, Western bank’s strategy did not amount to ‘cutting and running’ when foreign bank investors in the region had long time horizons and high toleration for volatility. In our study, complementary research with in-depth interviews is necessary to address the exit strategy. An acquired explanation about ‘too high risks’ perfectly suits our model, but does not provide insights into why some companies made a decision to exit while others planned to stay.

Eleven companies decided to continue operations ‘*as it is*’ without any changes in the commitment. Instead, these firms accepted the higher level of uncertainty and *maintain* the current position on the market. In Graphic 2, this strategy is shown by the blue arrow. Firms that pursued this strategy explained the choice by having the necessity “to survive the winter” and “be ready for improved situation”. “Clients remember and cherish commitments,” pointed out a manager. Previous research suggests that under radical environmental changes ‘wait and see’ can be the most adequate approach (Atkins & Anderson, 1999). According to Bengtson, Ljung, and Hadjikhani (2013), even the proclamation that, unlike other competitors, Ericsson was not leaving Argentina during the crisis, lowered uncertainty. Our study also provides some support for an ‘active waiting’ strategy suggested by Sull (2005). Although firms have accepted uncertainty without additional commitments, they are prepared to act as soon as a clearer view on the development trends emerges.

Surprisingly, as many as 46 companies decided to pursue an *expanding (or growing) strategy*. In Graphic 2, this strategy is shown by the green arrow. After an increase in commitment, the firms are expected to accumulate the amount of knowledge which is required to decrease the uncertainty until the risk returns back to its initial level. Companies that chose an expansion strategy argued that one should keep a long-term perspective in international business. It was also suggested that economic slowdown in Russia could be used

to build a market share. Expansion can be achieved by utilizing cheaper resources alongside a lack of financing on the market and difficulties being experienced by the competitors.

“The Russian market is a long term game, the upside is there when the political situation improves,” stated a manager.

Appraising the risk concept, the present study confirms the importance of a commitment decision to face the deterioration caused by the uncertainty. Furthermore, a strategy associated with an increased commitment was chosen by 63% of companies participating in the survey. Some researchers pointed out that during uncertain periods, new possibilities might arise for those who stayed or entered the market (Kaplan, 2004; Epstein, 2014). On the other hand, McGrath and MacMillan (1995) suggested that uncertainty caused by the introduction of a new technology can be reduced by an investment in a company owning such know-how. However, the opposite applies in the case of ‘external’ uncertainty, when investments will not contribute to reduction of unpredictability. A ‘wait and see’ approach is, therefore, recommended by authors until critical uncertainties are resolved. This advice has not been supported by our empirical findings.

Empirical data, acquired through BCS, provided an opportunity to map strategies chosen by Swedish companies during the period of escalated uncertainty. Firms had revised the previously adapted strategy as a consequence of the increased uncertainty in order to adjust the risk back to the initial, tolerable level. Although an exit strategy had been chosen by only two companies, there is the important concern of why an exit became the best choice for these firms when others preferred to stay. Two companies decided to reduce the commitment and eleven firms accepted the higher level of uncertainty and continuing operations ‘as it is’. These two strategies are very much in line with conclusions from numerous scholars. To retain a status quo without acting or slightly reducing the commitment seems to be a prudent approach under the increased uncertainty. An ‘expansion’ strategy appeared to be a dominant choice in our study. To our knowledge, growing strategy under uncertainty has seldom been reported and analyzed by scholars. Based upon the empirical evidence, we suggest that the company’s long-term objectives in the foreign market will impact the strategy choice under increased uncertainty. This topic, however, needs further investigation. What also tends to be lacking is the theoretical rationale for deciding which type of strategy (or mixture of types) should be adopted in particular investment environments. Other researchers are encouraged to follow up on these issues.

5. Conclusions

Traditional theory of investment decision-making commonly assumes that decisions are based on preferences and expectations about outcomes associated with different actions where the best possible alternative is chosen. Indeed, much of strategic management research is criticized as failing to take into account many factors, including uncertainty, which limit executives’ abilities to develop strategy in a rational manner (Mansfield, 2013). Our study suggests that companies continue to apply rationality and a deliberate planning approach during uncertainty and turbulent times. Strategy elaboration occurs when the major risks are identified, researched, quantified and integrated into the long-term objectives of a firm. Strategy is also flexible enough to adapt to the external challenges even if the aspiration to deliver favorable returns for shareholders remains constant. Forward-looking challenges include, in our view, further development of strategic risk management tools that can enable business rationality and profit maximization to co-exist with experimentation and bargaining.

Foreign company strategy under uncertainty requires decisions that routinely involve risk and commitment. In the study we applied the conceptual framework of Uppsala

internationalization process model to research strategies being chosen by firms under escalated uncertainty. Our ambition is far removed from further development of the model itself. We simply argue that valuable insights into decision-making under uncertainty can be achieved through application of the risk framework suggested by the model to research on companies' strategy.

The findings of our study contribute to knowledge regarding diversity in commitments shown by different companies at one particular point of time. The article suggests some explanations regarding the companies' motives for selecting one of the following strategies - exit, de-commitment, 'do nothing' and expansion. There is an obvious need to further extend our knowledge regarding diversity of commitment decisions chosen by different firms under the same pre-requisites.

Given that uncertainty may arise from a number of sources or may be characterized along a number of dimensions, it is necessary to develop further a concept of uncertainty and its impact on companies' strategies. In our study, we demonstrated that uncertainty is not only a threat to companies operating on the market, but can lead also to expanding strategies attempting to exploit the opportunities that uncertainty might offer. The latter endeavor will very quickly require much more formalized arguments than those used on the broad-brush level here.

It is reasonable to assume that acting early under uncertainty is riskier than waiting. The more risk-averse a firm is, the greater is the incentive for that firm to wait until uncertainty is resolved. Our findings, however, question whether companies and managers are really risk-averse in their behaviour. Empirical data from this study suggest that uncertainty is handled by companies better than one might expect. It is possible to assume that, as a result of international experience, today's MNE managers can exhibit greater variance in perceived uncertainty than did their earlier counterparts.

Since behavioral factors and bounded rationality were introduced into the research agenda, there has been an increasing trend towards acknowledging the role of individuals in foreign decision-making and related companies' strategies (Aharoni, Tihanyi & Connely, 2011). Indeed, decision-making is based on several characteristics of the manager, including personal experience, knowledge, and tolerance for uncertainty and risk. It is possible that Swedish managers made strategic choices in Russia differently compared to executives from other countries operating in other markets. More studies examining managers' perceptions in different countries are required and future research would obviously benefit from cross-country comparisons of similarities and differences in the decision-making.

It is difficult to assess the potential for generalizing the particular findings of this study. What we hope for is that this research paper offers some new insights into internationalization phenomena and provides a constructive view of company strategies under uncertainty.

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Olga Ignatyeva (corresponding author)
St. Petersburg University, Graduate School of Management
ignativa.bm2015@ledu.gsom.pu.ru

Tatyana Tsukanova,
St. Petersburg University, Graduate School of Management tatyana.tsukanova@gmail.com

Internationalization of firms in China: what drives foreign operation mode combinations?

Abstract: Understanding of internationalization strategies of firms in emerging markets is one of the most important areas in international business (IB) research. Entry mode choice is vital to survival and performance of firms but in the literature, foreign operation mode (FOM) is often considered as a singular strategy but there is evidence that firms can use multiple modes in the same foreign market. In this article, we examine the combination of multiple foreign operations modes (FOMs) in a single large emerging market - China. The purpose of this study is to identify reasons for international firms to combine foreign operations modes (FOMs) in the context of Chinese market. The key findings of the paper indicate, that weak intellectual property rights system, regulatory limitations, importance of networking and guanxi are the main reasons for combining FOMs in China.

Keywords: *emerging markets, China, foreign operations, mode combination, case study.*

1. Introduction

On October 7th, 2014 China has become the largest economy, moving ahead of the USA. Of the

Fortune 500 companies, 480 already operate in China and more than 90% of multinational companies say that China is important to their strategies, with 52% calling it critical for them (Torrens, 2010). Over recent decades the country has established itself as a leading manufacturing centre and the world's factory. However, its attractiveness as a large and expanding consumer market and location for R&D has been growing in recent years.

There are many studies, which suggest one mode to be optimal for the Chinese market. For example, the international players engage into different sorts of alliances due to tough and unfamiliar institutional context, high importance of networking, regulatory limitations and lack of recognition by the Chinese customers (Hitt et al., 2000, 2004; Luo & Peng, 1999; Xu et al., 2006). On the other hand, wholly owned subsidiaries (WOSs) are established in order to have full autonomy in managing the company and maximize the profits (Williamson, 1985; Anderson & Gatington, 1986; Hennart, 1988). In some cases, a foreign investor may prefer a wholly-owned structure as it can better protect its trade secrets and other intangible assets (Davidson & McFetridge, 1985; Hill, Hwang & Kim, 1990).

However, business-reality reveals that companies proactively combine multiple foreign operations modes in China, a phenomenon that has not been discussed in respect to this market. Moreover, the phenomenon itself is understudied, since there are different perspectives, only one of which accepts mode combination as rational strategy. Researchers have contributed to identification of factors that drive the choice of this strategy. However, there were no attempts to reveal the factors under the conditions of emerging market, which put forward more challenges for the firms.

Thus, the purpose of this research is to identify reasons for international companies to combine foreign operations modes (FOMs) in the context of Chinese market. We focus on a single case study of VTB as an example of an international company, which uses mixed modes in China. With this study we intend to contribute to the research on internationalization in IB studies in several ways. First, we identify multiple determinants of FOMs' combination, which are classified into three groups: country-specific, industry-specific and firm-specific groups. Further, we seek to contribute to the emerging debates on the combination of FOMs in that we analyze the importance that the multiple reasons have on firms' decision to utilize several modes in foreign markets, that is to say, its effect on international expansion into Chinese market. Conceptually, the framework can be applied in other contexts. Practically, the results of the study contribute to the discussion on how firms which have operations in China can optimize their internationalization strategy by analyzing internal and external determinants.

2. Theoretical background

2.1 Chinese Market

In the 3rd quarter of 2014 China overtook the US to become the world's largest economy, according to the International Monetary Fund. The People's Republic of China's Gross Domestic Product exceeded the GDP of America, as measured by purchasing power. According to the International Monetary Fund, China's purchasing power GDP hit \$17.6 trillion last year versus \$17.4 trillion in the US. Some analysts link the vast expansion of the domestic market with the growth of foreign capital inflow in China, which is thought to be one of the dominant characteristics of Chinese economy (Lau & Bruton, 2008). Meanwhile, China's experience in working with foreign investors

has been growing, and it learned how to create an attractive and stable environment for foreign investments (Zhan, 1993).

Whereas firms in the earlier years rushed into China primarily for reasons such as acquiring resources, securing key supplies, accessing low – cost factors, and diversifying sources of supply (Vernon, Wells, & Rangan, 1996), the rising income of the local populace is now resulting in market-seeking behavior (Johmson & Tellis, 2008). As a result, an increasing number of foreign firms seek to market their products in China by investing in production capabilities within the country (Shenkar, 1990). Due to favorable investment conditions such a development path is available. Special Economic Zones (SEZs) are the noted examples where firms enjoy low-cost labor, tax exemptions, and duty-free importation of raw material and technology (Tse, Pan, & Au, 1997). China has been open about its desire to become a world leader in innovation, stating a goal of becoming an innovation-driven economy by 2020 (in its five year plan in 2013). Thus, China plays an active role in attracting R&D-related foreign direct investment. As a positive consequence, R&D investments can have spillover effects to the host country: local companies benefit from the R&D activities through technology transfer, new forms of management, and outsourcing, which stimulate productivity and growth (Li & Zhong, 2003). At present there are over 60 New and High Technology Development Zones that offer various subsidies to the enterprises located in these zones. One of the objectives of the zones is to promote the industrialization of technologies owned by regional universities and research institutes.

In China, because of the weaknesses of formal institutions, “informal constraints rise to play a larger role in regulating economic exchanges” (Peng & Heath, 1996:504). The main informal constraints come from three sources. *First*, interpersonal networks, called *guanxi* in Chinese, cultivated by managers in the society may serve as informal substitutes for formal institutional support (Peng & Heath, 1996). Chinese managers, due to a lack of publicly available, reliable information about market opportunities, perhaps “rely more heavily on the cultivation of personal relationships to cope with the exigencies of their situation” (Child, 1994:150).

Second, external connections linking these executives and key stakeholders, especially government officials, are also a crucial part of the informal institutional constraints (Boddewyn & Brewer, 1994; Oliver, 1997). Given the need to combat environmental uncertainty, it is not surprising that managers maintain a “disproportionately greater contact” with government officials (Child,

1994:154). Peng and Luo (2000) find that connections with officials in China appear to be even more important than ties with other managers in terms of their impact on firm performance.

Finally, the reputation of conglomerates serves as an informal but strong signaling device to reduce uncertainty for customers and investors. It is important to note that in China, not only are domestic firms eager players of the networking game, but foreign entrants have also enthusiastically cultivated their web of interorganizational networks and relationships, as evidenced by the numerous international strategic alliances with local firms (Hitt et al., 2000, 2004; Li, 2005; Luo & Peng, 1999; Xu, Pan, Wu, & Yim, 2006).

2.2 Research on foreign operation mode combination

Many articles have focused on studying Chinese market as a host-country for internationalization of foreign companies (Tse, Pan, & Au, 1997; Lau & Bruton, 2008; Li, Lam & Qian, 2001). One of the most widely discussed questions was the choice of the entry mode as well as identification of factors, influencing such a decision in particular settings. Contrasting theories have different views on the most appropriate mode of operation in China, although they agree on

the main factors, which companies have to consider when entering the market (Johnson & Tellis, 2008). None of the authors touched upon combination of the modes in the Chinese market, whereas the trend for using two or more modes simultaneously in the same market has been set by leading companies (Benito, Petersen, & Welch, 2011). Some of them are also represented in China by multiple foreign operations modes (e.g. Jotun, Statoil, Eltek).

In general, there are a vast number of explanations behind the FOMs in existing literature. In a number of studies the phenomenon of mode combination was viewed as *sub-optimal decision*, made by a company due to coordination problems, limited information and various cognitive constraints (Cyert & March, 1963; Simon, 1978). In this sense, mode combination was considered as a simple transitory irregularity which would be sorted out over time, either through decision-makers' choice and intervention or by the elimination of inefficient businesses and governance structures through market selection processes.

Later with development of mode switching, mode combination is referred to as a step in changing the FOM by a company, due to "*switching costs*" – challenges of changing modes in a seamless, fluid manner (Benito, Pedersen and Petersen 2005; Benito, Petersen, & Welch, 2011). The problems could be externally imposed, such as in the case of legal constraints, or be internal, for example the (psychological) effect of sunk costs. Thus, several modes are used side-by-side for some time, even though the companies acknowledge that this is not a first-best solution.

Finally, one more perspective on mode combinations states that it is an appropriate and rational organizational *response to real-life conditions*, especially variation and complexity, which specific modes are too unsophisticated to cope with (Petersen & Welch, 2002; Welch et al., 2007). One mode cannot deal with all important contingencies, thus multiple modes are required in order to carry out operations successfully.

In development of the idea that mode combination is a rational behavior of the firm, Petersen and Welch (2002) have proposed classification of the mode combination strategies including *unrelated modes*, *segmented modes*, *complementary modes*, and *competing modes*. The multiple mode phenomena may reflect the operations of an entrant firm that conducts business across industries. Thus, the operations of large, diversified multinational concerns in a foreign country are likely to be handled by different parts (divisions, strategic business units, etc.) of the organization. If the units are organized with the help of different modes, then it could be referred to as *unrelated mode combination*. *Segmented modes* tailor to the different segments of customers, which could be divided by various bases: B-t-b/ B-t-C, geographical division, whole sale/ retail, large customers/

individual small accounts. *Complementary modes* are those employed for different tasks within the firm's value chain in order to boost efficiency. For example, a multinational corporation (MNC) may hand over the manufacturing in a foreign country to a licensee, but operate the sales and marketing through its own sales subsidiary. In *competing modes*, the foreign country business units target the same customer groups and perform the same business activities, but the ownership (in-house vis-à-vis outsourcing) and location (home country vis-à-vis host country location) differ. By keeping house accounts (via own sales people) in the representative's sales district the manufacturer can monitor the effort and capabilities of the independent representative. The two modes (direct sales and sales via reps) are directing the same activities towards the same segment, and thereby are involved in head-on competition.

In addition, Petersen and Welch (2002) identified the roles of different modes in a package. They write that "the existence of multiple modes in an integrated system does not, of itself, indicate what roles they are performing and how they are interrelated" (2002:159). They

continue that the role played by individual modes may change over time and vary across markets even for the same company. The researchers see that the role played by different operation modes in achieving foreign market objectives can vary in importance. One mode is likely to play a primary role in ensuring foreign market penetration and revenue generation, whereas the remaining other modes play various types of supporting roles. These can include, for example, further market penetration and revenue generation, or specialized roles in relation to particular objectives such as technology transfer or developing a positive political profile such as through a licensing or technical assistance agreement. Adding a mode to an existing operation, or changing the roles of operation modes within an unchanged overall mode package, may be actually a more effective way of responding to a change in market circumstances than undergoing the disruption and dislocation of a complete mode switch (Welch et al., 2007). According to Benito et al. (2009:10), “mode package addition or deletion may provide flexibility while a core, successful mode form is retained”. This also assists in maintaining knowledge, staff, and network assets that have been developed through a pre-existing mode arrangement (Petersen & Welch, 2002). FOM combination can be also a response to a mix of internal and external forces (Benito, Petersen, & Welch, 2011). The evidence suggest once involvement in the foreign market was established, in whatever form, there was a tendency for mode combination use to evolve. Mode combination adjustments allowed companies to respond, to adapt to the experience that unfolded for them in the foreign market.

3. Theoretical framework and research method

In order to address our open-ended research question regarding the reasons (“why”) behind realization of FOM combination by international companies operating in China, we integrate the existing knowledge partly discussed in the theory part. The central phenomenon, the combination of FOMs, is expected to be influenced by internal (firm-specific), industry-specific (task environment) and external (general environment) factors relevant to the decision-making process about the internationalization in the context of emerging markets. It provides us with the basic framework for further analysis. In addition, we would like to pay attention to the study by Benito, Petersen, and Welch (2011). These researchers have explored the extent of FOM combinations based on the analysis of six Norwegian companies in different host-countries – China, UK and USA. Based on the description provided in this paper, we considered the factors that were identified as more important in case of entering Chinese market or developing there through mode combination. We classified the factors into external, industry and internal factors:

- *External (country-specific) factors:* weak intellectual property rights system, governmental regulations, importance of networking and guanxi.
- *Industry (industry-specific) factors:* highly segmented customers in the industry, task differentiation dictated by the industry, cheaper/more rare resources in the host market, involvement in both technology-intensive and labor-intensive tasks, high level of competition in the industry.
- *Internal (firm-specific) factors:* different approaches to the customer segments, cutting of costs by optimal production, different approaches to various products, realized in the market, wider reach of the customers in the market, synergy effect.

Moreover, the reasons identified for China are compatible with the classification of mode combination, proposed by Petersen and Welch (2002). Thus, the previous studies enabled us to

organize the potential reasons in a theoretical framework that reflects the level of the mode combination factor as well as type of mode combination used (Table 1).

There is a tendency for usage of mixed mode combination types, meaning that companies in real life conditions do not just employ one reason in the decision making, but rather try to get the most out of this strategy. The choice of modes in a package are driven by both external factors, such as in China weak intellectual property rights system, and industry factors, for example, a ban for 100% ownership of foreign companies in some industries. It is rather hard to analyze the variance within internal factors, since the sample is not large enough. Another tendency among the analyzed companies is keeping the first mode that has been used to enter the market. This may reflect the desire to keep the knowledge base as well as connections in the market.

Thus, the findings of Benito, Petersen, and Welch (2011) about Norwegian companies coupled with research about these companies` business particularly in China present grounding for further study of the phenomenon in the conditions of Chinese market. This paper makes an attempt to look at an example of Russian firm, which operates in China with the use of multiple modes, and identify its core factors for choosing combination strategy. As a premise, we take the framework presented above, as it presents real life examples of the implementation of such strategy in Chinese market.

Table 1

Factors driving the choice of foreign mode combination in China.

Types of foreign mode combination	Factors		
	Country-specific	Industry-specific	Firm-specific
<i>Unrelated</i>	Weak intellectual property rights system; Governmental regulations; importance of networking and guanxi	Cheaper/more rare resources in the host market; Involvement in both technology-intensive and labor-intensive tasks	Different approaches to various products, realized in the market; Synergy effect
<i>Segmented</i>		Highly segmented customers in the industry	Different approaches to the customer segments; Synergy effect
<i>Complementary</i>		Cheaper/more rare resources in the host market; Task differentiation dictated by the industry	Cutting of costs by optimal production; Synergy effect
<i>Competing</i>		High level of competition in the industry	Wider reach of the customers in the market; Synergy effect

However, the findings of this particular study may serve as a beginning of comparing two different manners of realizing this strategy: developed country firm in an emerging country and emerging country firm in an emerging country. Throughout the investigation the framework

was gradually examined and the reasons behind the usage of FOM combination was concretized using the resulting empirical evidence.

A qualitative method was useful in such settings to provide fresh insights based on suggested framework and it may help to unfreeze our thinking. Thus, in the current paper we focused on the form of a single case study, which enabled us to answer “how” and “why” questions because the exploration in depth was required. The other reasoning for using this method is that a contemporary event is studied, but at the same time there is no control of the events (a pure experiment cannot be organized) (Yin, 2003). Moreover, an important factor is that the phenomenon is studied within the context of Chinese market and cannot be separated from the political and economic conditions, so the detailed description of the company’s operations in the market is mostly equipped to reveal every important factor under these exact conditions.

The choice of company for research was determined by several factors: a well-developed Russian company with high level of internationalization that has come to employ mode combination in Chinese market. After careful consideration “VTB” bank has been chosen as a company for research, and a telephone interview has been conducted in order to get first-hand information about the reasons to combine modes in China. Coupled with secondary data from open sources this information managed to reflect all aspects of the phenomenon, including stated motives as well as inner strategic aims.

4. Case analysis

4.1 Internationalization of VTB

“VTB” is a Russian bank that has officially started its operation under this name in 1990. It is involved in both B-t-B and B-t-C segments. It has started its internationalization path right away in

1990, and by this moment it operates in 23 countries in Europe, Asia and Africa. “VTB” has 12

WOSs throughout CIS, European and African countries, 2 representative offices in Italy and China,

2 branches in China and India and a network of “VTB” Capital offices in Moscow, London, Singapore, Dubai, Hong Kong, Sophia and New York.

A representative office of former “Vnesheconombank” has been opened in China in 1989. After the division of 2 banks, the representative office first served in the interests of both banks, but in 1997 “Vnesheconombank” has started working on opening of its own representative office. The “VTB’s” representative office in Beijing is still functioning, mainly responsible for government negotiations and PR functions in the Chinese market. The interview with the company representative has revealed that the office serves for networking with political elite as well as local banks. The location of the office is of high importance, in a sense that in the capital city all the political decisions are made, including those that affect bank’s interests.

In 2008 “VTB” has become the first Russian bank to receive a license to operate in China, so it first entered Chinese banking market through a branch in 2008. The key function of the “VTB” branch in Shanghai is complex servicing of CIS companies working in China. This includes trade finance, lending money to both subsidiaries of Russian companies in China, as well as local customers. In

2013 the branch has received a license to make transactions in national currency – yuan. The branch has been leader of ruble-yuan trade since 2011 on local market. Shanghai is financial center of mainland China, so many CIS firms enter the market and seek for financing in this city.

“VTB Capital” has an office in Hong Kong, which is responsible for investment business within

the VTB group. The operations in China are also developing, however, customers are more interested in “offshore zones” rather than investing in mainland China. The location is favorable again, because the financial flows of main currencies, such as Euro and USD, is much higher in Hong-Kong, and the city is one of the financial centers of the world. At the same time it is the first step for foreign companies, who are investing in China, and this trend is constantly growing.

4.2 Mode combination in China

The future development of the Russia-China trade is ensured by the governments` building of tighter relations between the countries. “VTB” bank will definitely play important role in the mutual projects, thus Chinese market is strategically significant for the bank. It is the bank`s first and only experience of using mode combination. The roles of the modes in the package as identified by Petersen and Welch (2002) are the following: branch and “VTB Capital” office serve the primary function of capital attraction as well as financing; whereas the representative office has secondary function of networking.

Among the reasons, that “VTB” management states to play a role in decision making, are local governmental restrictions and necessity to build relationship with the government and network. Chinese banking market is very different from Russian one, thus “brownfield” strategy is not only prohibited by the law, since there are restrictions on ownership equity, but is also very risky. The second factor mentioned addresses the necessity to have a representative office in China because of the political importance of the bank`s operations.

“VTB`s” representative has emphasized the synergy effect that 3 modes present in the Chinese market. Three strategically important areas are covered by the units: Beijing, Shanghai and Hong Kong as well as two business lines are presented: investment and corporate banking. Therefore, task differentiation, different approaches to various products, realized in the market and synergy effect are strategic industry and internal factors that influenced the choice of combination strategy. Thus, “VTB” has used a mix of unrelated and complementary mode combination. As for the modes used they are not typical for the mode combination types, because the choice is mainly driven by industry peculiarities as well as country restriction. However, the choice of representative office for networking purposes is typical. The first mode, representative office, is also retained by the company in order to keep the necessary connections and image of the bank in the country. The results of the analysis are presented in Table 2.

Table 2

Factors driving the choice of mode combination in China for “VTB”.

Type of foreign mode combination/ Package used	Factors		
	Country-specific	Industry-specific	Firm-specific
<i>Unrelated + Complementary</i>			

Branch + Representative office + Sales office	Governmental regulation and restrictions; Importance of networking	Task differentiation dictated by the industry	Synergy effect; Different approaches to products, realized in the market
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4. Discussion and Conclusions

Our study proves the rationality of the mode combination strategy itself. Such business organization

comes from strategic planning and careful consideration rather than from imperfections in the decision making process. Management takes into account all three groups of factors, while considering mode combination: country-specific, industry-specific and firm-specific factors. Thus, the external and internal determinants may drive the choice of this type of internationalization strategy.

Among the factors specific for Chinese market are governmental regulation and restrictions, weak intellectual property rights system and importance of networking and guanxi. The difference between developed country company and emerging country company operating in China is difficult to identify without additional quantitative research.

As for identifying the most crucial group of factors, the case study of a Russian company implementing mode combination in China showed that the strategy is highly dependent on the industry. Both production and service companies are able to deploy mode combination, however the implementation will be very different. Thus, peculiarities of the industry definitely affect the choice and variation of the mode combination in a more dictating manner than other factors.

Interesting tendencies identified are the necessity of international experience for the choice of the strategy and keeping of the first entry mode used. The first one refers to high level of internationalization noted among companies who are involved in mode combination. It could be explained through the knowledge companies gain while trying different modes in other market, so by the time they decide to mix modes, they have enough experience in each of them. As for keeping

the first mode, it may be applicable particularly to China, since the networking is of high importance in the market. Thus, the firms choose to save the contacts and positive image in China by keeping the entity, they used for entering.

The paper contributes to the existing literature in IB studies in the following ways. First, it formalizes multiple reasons and their potential effect on the preferences of FOMs' combination. This results in classification of main reasons into three groups: country-specific, industry-specific and firm-specific factors. Thus, the study seeks to contribute to the emerging debates on the combination of FOMs in that it analyzes the importance that the multiple reasons have on firms' decision to utilize several modes in foreign markets, that is to say, its effect on international expansion into Chinese market. Conceptually, the framework can be applied in other contexts. Practically, the results of the study contribute to the discussion on how firms which have operations in China can optimize their internationalization strategy by analyzing internal and external determinants.

The paper makes an attempt to stretch the research of mode combination phenomenon to analyzing its development in an emerging market, however, the results are preliminary in terms of statistical research. Case study does not allow for conclusions about the tendencies in the

market. Besides, the study does not include the analysis of cultural background, which could possibly be the driving forces of the approaches they are using. Thus, the direction for future research is finding more companies for completing quantitative analysis and including some variables that concern home country culture.

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Shehu Jallo
University of Bedfordshire
Luton, Bedfordshire, UK

Robin Croft
University of Bedfordshire
Luton, Bedfordshire, UK

**Corresponding author: Robin Croft, University of Bedfordshire,
Luton, Bedfordshire, LU1 3JU, UK
robin.croft@beds.ac.uk**

The Growing Sophistication of Political Marketing: Perspectives from an Emerging Economy

Abstract: The study investigates the use of social media to generate awareness and finance political campaign in a sub-Saharan Africa democracy. The recent Nigerian presidential election witnessed such activities with the APC presidential candidate targeting voters and encourages campaign donations using the social media. Literature suggests a growing interest in political marketing; however, little empirical attention is made to strategies used in campaigns especially in emerging democracies. A single case study approach is used to focus on the Buhari campaign in the Nigerian 2015 presidential election. The content analysis results suggest the target audience are divided into three groups based on their social and financial status. To attract voters' attention, the campaign developed a theme 'change is possible' with other supporting themes consistent with the party policy. This paper extends previous studies on political marketing activities by showcasing development of political campaigns.

Keywords: *Political Marketing, political advertising, BSO, Social media, crowd funding*

1. Introduction

Marketing strategies in political campaigns to improve candidates' image and source campaign funds has been used in developed democracies like the UK and the USA. Similarly, the social media serves as an alternative means of communication where candidates reach out to voters during campaign. These coordinated strategies have also been used by candidates to attract voter attention and generate funds in emerging democracies indicating a shift in the nature of electoral campaigns through the use of social media to create awareness. Academic attention in political marketing especially from the more advanced democracies is gaining prominence. Marketing scholars and practitioners alike need understanding of concepts, and models of behaviour, to assist them to manage in an interactive world (Egan, 1999). This is without acknowledging critics on the use of mass communication tools in modern campaigns (Croft and Dean 1996).

Political marketing witnessed a pivotal growth in countries from developed democracies with example of the 1978 hire of Saatchi by the Conservative Party in Britain, Harrop (1990) and most recent, the Obama 2008 and 2012 presidential campaign in the USA. The development of political marketing in emerging economies that embrace the democratic system has witnessing remarkable events. Especially with the evolving means of communication enabling a wider reach of audience with little financial commitment. Emerging economies in Africa are no exception, with Nigeria going into the political scene for the fourth time in 1999. This heralded the emergence of seven political parties vying for posts from the different levels of government. Still, despite the significance of this phenomenon, the literature appears to lack consideration of political marketing in emerging economies.

In this article, results from recent study which focused on marketing strategies in the Nigerian presidential election are outlined. The emergence of the social media enables individuals, companies and indeed politicians to share information across a wider audience at low cost. These tools offer politicians an alternative to creating awareness, support and fundraising. With a growing large population and the rising influence of online resources in Nigeria, the opportunities of these tools as alternative media are unimaginable.

2. Background on the Nigerian Election

The early 1990s saw the emergence of an organised political marketing in Nigeria by the Social Democratic Party, SDP on the presidential elections of Shehu Musa Yar'adua and M.K.O. Abiola when they hired an American firm to run their presidential campaign, it was a successful strategy. By the year 2000 politicians were adopting a similar strategy of using domestic and foreign professional marketing firms to promote their election campaigns. By the end of the 2011 elections, politicians had adopted marketing techniques to reach the wider audience by using the vast array media sources available.

For the 2015 presidential election and with primary elections approaching, a presidential hopeful has adopted a marketing strategy by using the social media to raise funds through the public for his presidential campaign. To launch the campaign, his Facebook page and that of his political team tagged "Buhari Support Organisation" posted his comments where he urged his supporters to donate for his presidential ambition. The fundraising he said, will be through the crowd-funding system where quoting the message in part, it read thus, "*In this regard, we launch our crowd funding platform*", bringing a new dimension to political campaign in the country where running for elections requires substantial amount of money. The posts offered details of bank account for the fund raise. Interestingly, few days later the campaign team posted other alternative means of donation, online payment platform by using

a card payment scheme that uses a digital PIN and a mobile phone number was offered to those inclined to the e-banking. Similarly, SMS option was offered where payment can be made through sending scratch card numbers of amounts desired for donation. Thereafter, video adverts were posted online to boost the crowd funding campaign awareness urging supporters to purchase “scratch cards” to register their name. Similarly, different cards are made available to be purchased in nearest stores for donations ranging from one hundred naira to ten thousand naira. The key research questions are put as follows:

1. What is the importance of social media to an effective political campaign strategy?
2. How do the social media influence political campaign funding in emerging democracies?

The use of social media to attract and engage voters during election campaigns have been witnessed in the more developed economies like the UK and US. Our study finds that voter engagement through the social media is gaining widespread acceptance in developing economies. The Nigerian presidential election of 2015 appears to be the most anticipated and exciting campaign in the countries democratic history. Social media was widely used by the two key contenders to win votes and voter confidence. However, the main contestant adopted a new strategy of raising funds and connecting the voters to participate in the election. A review of literature suggests that the use of social media to generate awareness and influence voter confidence during political campaigns is an under researched area.

The case of Obama 2008 and 2012 political campaign serves as an exemplar where the campaign team solicited for funds through alternative means. By avoiding public campaign funds and resorting to raising money from small donors through the internet, the campaign broke previous presidential primary and general election records raising over six hundred and fifty and one billion dollars in 2008 and 2012 elections respectively (Lou, 2008; Kurtz 2008; Scherer, 2012).

3. Information Technology and Political Engagement

Nigeria has a population of 173.6 million with an average GDP of 321 billion pounds. Similarly, the ICT contributes to about 8 per cent to the country’s GDP and is likely to increase to 15 per cent in the next three to five years. Accordingly, in the year 2014 there are over 57.7 million users of the internet comprising of 38 per cent of the total population (Nitda, 2014). Therefore, with this large number of users at least 50 million will be Facebook and other social media users. Further, due to increase in penetration of mobile users enabling more internet access, the country falls among the world’s 10th ranked in the list of internet users (Aderibigbe, 2014).

The average age of internet users is about 34 years or younger. Accordingly, the young and educated group in Nigeria are more likely to use the internet for news, social network and mobile apps (Bbg, 2014). This is parallel to the internet users in the UK with an average of 16 to 34 years having the highest users, followed by the age of 35 to 54, while 75 years and over are the lowest users (Ons, 2014).

This study aims to explore the emerging economies marketing perspective of a political campaign towards improving political communication. The impact of social media on political awareness creation and the influence of marketing tools to gain funds for campaign. To achieve this, the study will focus on the Nigeria political scenario by focusing on the fund raising campaigns leading to the presidential elections. Drawing from several topics in the area of political marketing, relationship marketing and political economy, the

literature review offer the framework for understanding alternative source of campaign funding within political marketing.

4. Literature Review

4.1. Political Marketing

We begin with Newman (1999) definition of political marketing who defined it as;

“The application of marketing principles and procedures in political campaigns by various individuals and organisations. The procedures involved include the analysis, development, execution, and management of strategic campaigns by candidates, political parties, governments, lobbyist and interest groups that seek to drive public opinion, advance their own ideologies, win elections, and pass legislation and referenda in response to the needs and wants of selected people and groups in a society”.

Political marketing involves a wide range of theories and concepts used by organisations to market their goods and services to consumers. This section highlights candidates and political parties’ application of these processes to drive public opinion on themselves or their policies to a desired direction. The growth in political advertising has stimulated interest in political marketing, followed by opinion polls; computer assisted voting patterns and employing the services of professional campaign management companies.

Despite its relatively new entrance into the marketing scene, attempts have been made to classify political marketing into the main stream marketing discipline. Today, the polls are not the only tool attracting voters, marketing has become an important part of political campaigns (Newman, 1993). Kotler, (1975) offered political marketing uses such techniques like marketing research and advertising to reach out to the electorates. Indeed Wring, (1997); Egan, (1999) offered the fundamental link is that of buyer and seller exchange, transforming political science to commercial transaction. The literature suggests the communication process is the most commonly compared to the other identified connections. The general notion appears to be the messages are basically political advertising (Egan, 1999). However, what the campaign intends to portray to the intending electorates may focus on development process in the area of segmenting the electorates, manipulating and containing debate, narrow focus on election issues. Accordingly, Wring (1997) offered, for effective campaigns to produce and promote a competitive ‘push’ to the electorates to help achieve the organisational aims, opinion research and environmental analysis has to be adopted. Similarly, Harrop (1990) offered it is the positioning of the party within the electoral market, and how effective the party is in connecting with the researched voters. Likewise, Egan (1999) opined, relationship marketing strategies especially the area of alliances is an important ‘fit’ to the political marketing arena.

Sceptics are of the opinion that political marketing is still at the ‘craft stage’ in that it does not ‘fit’ into the marketing discipline. To support these cynics and situate the scenario to western democracies, Lock and Harris (1996) offered a framework of political marketing is yet to be constructed that will define the various aspects of the emerging phenomena. Therefore, Egan (1999) points to, political marketing like other concepts that emerged in the later twentieth century involve a different approach within the marketing discipline. They further point to the different means of communication in reaching out to the wide target audience progressed during the twentieth century. Based on the use of these communication tools in politics Egan (1999) opined that political marketing is regarded as a vital component

of any political process. Even so, it is clear to comprehend those vying for political office cannot do without the service of media advisor to manage their diverse marketing campaign.

According to Kotler (1975) election campaigns have for long adopted marketing characteristics to appease the electorates. Similarly, Jacobson (1978) purported that awareness plays an important part in voter evaluation of candidates and voting behaviour during elections. Thus, Kotler further added that, initially candidates convince the voters through handshakes, sitting down for tea, baby kissing and speechmaking. However, political campaigns evolved with more sophisticated methods to convince the voters.

4.2. Political Candidate Marketing

Marketing a political candidate is more in common to branding a product or service within the marketing stream with the aim of differentiation and reaching out to the different channel players to effectively convince the (customers) electorates. A parallel to conventional marketing is in offer of abstract and intangible attributes which are value laden by the political candidates sold on the promise of trust (O'shaughnessy, 2001). Trust in this sense is established through the demonstration of reliability, consistency and competence hoping that future satisfaction may be achieved.

In conventional marketing, consumer find services to be highly technical with varying quality, lack of samples to examine previous jobs and products. Hence, parallel to this and to counter scepticism, the candidates ensure they reassure the voters through delivered quality (what it aims to achieve) and the designed quality (the party manifesto). In particular, candidates must aim to remove the risk perception by reassuring the electorates that the problems would be solved rather than emphasising it.

Funding political campaigns are very expensive, for example, Weiss (1973) offered that in less than two months of the campaign in the 1972 presidential election in America, candidates in various levels of across the different levels of governments spent over \$400 million. Developing a marketing strategy to win the support of voters should consider other factors that will contribute to election success. Thus, Kotler (1975) proposed that marketing the candidate rests upon four connecting (markets) factors, the party, interest groups, voters and contributors.

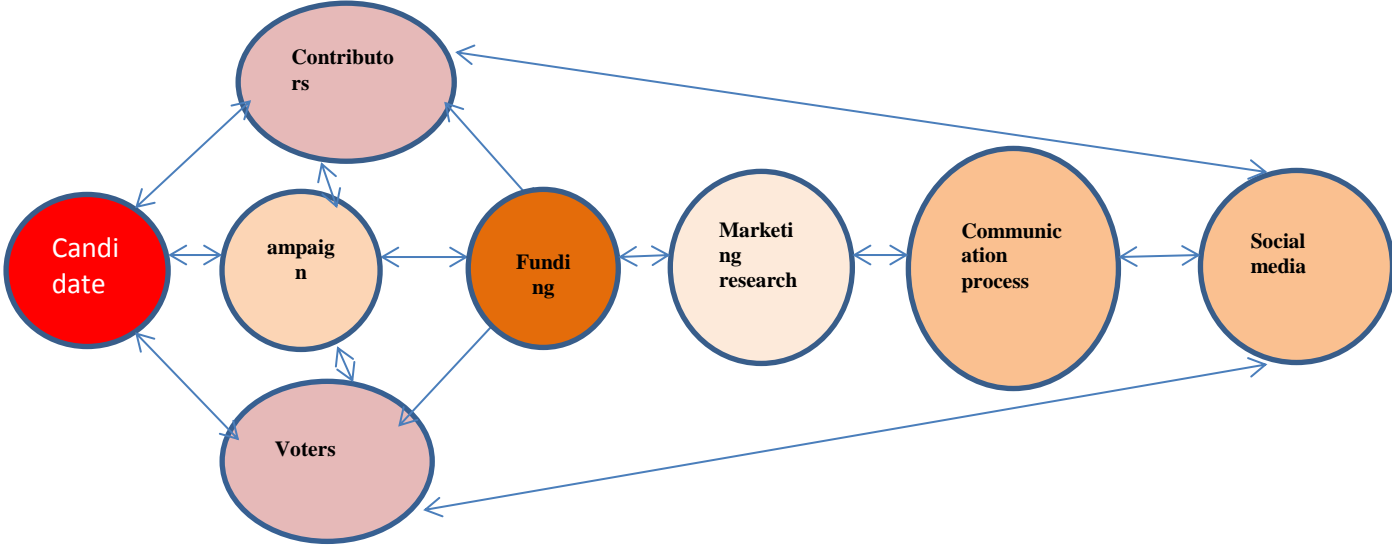


Figure 1: Candidates’ social media communication process

The conceptual model in figure 1 represents the political candidates' communication process with the connecting elements linking the communication process with the political market and the various segments of the social media. The interactions between the factors are crucial to the candidates' success strategy in generating awareness and reaching the target market.

Raising funds for campaigns during elections is important for any candidate to allow the various aspects of the campaign like logistics and publicity to be successful. According to Jacobson (1978) non-incumbents campaign expenditure offers voter recognition to equal that of the incumbents who already enjoys the image recognition. Candidates usually engage in fund raising by encouraging their supporters to contribute for expectations of victory. Therefore, when a candidate is expected win or his overwhelming popularity from the public it may encourage campaign contributions. Hence, voters as 'rational investors' consider the likelihood of the candidates election victory to their level of donations (Ben-Zion and Eytan, 1974; Welch, 1974; Dawson and Zinser, 1976). In contrast, Jacobson (1978) argued, incumbents popularity may decrease as they increase in spending. This, they suggest may be due to the proportion of money raised and spend to extent of the challengers' electoral threat.

Consequently, voter's popular support may be realised from a successful campaign spending, but other factors may also play an influencing part to attract votes. The candidates' charisma, personal charm, experience, honesty and political skill serve to influence voter confidence in fund raising. Hence, a candidates success likelihood may be influenced by his/her popularity as well as political experience may have a higher likelihood of success and acquiring more funds.

4.3. Political Marketing and Social Media

Free media serves as a cheaper alternative to communication hence; it is an important tool to reach a wider audience/population. According to Mangold and Faulds (2009) social media offers a different tool and strategy in marketing communication and customer engagement. This is significantly employed in political marketing to generate awareness and engagement, opinions, information and attitudes. Hence, the social media plays key role in the promotion mix of a political communication process to influence (voter) behaviour.

Further, with the development of various communication channels, political marketing cannot be seen as an isolated phenomenon. Actions or inactions done in one democracy may have international implications. Political marketing Strategies adopted in international campaigns can help in shaping domestic campaigns in other democracies. The use of differing activities in political marketing can result in positive response to result to cross fertilise ideas, for example, Blair's 1997 general election in adopting the Clinton-concept (Henneberg, 2002). Hence, Baines *et al.*, (2002) asserts parties should target key voter groups to allow retaining or gaining office while maintaining and enhancing image and policies beyond their election cycle for political success. They further found that, a structured and planned approach should be employed by strategists like, analysing diverse constituency data, determine major competitors and identify and target voters.

The literature shows a gradual shift in the development of political marketing into strategic marketing (Newman, 1993; Butler and Collins, 1996). Marketing in politics is no longer adopted as only a short-term strategic device but as a long-term activity to ensure continuity in governance and elections. Further, the short-term strategic marketing is used in information gathering and target marketing during the run up to elections.

The study of Farrell and Drezner (2008) has focused on the effect of political blogs on real world politics in the mainstream media to mobilize supporters; they however ignored the influence of digital media in politics. Further, there are indications that suggest some studies exploring the political setting in weblogs and social media sites were conducted. Thus, Williams and Gulati (2008) found that candidates with large supporters in Facebook pages is indicative to electoral success. Also, in their study of interaction between political bloggers, Adamic and Glance (2005) establish a pattern of frequent linkage among bloggers of the same party.

Although a fairly new phenomenon in the marketing field the advancement of the digital age, the use of social media to reach out to the electorates is showing unprecedented results (Tumasjan *et al.*, 2010). Developed democracies like the UK and the USA have adopted this means of communication to engage voters and attract popular support with success in the past.

5. Methodology of Research

This netnography is conducted to understand the online political marketing phenomenon by using a single case study approach by focusing on the Buhari campaign in the Nigerian 2015 presidential election (Yin, 2013). The study aims to explore the online tactics and strategies adopted by the candidate of the opposition party in the Nigerian presidential election. Our data include those in the brand community of the BSO including adverts posted, users' comments, candidates' campaign messages and other relevant postings to allow emergence of common elements through the online netnography process (Kozinets, 2002; Kozinets, 2006).

Netnography was conducted on the Facebook page of the support group website, twitter and YouTube accounts of the candidate by becoming members of the community group. All the messages are saved, notes taken down and analysed during the four month of netnography. In addition, the research was informed by newspaper reports, conferences and seminars of Buhari's activities. Daily postings were observed and comments were made on certain points that warrant classification. The study scope will entail looking at the techniques the candidate used to generate funding which serves as an avenue to commit the supports into election participation, generate support and persuade voter loyalty. In order to dissuade undue messages, initially, the researchers became covert participant observers. To ensure validity of the study, the research purpose was made known to the organisers immediately the election completed. Thereafter, permission was sought to use the data. Further, messages were communicated to the group for clarification through 'whispering' which gave useful feedback (Denscombe, 2010). Postings are saved using Windows snipping tool in organising the data where content analysis Krippendorff and Bock (2009) is employed to allow triangulation across the different data source (Kozinets, 2002).

For this study, videos, pictures and text were analysed. In total, fifteen videos and one hundred and eighty pictures including text containing different contents were analysed. Accordingly, coding of the postings incorporates the data analysis and interpretation (Spiggle, 1994). Consistent with Krippendorff and Bock (2009) themes identified were grouped according to categories by looking at similarities and differences Spiggle, (1994). The themes that emerged from the categories formed the baseline for understanding the research phenomenon.

6. Key Findings

6.1 Election Kick-off

The launching of the crowd funding programme generated 6,042 views, 374 likes and 318 shares while the crowd funding jingle had 12,629 views, 720 likes and 817 shares. By December 23 donations generated has reached N54 million, with 82 support groups from different parts of the country. The BSO has membership of 8,492,226 nationwide with 475,796 coordinators. Similarly, on Monday the 22nd of December, 2014 the APC candidate opened his own twitter account to engage with his supporters. Within an hour of posting it got over 1,000 re-tweets, in six hours it garnered 12,000 followers and by 9 p.m. on Monday it reached 14,000 and Monday, by 3:17 pm it reached over thirty four thousand followers, while on 24th October it had 40.9K followers. The YouTube following however did not do so well with 43 subscribers by 24th October, the number of subscribers gradually increased to 1,598 at the time of this write-up. This suggests the rapid acceptance of the campaign strategy from the voters in such a short while. Similarly, the Facebook page urges users to donate funds to allow campaign messages through the various communication channels and the logistic support during elections. Donors are assured that what they donate is safe by constantly pointing that, “The Online BSO Fund is perfectly safe and transactions are processed on the Interswitch Web Pay platform”. Table 2 shows the different social media sites with different user activities.

Buhari’s online campaign is notable for its use of logo. The logo of different colours, consists of first letters of the support group BSO with cluster of triangles by the side which are bright at the centre but seem to fade as they move outwards. The logo comes with the slogan ‘securing our people, prospering our nation’. Similarly, the online campaign adopted the slogan “change 2015” as a parody to the incumbent with chants like “FeBuhari” to indicate the change that will occur during the February election. As we are in a generation that a large population live on their phones, to generate loyalty, the BSO started posting free display pictures and cover photos of the candidate for those with mobile device. Further, to increase user engagement, members are urged to like the posts and also invite others. Towards the end of the year the postings started posting emotional adverts showing the softer side of the candidate, perhaps to counter the accusations of his past hard line stands and build loyalty. By January 2015 the organisers announced reaching fifty thousand likes in the Facebook page. By this time, several organisations have started posting messages and adverts urging voter support.

The results indicate the target audience are divided into three groups according to the financial position and the socio cultural situation. Using bank accounts will attract the older donors who are richer, perhaps are not users of the internet and would not like their contributions traced. The promotion also target online donors who constitute a large portion of the support base. They are mostly younger, educated and of the working class. Apart from their contributions, the effort of online users will serve the political promotion of the word of mouth. This group are more daring and confrontational playing the opposition role by engaging with opponents. Similarly, the results suggest targeting the lower class that has developed a passion for the candidate. They are young or middle age, uneducated, mostly skilled workers who do not use the internet or enjoy visiting banks. Similarly, to attract volunteers for election monitoring the posts target users in the different section of the country, urging them to sign up for news and information. Table 1 shows the socio cultural classification of donors.

Table 1: Classification of Target Donors

Media platforms	Target		
Bank Account	Older	Richer	Discrete
Online Verve card	Younger	Average finances	Carefree, Daring
SMS	Young/middle age	Poor	Carefree

The first video advert, urging donations indicates a dual target approach by appealing to two separate groups in the country. By using a Yoruba man to address the audience in Hausa Language it suggests targeting those supporters in the South West and the Northern. Thereafter, to target the wider audience adverts in ‘pidgin English’ were published. Subsequently, to educate intending donors who will have difficulty using the card, videos are posted showing how to use the BSO cards.

Table 2: The Social Media Sites

Social Media	Facebook	Twitter	YouTube
23/12/2014	8,518 likes 135 Share	32.4 K followers	43 Subscribers
24/10/2014	-----	40.9K followers	94 Subscribers
27/12/2014	-----	48.6K followers	105 Subscribers
31/03/2015	61, 380 likes	179.3Kfollowers	1,598 Subscribers

6.2 Post Postponement Period

Getting close to the election, the government announced that due to security issues the election will be postponed to March. This announcement surprised and angered a large portion of the country with many people voicing their disagreement. The unexpected announcement gave rise to a long vacuum in the social media engagement. Consequently, coming to terms with the reality of the postponement, the chant changed to “*March4Buhari*”. The posts consistently urge voters to choose the candidate and their party against the incumbent with posts like “*A better Nigeria is as simple as APC*”, “*Kick out corruption vote for a better future. Vote Buhari/Osinbajo 2015*”, “*It’s our country let’s take it back!*” indicating a better choice will be made if the candidates are voted. Getting to the election date, voters are urged to donate echoing the collective decision to finish what was started earlier by voting out the incumbent.

7. Discussions

We are living in interesting times with the emergence of social media platforms to reach a wider audience. Who would have thought that from the beginning of democracy in 1999 that the political system will be engaged with the alternative media to reach the wider audience and influence voter decisions? In total, the BSO generated contributions of over one hundred and sixty million Naira (over 484,000 pounds), to the APC presidential campaign. These funds have been raised through a crowd funding scheme that involves the sale of scratch cards to the public and has now evolved into the Online BSO Fund with donations across the country and abroad.

Towards the election period, perhaps due to significant voter anxiety and excitement from the election postponement and flamboyant political rally the call for donations and engagement on the page increased significantly. Counter intuitively, this wide acceptance and usage is a testament that the online engagement is gaining acceptance by the Nigerian voters. This scenario is similar to the Indian elections where the political candidate used the social media to appeal to voters. The results may also suggest that Nigerian voters have become more comfortable with giving small donations online towards presidential candidates whom they support.

The results further indicate that voters are moving away from the thought of regarding democracy as an ideal or as a development process to an acceptable choice for political engagement to change leadership. Further, consistent with Lock and Harris (1996) view, the study found universality of campaign strategy by communication with party members; media (social media) and likely sources of funding form the electorates. Hence, the findings suggests key tools and techniques in the social media election campaign like, relationship marketing by retaining bond with electorates while building alliances with other political parties and groups, word of mouth, identity and image awareness which is consistent with Dean and Croft (2001). The digital efforts coupled with the volunteers, worked really well for the candidate. During the election, votes were shown in the Facebook platform before they are officially announced. This effective way of monitoring votes serve to reduce rigging which many feared might undermine the election.

8. Conclusions and Implications

By carefully interpreting contents in the BSO online community, insight is gained on the use of alternative communication media to amplify campaign messages. Understanding the online messages can also provide insight into the different marketing and financial strategies to induce the electorate. The digital media should be a medium where messages are able to engage with the target audience. This paper extends previous studies on the political marketing activities by showcasing the political development of political campaigns. It helps to offer understanding of the development of fundraising and promotion campaign through the social media in a section of the world that is gradually becoming important at the political and economic level. The findings indicate the growing sophistication of promotions in politics and alternative ways used to improve campaign awareness in the sub-Saharan African context. The paper improves marketing managers and politicians understanding of the alternative promotion strategies to generate awareness and encourage voter participation.

9. Originality/Value

This paper extends previous studies on the political marketing activities by showcasing the political development of political campaigns. It helps in understanding the development of fundraising and promotion campaign through the social media in a section of the world that is gradually becoming important at the political and economic level. The findings indicate the growing sophistication of promotions in politics and alternative ways used to improve campaign awareness in the Sub-Saharan Africa context. The paper contributes in better understanding the various alternatives associated with individual promotion in political marketing.

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L.O. Kokoulina
Graduate School of Management, St. Petersburg State University
l.kokoulina@gsom.pu.ru,

T.A. Gavrilova
Graduate School of Management, St. Petersburg State University
gavrilova@gsom.pu.ru

Concept Map of the Circular Economy Theoretical Origins

Abstract: In response to calls from industry for framework guiding the strategies for sustainable development, a concept of Circular Economy emerged recently, aiming at integration of economic activity and environmental prosperity in a sustainable way. Circular Economy, as a national strategy, has been implemented in China and announced in Kazakhstan. This paper presents an attempt to trace the origins of the Circular Economy from various theories: industrial ecosystem, technological design, and eco-discipline. The research provides a concept map of the Circular Economy concept.

Key words: *circular economy, industrial symbiosis, concept map.*

1. Introduction

The issues around the concept of sustainable development are complex and sophisticated. A number of authors have called for the integrative approach which would integrate multiple perspectives on sustainability. Despite the fact that the amount of concepts and terms multiplied in sustainability research, there is a necessity in a holistic framework which could serve as a common metaphor for academia, policy makers, and business. Circular economy is a concept which, as we believe, has both ambitions and potential to provide an integrated holistic perspective on economic and environmental concerns.

This paper is structured as follows. First, we give a definition of the Circular economy and briefly describe its role in the corporate sustainability research as well as its current implementation. Second, we provide research design and methodology of the study. Then, we describe the results of our theoretical research: a concept map of theories from which Circular economy has originated. Then, the results are discussed, contribution, limitations, and the conclusion is provided.

2. Research Motivation

2.1 Circular economy and its role in sustainability research

Currently environmental foot-print of industrial and municipal wastes is growing substantially. Urbanisation is expected to account for 70% of global population by 2050 and urban residents generate twice as much waste as their rural counterparts. By now, the global population produces about 1.3 billion tonnes municipal solid waste per year but this could increase to 2.2 billion tonnes per year by 2025 (World Bank, 2012). We believe that waste increase, global warming, and species extinction are warning messages indicating that the economic systems and the attitude toward environmental problems should be rethought.

According to Porter and Kramer and Hansen et al., “sustainability is a mega trend that is driving sustainability oriented innovation as the means to accomplish sustainability initiatives” (Porter and Kramer, 2006; Hansen et al., 2009). Corporate sustainability is conceptualized differently by various authors. Montiel (2008) finds that the research on corporate social responsibility (CSR) since the 1990s started to focus on corporate social performance (CSP, which included environmental foot-print analysis), environmental management (EM), corporate sustainability (CS). Besides, Montiel suggests that despite the variability of the terms in academic management literature he found, all concepts are similar in the sense that “...all of them rely on the... vision of [corporate sustainability] CS” (257). Therefore, for the purpose of the paper we will use corporate sustainability as an umbrella term for related concepts (CSR, CSP, EM).

Corporate sustainability field has served as a common ground for discussing environmental and social responsibility issues, however it is anchored to the organizational level. Nowadays there is a need for more holistic and systemic perspective on environmental issues. There are some attempts to embrace a holistic view on corporate sustainability. For example, Patala et al. (2014), basing on systematic literature review, identify four types of eco-industrial networks. The authors define eco-industrial networks as “industrial networks that advance environmental sustainability through inter-organisational collaboration” (p. 166). In reliance on operational logic and networks architecture types, the following four types of eco-industrial networks were found: industrial symbiosis networks, sustainable supply networks, environmental issue networks, and environmental solution networks. However, the authors note that these types could be interconnected in reality. Even though eco-industrial network

concept reflects interconnectedness of the stakeholders (including municipalities and NGO), we believe that the broader perspective should be applied. The reason is that economic and social context could play a major role in the necessary move towards sustainable development. Therefore we argue that holistic and systemic view should be taken into account by policy makers, business and academia. Circular economy could become a valuable perspective in a discussion of sustainability, and the definition and theoretical analysis of this concept is given in this paper.

2.2 Circular economy: definition and global implementation

Murray et al. (2015, p. 1) define Circular economy as “an economic model wherein planning, resourcing, procurement, production and reprocessing are designed and managed, as both process and output, to maximize ecosystem functioning and human well-being”. Another practitioners-oriented definition is given by Ellen MacArthur Foundation (2012): “a Circular economy is one that is restorative by design, and which aims to keep products, components and materials at their highest utility and value at all times, distinguishing between technical and biological cycles”.

The goal of the Circular economy is to shift from the linear economic model, summarized as ‘take–make–dispose’: starting from raw materials and ending with externalized wastes. To the contrast, in a circular economic model, wastes become resources to be recovered and revalorized, due to recycling and re-use (Gregson, 2015). European Union has committed to becoming a recycling and recovery society by 2020 through the ‘Roadmap to a resource efficient Europe’ (European Commission, 2014).

Facing limited resources supply and high energy consumption, China implemented a new national strategy for Circular Economy in 2005, which aimed to obtain high resources and energy efficiency by means of 3R: “reduce, reuse and recycle” (Yuan and Zhang, 2010). Moreover, Chinese National Bureau of Statistics in September 2006 issued a "circular economy evaluation index system" according to the 3R principles, at the macro level to establish a set of evaluation index system (Zhang, 2014). From the point of view of Chinese authors, Circular economy is a ‘recycling economy’, and it is described as a “scientific development model . . . where resources become products, and the products are designed in such a way that they can be fully recycled” (Yap, 2006). It is interesting to note the difference in the meanings of the Circular Economy of EU and China national strategies. The focus of the research on Circular economy in China is mostly on the governmental program implementation which is mostly achieved by industrial parks development. There are more than 1500 industrial parks approved by the government, and their cumulative output value accounts for more than 60% of all gross industrial output value, however, most of the parks are operate in heavy polluting industries and have become the main source of environmental problems (Yuan and Zhang, 2010). On the other hand, EU does not argue for the centralized industrial parks development.

Speaking of CIS experience, a national strategy aimed towards Circular economy practices was recently announced in Kazakhstan: in 2013, minister for the environment Nurlan Kupparov claimed that “by 2050 in Kazakhstan should be built so called zero-waste circular economy”.¹ As for the Russian experience, there is some literature on Circular economy opportunities (for example, Kaliuzhny, 2013), but this research stream is quite limited currently.

¹ http://forbes.kz/news/2013/06/05/newsid_30174

3. Research Design and Methodology

There is a need for a holistic and systemic perspective in dealing with economic and environmental problems. Circular economy could serve as a promising metaphor for the integrated, holistic perspective for academia, policy makers, and business. However, the concept of Circular economy still does not have commonly accepted definition and understanding despite recent rise in popularity. We believe that, in order to better understand a concept, it is important to have a clear picture of the theories from which this concept has emerged. Therefore, the goal of this research is to create a knowledge map of Circular economy theoretical origins.

Knowledge mapping (or knowledge cartography) is usually applied for the corporate knowledge sharing enhancement, or for educational purposes. However, we believe that knowledge mapping could serve as a valuable method for analysis of complex theoretical constructs (such as the Circular economy) in order to make them more understandable both for practitioners and scholars.

Knowledge mapping methods could be classified into two approaches: process-oriented approach, and domain-oriented approach (Ermine et al., 2010), and for our aims the latter approach should be used. The stream of research on the knowledge mapping techniques proposes several ways of implementing this approach. We have chosen concept mapping as a research method because it allows us to represent knowledge on the theoretical roots of the Circular economy concept. Concept maps are “graphical tools for organizing and representing relationships between concepts indicated by a connecting line linking two concepts” as defined by Novak and Canas (2007, p. 29). Concept maps could describe any concept or event using nodes and linkages of different types. In our case, all the linkages would be a type of “has roots in” as we aim to describe theoretical origins of the concept.

4. Circular Economy Theoretical Origins: a Concept Map

Circular economy combines several theoretical streams under one label. We distinguish three main streams of research which have contributed to the concept development. Firstly, industrial symbiosis, which is a theory on a resource exchange relationships among organizations from different industries. Secondly, Circular economy relies on the results of the studies on sustainable technological life cycle of the industrial materials, products, and processes. Thirdly, the social and regulatory contexts play a crucial role in the scope of the Circular economy implementation. The overall concept map of the relationships of the theories from which Circular economy has emerged is presented on figure 1. We briefly describe these three theoretical streams and particular areas of research which valuably contributed to the formation of the Circular economy concept.

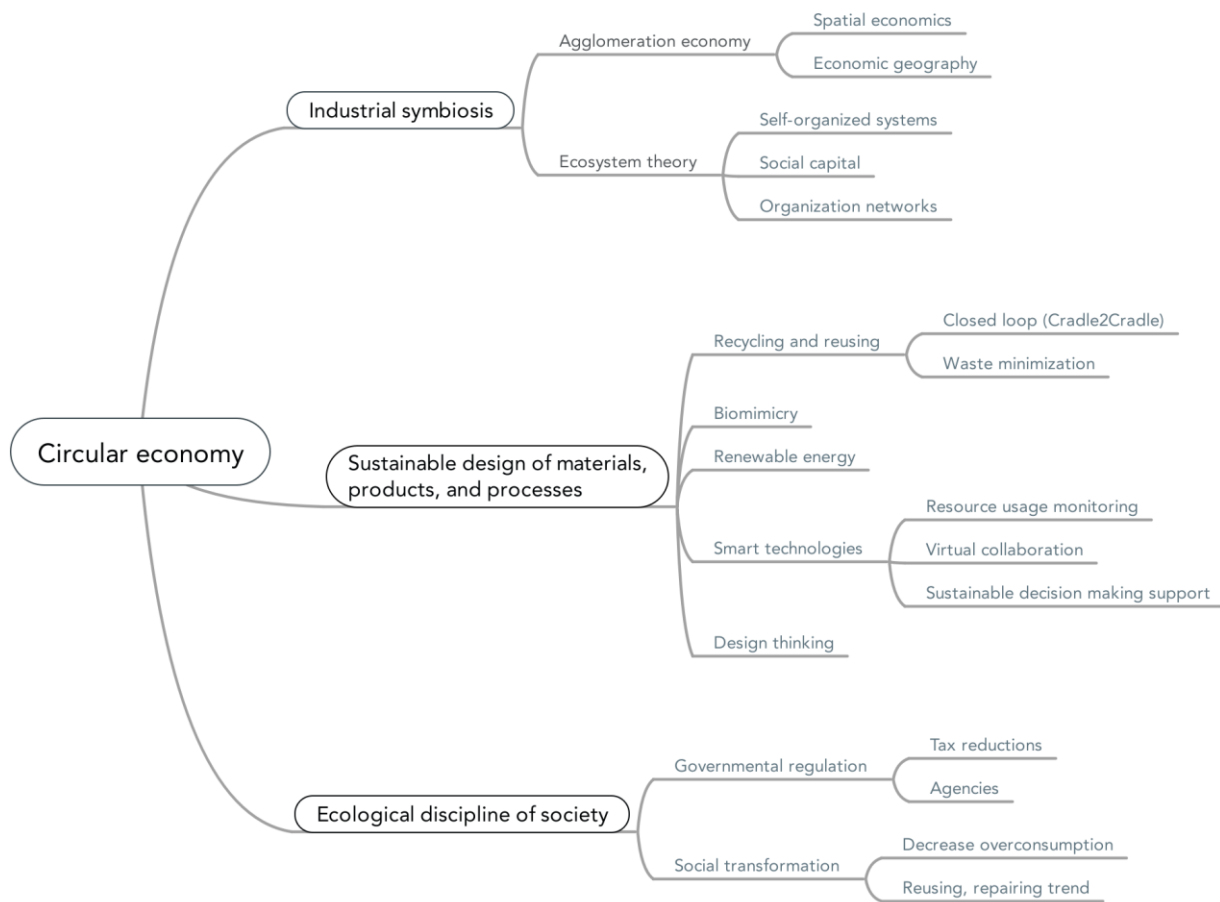


Figure 1. Concept map of the Circular economy

4.1. Industrial symbiosis (IS)

Substantial number of books and articles published between the beginning of the Industrial Revolution and the start of the current environmental movement report and analyze the development of profitable industrial waste recovery linkages between otherwise unrelated firms (Desrochers 2007; Desrochers & Leppälä 2010).

It is noteworthy that some scholars focus their attention on planned symbiotic relationships, whereas others argue for the unplanned, spontaneous and self-organized IS. For instance, the term “industrial ecosystem”, similar to natural biological ecosystem, was coined in 1989 by Frosch and Gallopoulos (Frosch and Gallopoulos, 1989). Industrial ecosystem was described as a system where flows of energy and materials are optimized, and byproducts of one process become a feedstock for another one. The same year cluster of companies from different industries, which had relationships similar to described by Frosch and Gallopoulos, was ‘discovered’ in Kalundborg, Denmark, and described in academic literature. The classic case of self-organized symbiotic relationships in small city of Kalundborg was gradually created over a period of three decades among a refinery, a power plant, a pharmaceutical plant, an aquaculture operation, the local city administration, a wallboard manufacturer and nearby agricultural producers.

As for the Russian based studies on IS, there was a stream of research of Soviet authors studying possibilities of planned IS, named as TPC (territorial production complex) by N. N.

Kolosovsky. The main idea, developed by such authors as N.N. Kolosovsky, P.M. Alampiev, and Y. G. Saushkin, was to develop an approach to planning and realization of construction of the network of enterprises located nearby in such a way that the economic value of such production facilities complex would be maximized, considering geographical conditions, economic and social circumstances. The concept of TPC, born in 1960th, had been maturing and proliferating through the Soviet times: in 1980th, specialized TPC in economic regions were given a special attention and financial support from the government. TPC usually have specialization, share common social and technological infrastructure, and have common environment protection policies. The concept of TPC does not imply internal competition. Majority of TPC in Russia specialize in heavy equipment industry and energy, which corresponds to the structure of the country's GDP. By now, similar to China, centralized IS is implemented through industrial parks development.

The literature on industrial symbiosis has adopted theories from various disciplines. Rooted in mostly in economic geography and spatial economics, the concept of *agglomeration economy* appeared. Agglomeration economy is one of the main driving forces of industrial symbiotic relationships, as it represents economic benefits of high concentration of labor force production facilities in one locale due to collaborative purchasing of raw materials and possibilities of exchange of materials and knowledge.

As industrial symbiosis research is basically a part of *industrial ecosystem* field, the theories from natural ecosystem studies and biology were also adopted. Analyzing unsuccessful cases of planned industrial parks, researchers (e.g. Chertow, 2007) have come to conclusion that unplanned industrial symbiosis, like its natural analogue, is more robust and stable to external shocks. Probably, it could be explained by the fact that self-organized IS has such features of environmental ecosystem as redundancy and diversity. Redundancy in biology is the opposite to optimization – organs and functions which they serve are often redundant. In planned system it is hard to plan redundancy taking away optimization motives. Diversity of actors of IS is considered to be one of the main antecedents (Walls and Paquin, 2015) as various industries could develop more innovative by-product linkages. Nevertheless, too much diversity among the actors could limit IS. As with redundancy feature, diversity is also hard to plan in advance – usually planned industrial ecosystems are based on the ‘anchor’ model when one main production facility serve as a source of by-products reutilized then by other smaller companies. Besides, recent review of IS literature found out that research shifted from technical opportunities towards *social and network* aspects (Walls & Paquin 2015).

It is not easy to answer why industrial symbiosis field was on the backstage of the academic world during several decades of the 20th century and is now rediscovered. There could be several reasons. Firstly, as the companies started growing in size and across global regions, self-organized symbiotic relationships could not be scaled to a large multinational level as the possibilities of IS differ in various countries, and centralized company-wide policies usually disrupt cross-industrial relationships which are not vertical client-supplier relations. For example, Ashton (2008) highlights subsidiaries' insufficient autonomy for entering into local exchange. Secondly, linkages of by-product are not straightforward and assessing the value derived from these relationships may be difficult to quantify. Another possible reason is that over time several successful inter-firm recovery recycling linkages could become internalized within the boundaries of one firm. However, the trend to refocus on core competencies in the last two decades could have reopened the opportunities to external symbiotic relationships (Desrochers & Leppälä 2010).

4.2. Sustainable design of materials, products, and processes

Firstly, trends towards *renewable energy* use contribute to wastes reduction. An approach of *recycling* and reducing externalized waste is becoming a new technological paradigm for many practitioners. One of the examples of zero-waste paradigm is Cradle to Cradle which was initially introduced during the 1970s by the Swiss architect and economist Walter Stahel who proposed that materials could be processed in a ‘closed loop’ and ‘waste’ becomes a resource as opposed to the Linear model described as Cradle-to-Grave (Stahel and Giarini, 1989). Stahel also identified the need to extend product life through repair and remanufacture (Stahel, 1981), which are also now seen as integral to the Circular Economy. Cradle to Cradle is also a design method employed by William McDonough (architect) and the Michael Braungart (environmental chemist) who state that it will facilitate ‘design for abundance’ (McDonough and Braungart, 2002).

According to Andrews (2015), *design thinking* plays a major role in the sustainable design of the materials and products, and is crucial for the development of CE economic model. Education on sustainability for industrial designers would benefit a general shift towards CE. There are notable works of the designers arguing for sustainable design, for example, Richard Buckminster Fuller and Victor Papanek. Buckminster Fuller advocated efficient design and engineering by ‘doing more with less’ (which he defined as Ephemeralization) as early as 1938 (Fuller, 1973). This practice, recently characterized as ‘lean engineering’ and ‘dematerialisation’, is now relatively common.

Humans were always inspired by the nature’s inventions such as birds flight mechanics or hydraulic mechanisms. For example, Leonardo da Vinci made his sketches on “flying machines” after careful observation of the birds’ anatomy. There were several attempts to conceptualize this approach to innovations: biomimetics, bionics, and the recent concept of *biomimicry*. Biomimicry describes ‘innovation inspired by nature’; it is further defined as “an approach to innovation that seeks sustainable solutions to human challenges by emulating nature’s time-tested patterns and strategies” (Benyus, 2002). Circular economy is itself a concept borrowed from the nature’s approach of circulating flows of materials where dead organic material decomposes to become a nutrient for the next generation of living organisms.

Currently IT can support a Circular economy technological life cycle in various ways. For example *smart technologies*, embedding artificial intelligence and interconnectedness, could support monitoring of the resource usage through sensors and mobile technologies. Besides, virtual collaboration among organizations from different industries supports knowledge sharing on the possibilities of resources exchange. For instance, Cecelja and Trokanas (2014) use ontological engineering and semantic approach to create a web service for SMEs in order to support industrial symbiotic relationships and therefore to reduce overall level of externalized wastes (e-Symbiosis project based in Greece). Sustainable decision making support is also a prominent topic of research. For example, Wątróbski et al. (2015) suggest methodological framework for decision support system or the location of the renewable energy sources.

4.3. *Ecological discipline of the society*

One of the important areas of social research is *policy influence* on industrial symbiosis development. Jiao and Boons (2013) claim that policy certainly impacts on IS development, but its impact varies in different regions and there is no “one-size-fit-all” approach to promote IS. For example, in European Union countries, policy has a positive influence on IS development through indirect incentives and not through direct obligations to improve the environment performances (e. g. Gregson, 2015). Financial support from government can also facilitate IS development. Salmi et al. (2012), however indicate that regulation could be a

barrier to IS. Besides IS benefits from the involvement from different stakeholder groups (Walls and Paquin, 2015). *Social transformation*, in our case meaning growing environmental awareness of the society, could be important for the promotion and the scope of the Circular economy because stakeholder involvement is one of the most important lubricants for the Circular economy implementation (Walls and Paquin, 2015).

5. Conclusion

In this paper we present a first attempt of visualizing of Circular economy theoretical origins. The research is motivated by growing importance of this new economic model in various countries as well as absence of the common understanding of this term. We provide a concept map which shows the theoretical roots of the Circular economy from industrial symbiosis research, sustainable materials, products, and processes research and the stream of research on regulation and social transformation influence on the Circular economy implementation.

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E.R. Koleeva, Chelyabinsk State University
elmilka89@gmail.com

I.A. Bobykina, Chelyabinsk State University
bobykina-ia@mail.ru

**The models of foreign language bilingual training by the students studying
at non-language faculties**

The article examines the model of bilingual training by the future lawyers. Particular attention is paid to the concept of "bilingualism" and its variants. The article gives the description of the experiment, which took place in March 2015 in Chelyabinsk State University. The difficulties that encountered during the experiment are emphasized, and the different ways of their solving are suggested.

Keywords: *bilingualism, bilingual training, training model.*

The relevance of bilingual training is determined, above all, by the increased requirements in the modern Russian society by learning foreign languages at the non-language faculties. In connection with the Russian release on the world stage in the new ideological and political conditions, its entry into the global economy, the signing of the Bologna Convention, the problem of the real level of non-language faculties training specialists in foreign languages raises sharply.

To solve this problem, it is necessary to implement and expand the range of forms, methods and technologies of training. In the new context of intercultural motivation, the idea to learn foreign languages is markedly increased. However, the main problem, that is, uncreative attitude towards learning a foreign language, the lack of experience of the teachers passing from one language to another culture, lack of student interest in multilingualism, remains. In this regard, we can see the increasing interest in the bilingual approach. Modern society needs a person who is focused on dialogue in family, social, political and ethnic relations.

Under the term bilingualism is generally understood possession of more than one language, and the degree of knowledge of a particular language can be very different. The highest degree of bilingualism occurs when the speaker recognizes the second language as a native language. [2] But perfect bilinguals almost never occur. Individual bilingualism is rather a phenomenon that manifests itself primarily where the linguistic minorities exist. Often it is an unequal and functional distribution of languages in some areas. In fact, bilinguals use each of the languages in different social contexts and are unable to use all of them known languages in all contexts equally.

There is also important to distinguish between bilingualism, which is called the contact or "natural bilingual", acquired in the language environment in the conditions of daily life together of two nations, for example:

- long staying abroad;
- immigration (usually when you visit a language course);
- children bilingualism (when a child has been born in foreign-language space in the family of a national minority);
- in the case of international marriage parents.

In the last two cases, the natural or contact bilingualism is usually spontaneous, mastering a second / both languages happens haphazardly and unconsciously, and communication skills in both languages can be configured as a parallel or series (supported by the dominant language). This natural bilingualism is more stable and permanent; it is the basis of language to change the language in their combination. The contact bilingualism is a language of international communication. It is also necessary to distinguish the natural bilingualism from "proximity bilingualism", which is the result of a focused study of foreign language in artificial conditions as close to natural methodically recreating real communicative situation:

- at kindergarten;
- at school;
- at university;

-at language and special courses. [3]

It should be noted that bilingualism can be not only individuals, but entire social strata. Forms and types of bilingualism in this case depends on the specific historical conditions of the development of peoples, their socio-economic, cultural and political structure. Although bilingualism known to all social community of people and historical periods as a significant social and historical phenomenon, it has attracted attention in the Renaissance, when the people began to learn new languages and occur literary and written languages for special purposes (worship, public acts, scientific work). Such languages are international: for the people of the East is Arabic, Persian, Chinese; Western Europe - Latin; a number of Slavic people – Church Slavic. Bilingualism had socio-limited character: two languages could speak only representatives of the ruling classes and professionals (cult leaders, diplomats, academics). Wider and deeper is understood bilingualism in the modern world. Bilingual is, for example, much of the modern population of Latin America, bilingualism is common in Switzerland, Belgium, England and France. Already during the census in 1940, more than 22 million. US citizens who speak English as a native language called the other - French, German, Russian, etc. Distributed by bilingualism and the Russian Federation, where a huge number of representatives of national minorities and various ethnic groups (Armenians, Gypsies, Kalmyks, Ossetians and others.). Therefore, we see that the bilingual may become not only individuals, but entire social groups, this fact once again confirms the individual psychological and social nature of the phenomenon.

Under these conditions, multicultural intercultural interaction at the present stage is becoming increasingly common model of bilingual training. Under the bilingual training we mean the organization of educational process, when it is possible (for example, the language of the Turkish minority in the Austrian or German as a foreign language in Russian) use more than one language as the language of instruction. In this case, a second language is not only an object of study, but at the same time a means of communication, the language of instruction.

-Training students to master the subject and subject knowledge in a particular area based on the interconnected use of two languages (native and foreign) as a means of educational activities;

-Training foreign language in the process of mastering the specific subject knowledge at the expense of the interconnected use of two languages and the mastery of a foreign language as a means of educational activities. [3]

Thus, with this language learning is seen primarily as an instrument of initiation to the world of expertise and combining different learning content subject and language components at all levels of the educational process. Currently, different countries have accumulated some experience in bilingual education. This is the case, as already stated, in areas with natural bilingual environment (Switzerland, Belgium, Canada, etc.), as well as in countries where there is an influx of immigrants who are forced to get used to the foreign culture (Germany, USA). In these countries operate different kinds of bilingual teaching model in which languages are studied not only as a means of communication, but as a way of familiarizing with the culture of the target language country, get acquainted with its history, area studies, science, literature, art. There is experience in creating a number of bilingual schools based on

bilingual education in a number of cities in our country, which are based on the concept of continuous bilingual education, from kindergarten to higher school. A common model of bilingual education is also based on a particular subject area, called immersion, which can be short-term and long-term. As for the simulation of the educational process in teaching foreign language on bilingual basis, it is important to note that the bilingual training program can be grouped into two different areas:

- enrichment,
- transition.

Enrichment Programme is an arbitrary set of objects and is focused on students. The second language is taught here for more intensive. If there is a language immersion learning the basics of a second language, curricular foreign and native languages are swapped.

Other models are bicultural counter classes, in which classes are held in two languages. The most widely used model in the world to bilingual education of people of ethnic minorities, known as the transitional program. Training is conducted at the outset in a certain part. 50% of subjects is conducted in the primary language, and the rest - the program of bilingualism for subsequent full integration after a certain time in a monolingual learning process in a multilingual school.

In the early 21st century bilingual training is seen as a very promising direction. Many scientists support the introduction of bilingual training. This problem has been studied previously. (Galskova et al., 2003)

The Chelyabinsk State University tested model of bilingual training, implemented on the basis of wealth. Teachers of various faculties during the month lectured in English on their subjects. The experiment has revealed a number of advantages specific to this model of training, and weaknesses of the participants. Students have shown a keen interest, high motivation and concentration in the classroom. However, the professional vocabulary used in class, and the specificity of the subject made it difficult to complete the perception and development topics. Overcoming these problems is possible through additional training of teachers and students, for example, compiling a dictionary of English terms used in class, and their translation, would help remove language difficulties to students. Conducting seminars in English would consolidate the vocabulary and explore the subject.

Bilingual approach involves the close cooperation of foreign language teachers and teachers of legal sciences, which implies coordination of educational programs and parallel explanation of the material. Possible forms of educational process include subject lectures in English, seminars and colloquiums, as well as simulation of court proceedings in English. The experimental results show the effectiveness of the chosen model of bilingual training. [1]

Thus, in recent years increasingly conducted discussion on bilingual education. The relevance of bilingual education on the basis determined by the general global trend towards integration in the economic, cultural and political spheres, in the sphere of education leads to a tendency to integrate subject knowledge, focus on the knowledge of a complete picture of the world.

Held in Chelyabinsk State University experiment showed the possibility of the successful implementation of bilingual training at the non-language faculties.

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Mariia Kozlova, Mikael Collan, and Pasi Luukka
School of Business and Management, Lappeenranta University of Technology

**Renewable Energy in Emerging Economies:
Shortly Analyzing the Russian Incentive Mechanisms for Renewable Energy
Investments**

Renewable energy has become an actively developing sector in many emerging economies and there are various incentive mechanisms. Russia has implemented a unique incentive policy for renewable energy investments, based on two separate mechanisms that reduce the risks of investments into renewable energy generation. This study presents a short analysis of the two Russian RE incentive mechanisms, illustrates the profitability effect of the capacity mechanism for investments into renewable energy on the wholesale energy market, and analyzes shortly the results from two past capacity auctions to shed light on how well the renewable energy incentive mechanism is functioning in reality.

Key words: *capacity mechanism, emerging economy, Russian renewable energy policy, renewable energy tariffs for retail markets.*

1. Introduction

Attracting investments and developing new sectors of business and industry are among the important goals of many emerging countries. The renewable energy (RE) sector represents a relatively young part of the energy industry that is still actively evolving. Developed countries that are playing the first mover role in RE investment mobilization, have experienced decaying investment volumes already for some years, meanwhile emerging economies demonstrate strong upward trend in new investments in renewable energy of \$131 billion in 2014 and reaching the almost same level as investments in developed countries (Figure 1).

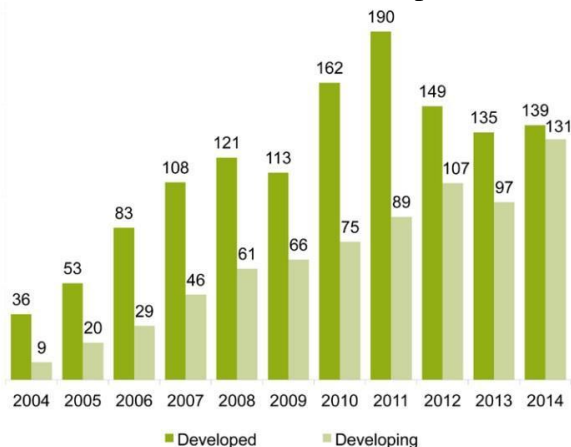


Figure 1. Global new investment in renewable energy, \$bn (Frankfurt School UNEP Collaborating Centre & Bloomberg New Energy Finance, 2015).

Largest emerging economies in terms of RE investment volumes are China, Brazil, India, and South Africa. Apart from them, also several other emerging economies attracted total investment over \$1 billion in 2014. These include Mexico, Indonesia, Turkey, Chile, and Kenya and yet more reached over the \$500 million investment volume (Frankfurt School UNEP Collaborating Centre & Bloomberg New Energy Finance, 2015).

To provide a favorable investment environment for investments into renewable energy, governments commonly resort to investment supporting policies. In fact, the number of emerging countries that have adopted incentive policies to support investment into RE has been growing, see Figure 2.

The types of support mechanisms to incentivize RE investments vary. The most popular supporting policy type is the use of feed-in tariffs (or premiums). Feed-in tariffs are widely used all over the world and systems based on feed-in tariffs are in force in such emerging economies as China, Egypt, Kenya, and Ukraine. Another widespread policy for incentivizing RE investments is the use of auctioning production rights, where the idea is based on competing companies (potential producers) bid each other down on the price of produced electricity from renewable energy sources. Auctions are common, e.g., in South and Central America. Renewable portfolio standards, or quotas, although being active in some developed countries, including the US, have not been adopted in many emerging economies (REN21, 2014). Overall, main policy instruments used seem to support renewable energy investments by providing additional revenues for the production, other incentives include, e.g., the use of tax exemptions and financing facilitation.

Recently, Russia has joined the list of emerging countries with active renewable energy supporting mechanisms. In 2013 it introduced a renewable energy incentive mechanism for the wholesale energy market that is integrated to its existing energy trading system (Government of Russian Federation, 2013a). A distinctive feature of this mechanism is that it provides remuneration in terms of capacity installed, not based on the electricity produced (further referred to as the capacity mechanism). In addition, in early 2015 Russian government enacted

a renewable energy tariff scheme for retail markets (further referred to as the tariff scheme), expanding coverage of RE support in the country (Government of Russian Federation, 2015). Both mechanisms differ in many respects from the existing RE incentive mechanisms and policies worldwide.

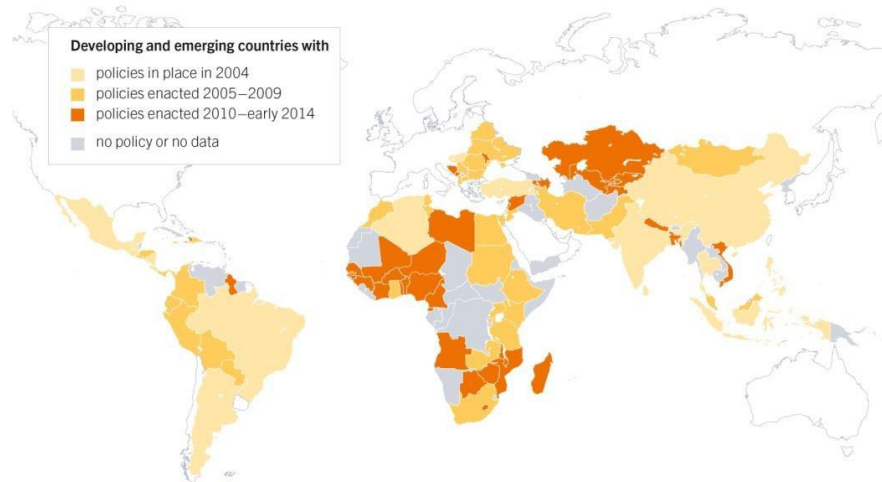


Figure 2. Developing countries with renewable energy policies (REN21, 2014).

The effects to RE investment profitability, or the success in attracting new RE investment, of these new Russian incentive schemes has not gained a lot of attention in academic literature. Current literature includes a qualitative analysis of the draft version of the Russian capacity mechanism (Boute, 2012), modeling of possible effects of the Russian capacity mechanism on energy market prices (Vasileva, Viljainen, Sulamaa, & Kuleshov, 2015), and a model-based analysis of the effects of the scheme on investors' decision-making (Kozlova, 2015). In addition, the International Finance Corporation has published reports describing the Russian renewable energy policy (2013a; 2013b). There have been no attempts so far to analyze the actual effects of the incentive systems on realized RE investment deployment. Studies on the newer Russian tariff scheme for RE retail market investments have not, to the best of our knowledge, been reported at all.

The purpose of this paper is to analyze the incentives the Russian Federation uses to promote renewable energy investment in the country, and whether these incentive systems have been successful so far. The paper combines the analysis of legislation and numerical investment case illustration on one hand, with the analysis of actual implementation results in terms of the amount of deployed RE capacity on the other. By comparing the intentional incentives with the actual realized output, this paper tries to illustrate the effectiveness of the policy.

A wind farm investment case is used to numerically illustrate the effect of the Russian capacity mechanism on the profitability of a RE project operating on the wholesale electricity production market. The tool used in the analysis is the fuzzy pay-off method for investment valuation and real option analysis (Collan, Fullér, & Mezei, 2009). Analysis of the case provides the first conclusions on the how well the new Russian RE incentive framework works, and sheds light on some important characteristics of the incentive policy, providing also insights for other emerging economies.

The paper is structured as follows: in the following section, the Russian electricity and capacity trading system are introduced supporting RE policy description starting in the subsequent section. Then we present results of investment modeling in the presence of the new capacity mechanism to analyze the effects of the policy. Further we show its actual realization results. Finally, the discussion of obtained inferences and some conclusions complete this paper.

2. Russian energy market

The Russian electricity trading system consists of a wholesale market and a retail market. Large generators sell electricity to the wholesale market, where large industrial consumers, retailers and suppliers of last resort buy it. The latter two then sell electricity to the consumers through retail markets. Smaller power generators can sell electricity directly to the retail markets, whereas medium installations, with nominal capacities between 5 and 25 MW can participate on either, the wholesale, or on the retail market. State-controlled infrastructure organizations act as market regulators. The Non-profit Partnership (NP) Market Council is a self-regulatory organization of wholesale market participants, responsible for regulation and optimization of the trading system. Its subsidiary, the Trading System Administrator (ATS) organizes the trade and conducts the settlements in the wholesale market. The System Operator (SO) is responsible for actual electricity flows and for dispatch management. A simplified structure of the Russian electricity markets is presented in Figure 3.

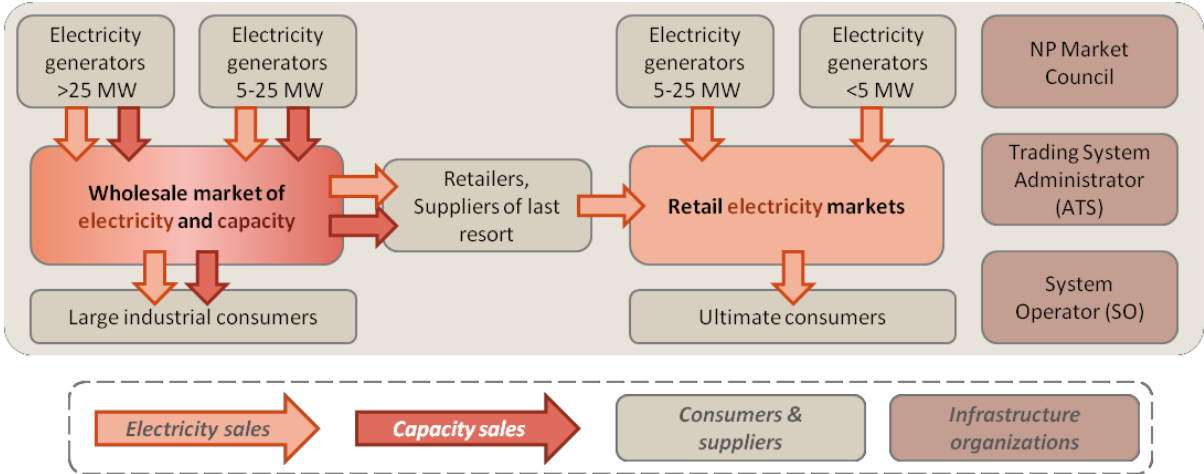


Figure 3. Simplified model of Russian electricity and capacity trading system (based on (NP Market Council, 2012a)).

A specific feature of the Russian energy trading system is that electricity is not the only commodity on the wholesale market, also capacity is traded. “Capacity is a special commodity that, when purchased, gives the wholesale market participant the right to demand that the capacity seller maintains his generating equipment in a state of availability to generate electricity of a defined quality and in the volume required to meet that participant’s needs” (NP Market Council, 2012b). In the Russian system the electricity generation facilities submit their production price bids to a capacity auction, where the ATS selects bids from the lowest to the highest until the required total capacity is fulfilled. The required total capacity is defined by the System Operator (SO). It can be noted that in the Russian system some other types of capacity compensation also exist (Gore, Viljainen, Makkonen, & Kuleshov, 2012; Kuleshov, Viljainen, Annala, & Gore, 2012), these however fall outside the scope of this paper. Wholesale market actors (buyers) are obliged to buy the defined total capacity at a weighted average price, defined for different zones (Russian electricity market is distributed into zones). In addition, a separate long-term capacity market is in place for new, planned power generation investments, where new projects compete for long-term regulated capacity agreements. Capacity price within these agreements is calculated for each project in accordance with a procedure, defined by Russian legislation, and that is designed to guarantee coverage for the investment costs and a given return level.

Russian renewable energy incentive mechanism is integrated to the above-described energy trading system and is realized with long-term RE capacity contracts for the wholesale market

and regulated tariffs for retail markets. The next section describes the Russian RE incentive policy in more detail.

3. Russian renewable energy policy

The legal basis for renewable energy support was introduced in the Russian legislation in 2007 (International Finance Corporation, 2011). Practical realization of the RE investment incentives started with the introduction of the RE capacity mechanism for the wholesale market in 2013. The RE energy incentive policy was extended with the introduction of the tariffs scheme for retail markets in 2015. These two incentive schemes are presented in the following two sections.

3.1 Capacity-based RE incentive mechanism for the wholesale market

The practice that exists in Russia for long-term capacity contracts for conventional energy projects was extended to wind, solar PV, and small hydro power (less than 25 MW) generation in May 2013 (Government of Russian Federation, 2013a). Since then, capacity auctions have been held annually by the ATS to select renewable energy projects that become eligible for (win) the long-term contracts. The only selection criterion is the amount of capital expenditure: the cheapest projects are accepted, until the target installed new power generation capacity for a particular year is fulfilled. The following target installed capacities are set by the Government for each year until 2020 (Table 1).

Table 1. Target RE installed capacity, MW (Government of Russian Federation, 2013b).

Technology type	2014	2015	2016	2017	2018	2019	2020	Total
Wind	100	250	250	500	750	750	1000	3600
Solar PV	120	140	200	250	270	270	270	1520
Hydro	18	26	124	124	141	159	159	751

Projects are obliged to use mostly domestically manufactured equipment and services, this is the so called “localization requirement”, and to keep capital expenditures within pre-specified limits for each year of operations. The limits are separate for the three different types of RE technology (wind, solar, and hydro).

The projects that win the RE capacity auction are entitled to a 15-year capacity contract after successful construction. In case of commercialization delay, project owners are subject to a penalty of 25% of the planned capacity payments (NP Market Council, 2006).

The RE capacity price system is designed to provide a guaranteed return on investment (ROI) of twelve percent in annual terms, corrected with the change in the national interest rate (for which the state long-term bond yield is used as a benchmark). The return calculation also includes adjustments for changes in electricity prices and the inflation. The capacity payment from the RE incentive system is dependent also on the production performance of the project, this is referred to as the “capacity factor” and is backward-looking measure of how much of a targeted, government set, energy production level has been achieved. The adjustment has three levels based on the previous year’s production: if the achieved production no more than one half of the target level the capacity payments are reduced to nothing, if the production is between 50% and 75% of the target level, 80% of the capacity price is paid, and the full capacity price is paid otherwise. Finally, if the achieved localization level (the level of “local production” in the construction of the investment) after construction is lower than required level, the capacity payments are cut down dramatically, for the whole tenure of the contract.

Summa summarum, the capacity mechanism for RE investments is designed to provide stable revenues for investors regardless of market conditions, and to motivate the investors (i) to use (local) national equipment and services, (ii) to reduce capital expenditures under competition pressure, and (iii) to actually produce electricity on the other hand.

3.2 RE incentivisation through tariffs for the retail markets

To extend the coverage of the support for renewable energy the Russian Government has recently introduced a tariff scheme for RE projects operating on regional retail markets (Government of Russian Federation, 2015). The tariff scheme aims to provide a favorable investment climate for RE investments that focus on the production aimed directly at the retail market. Contrary to the capacity-based scheme for the wholesale market the tariff scheme provides remuneration in terms of the volume of electricity produced. Demand for RE is boosted by an obligation to the power distribution (grid) operators to use the electricity from renewable energy sources as a first priority, when compensating losses in the grid. Selected on a competitive basis, RE projects become a part of a regional power industry development scheme and eligible for the long-term, 15-year long, contracts with grid companies. Regional authorities are responsible for the organization of the competitions and for publishing the information about them on their official web-sites. The tariffs are designed in a similar way to the design of the capacity payments, to cover investment costs and to provide some return in excess of investment costs (14% for projects commissioned before 1.1.2017 and 12% for projects commissioned thereafter). The tariff is calculated in accordance with a federally set methodology (Federal Tariff Service, 2015). Regional deviations in tariffs may arise only from when initial capital costs are set at a lower level, or from when the planned capacity factor requirement is set higher, if so offered by a competing investment project. These changes can only push the tariffs downward. The main difference from the capacity price (per kW) system is that the tariffs are transferred to the electricity price (per kWh). This means that there is no separate need to make adjustments on the tariff, when electricity market prices change, since it is already designed to cover project costs, adjustments are however made for changes in the interest rates to keep an adequate ROI.

Some potential legal challenges were previously identified with regards to the realization of the tariff system (International Finance Corporation, 2013a), but it seems that some of them have been already overcome.

4. Case illustration

The way policy shapes profitability of investment is crucial for reaching its goals. In general, it is important to find a balance between reducing uncertainty for investors and neutralizing the burden of the costs of a support scheme for the whole energy system and the ultimate energy consumers. The Russian approach is a singular mechanism for tackling this trade-off and very different from the incentive systems used elsewhere. To illustrate how the mechanism works in reality, we present a numerical case analysis of the profitability of a medium scale on-shore wind farm project with 10 MW installed capacity with the RE capacity mechanism in place.

To investigate how the RE incentive policy shapes the uncertainty faced by an investment project, considering single number profitability indicators such as NPV will not be enough to give a complete picture of the uncertainty. For this reason we have chosen to utilize a (fuzzy) pay-off method (Collan et al., 2009) that presents the profitability of these investments as a profitability distribution that also intuitively shows the perceived downside, the potential, and the overall distribution of the outcomes. The pay-off method has been previously applied to a number of corporate finance problems, see, e.g., (Bednyagin & Gnansounou, 2011; Collan,

2011; Hassanzadeh, Collan, & Modarres, 2012). The method has also previously been used in the analysis of the effects of RE incentives on project profitability (Kozlova, Collan, & Luukka, 2015).

Another method that allows for similar distribution-representation of uncertainty is to use simulation based methods, most common of which may be the Monte Carlo simulation that has also previously been used in investment profitability analysis, see, e.g., (Abdel Sabour & Poulin, 2006; Mathews & Salmon, 2007; Mun, 2006). We leave, however, the simulation-based approaches outside the scope of this paper.

The analysis is technically based on a “classical NPV model” that is presented in more detail in (Kozlova, 2015), and the platform used is MS Excel®. The calculation procedure is the typical three-scenario procedure used in connection with the pay-off method that returns triangular distributions, see (Collan, 2012) for details. The case project is assumed to operate in the Russian wholesale power market and falling under the RE capacity mechanism. The electricity wholesale price and the inflation are assumed to be uncertain, and their values are assumed to uniformly distribute (being an interval or a flat distribution) within the ranges between 1-3 rub./kWh and 1-1.7 in terms of the consumer price index, correspondingly. The yield on long-term governmental bonds is assumed to be fixed at 10%. A broad range of possibilities is initially considered for endogenous project factors, such as the capital expenses (CapEx, from a limit of 65.6 min.rub./MW for 2017, set by the legislation, to a level of 150% overspending), the capacity factor (30% - 120% production of the set target that is, 27% for the wind power), and the localization requirement (either “fulfilled” or “failed”), see (Kozlova, 2015) for more details.

By using the above noted initial values in the profitability analysis the pay-off method result is a triangular NPV distribution that is visible in Figure 4, more specifically on the left-most part of the figure, denoted “a”. One can see that a major part of the NPV distribution with the initial values discussed above shown in “a” is on the negative side of the zero, which means expectation of loss.

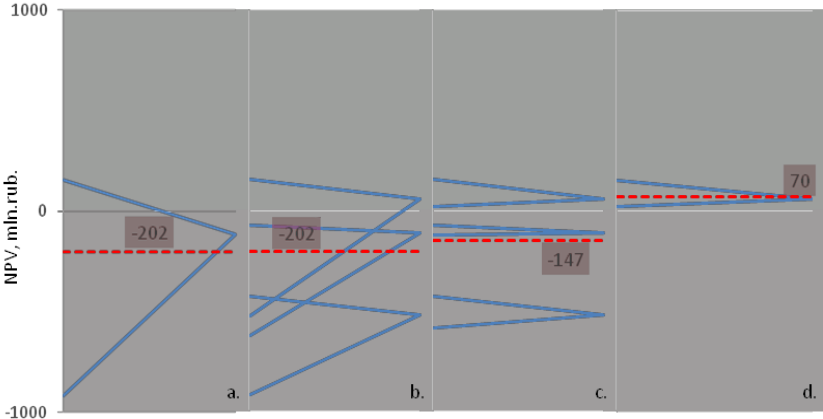


Figure 4. Wind project pay-off distributions for different cases, with mean NPV indicated (dotted line).

The shape of the NPV distribution is caused by the possibility of the combination of a low capacity price, as a result of a low capacity factor, failed localization, and overspent CapEx. If we “divide” the analysis into three sub-analyses, where we use one of the three capacity factor “states” (as described above) in each, we obtain three overlapping NPV distributions, visible in Figure 4 (b) that reflect the three different possible outcomes of the wind farm profitability in the different electricity production performance ranges. Figure 4 (c) illustrates the distributions for the same situation, when the localization requirement is “fulfilled” and the CapEx is “within the set limit” – the uncertainty is reduced (distributions become narrower). One can see that in this case the distribution that results from the “capacity factor $\geq 75\%$ of the target” – situation,

with a full capacity payment, is in its entirety over the positive “zone”, thus signaling that the project is expected to only produce positive NPV outcomes. Figure 4 (d) shows separately the said case with the full capacity payment, with the calculated possibilistic mean value of 70 mln.rub indicated. The internal rate of return (IRR) is 14.5% in this case.

By analyzing the sub-distributions of the “overall situation” separately, in this case by looking at variable’s values “state by state”, one can derive important information about what variable state combinations correspond to profitable vs. unprofitable projects.

What can be seen from the numerical illustration, with regards to the RE capacity mechanism, is that the mechanism, when an investment meets all the targets, is able to guarantee a much lower risk level regardless of market conditions. The illustration, in fact, shows a situation (Figure 4d), where the investment is expected to be profitable in all considered states, when the localization, capacity factor, and CapEx targets are met.

5. Analyzing policy realization

Something that works in a modeling environment, does not necessarily work in reality, Table 2 summarizes the actual results of the two competitive capacity auctions held in 2013 and 2014, each used for selecting renewable energy projects for a period of 4-years-ahead.

Table 2. Selection results, MW.

Technology	Capacity	2014	2015	2016	2017	2018
Wind	target	100	250	250	500	750
	selected	0	51	15	90	0
	%	0%	20%	6%	18%	0%
Solar PV	target	120	140	200	250	270
	selected	35,2	140	189	255	285
	%	29%	100%	95%	102%	106%
Small hydro	target	18	26	124	124	141
	selected	0	0	0	20,64	0
	%	0%	0%	0%	17%	0%

One can observe from Table 2 that the auction results are reassuring from the point of policy success only with regards to solar PV power that has received enough bids for new capacity to be built almost as planned. For wind and small hydro power investments the picture seems bleak. The results may be caused by investments being hindered by the rather strict localization requirements and the strict CapEx limits (Boute, 2014; Gerden, 2014). In addition, the depreciation of the ruble has made the ‘foreign’ part of capital expenses more expensive for Russian companies thus contributing to the difficulty of being able to keep the CapEx below the set limits.

6. Discussion and conclusion

Renewable energy production is actively sought more and more by emerging economies and there are various incentive mechanisms in place to support new RE investments. While most developing countries have adopted approaches that have been previously deployed in developed countries, Russia has followed its own path and extended the existing Russian national capacity and electricity market mechanisms to include incentives for renewable energy investments.

A new capacity based RE incentive mechanism was implemented for the wholesale market within capacity trading in 2013. Selected on annual actions, projects become eligible for long-

term capacity contracts that guarantee a specific rate of return on investment for new RE investments, irrespective of market conditions for successful projects that have fulfilled the required quota of Russian national “production” and capital expense limits in the investment phase and that continuously fulfill set production targets. A tariff-based RE incentive mechanism is in force since 2015 on the retail electricity markets, where remuneration is provided in terms of electricity produced from RE sources and also designed to provide some return on investment.

A case illustration that uses the pay-off method was used to show how a project that is able to fulfill the set requirements and targets is able to enjoy a considerable reduction of risks from the RE incentive mechanism.

In reality, there are some challenges impeding renewable energy deployment in Russia. In particular, the strict local content requirement and the capital expenses limit seem to constrain investments into wind and small hydro power projects. Solar PV investments however, seem to be picking up.

This study contributes to the existing academic literature on emerging economies RE investments by presenting the analysis of the two emerging Russian renewable energy support schemes. Further investigation and more detailed modeling of the effects and effectiveness of the Russian RE policy will reveal more insights for investors and for policymakers.

Acknowledgments

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Sorin M.S. Krammer, University of Groningen
Faculty of Economics and Business, Department of Global Economics and Management
Nettelbosje 2, 9747 AE Groningen, The Netherlands
M.S.S.Krammer@rug.nl
Tel: +31 (0) 50 363 3713
Fax: +31 (0) 50 363 7337
Web: <http://www.rug.nl/staff/m.s.s.krammer>

**BRIBERY AND INNOVATION IN EMERGING MARKETS: THE
MODERATING ROLE OF INSTITUTIONAL SETTINGS**

Abstract: Despite the relevance of institutions for many economic activities, little is known about how different institutional aspects affect firms' ability to innovate. This study examines the impact of bribery and institutional quality on firms' product innovations in 30 emerging markets. The results suggest that bribes have a positive effect on firm to introduce new products by "greasing" the existing regulatory apparatus. Moreover, this effect is negatively moderated by the quality of formal (control of corruption laws) and informal (level of societal trust) institutions. Together, these findings provide new insights into the relationships between firm innovation, bribery, and institutions.

Keywords: *Bribery; Control of corruption; Innovation; Institutions; Trust;*

SUMMARY

Innovation is widely acknowledged as the main engine of competitiveness and performance in an increasingly dynamic environment (Li and Atuahene-Gima 2001; Danneels 2002; Rosenberg 2004). Given the critical role of innovation in sustaining competitive advantage and economic success, numerous scholars have investigated its underlying drivers (McCann and Oxley 2012; Crossan and Apaydin 2010). Overall, these studies identify a multitude of factors that affect the rate of innovation across countries, industries and firms (Furman, Porter, and Stern 2002; Lederman 2010). These factors include geo-political characteristics embedded in regional (Cooke 2001) and national (Lundvall 2007) innovation systems, structure of markets (Cohen and Levin 1989), extent of available networks (Romijn and Albu 2002), firm specifics (Damanpour 1996) and characteristics of individuals (Anderson, De Dreu, and Nijstad 2004).

Despite this large body of work, evidence of the impact of institutions and corruption on innovation remains relatively scant. The few studies that have examined these issues suggest that countries with better institutional quality invest more in research, human capital and development of new technologies (Dias and Tebaldi, 2012), which in turn drives their innovative and economic performance (Guellec and Van Pottelsberghe, 2004). Likewise, among the multitude of elements that make up and trigger institutional responses, corruption (i.e. the abuse of public power for private benefit) and its contingent legislative counterpart (i.e., control of corruption laws) have been mostly examined at the country-level, given their immediate implications for growth and development (Mauro 1995). However, while numerous studies (Rose-Ackerman 1998; Cuervo-Cazurra 2006; Asiedu and Freeman 2009; Dutt and Traca 2010) document a negative relation at the country-level between corruption and different macroeconomic indicators (i.e., growth, productivity, trade and FDI flows, entrepreneurial and innovative intensity of countries), it is clear that these effects are not spread uniformly across all firms in a given industry, country, or region (Galang, 2012). Therefore, a recent body of work has started to examine firms' reactions and strategies vis-a-vis corrupt practices. Focusing mostly on international activities (e.g., exports, entry modes) of MNEs, these studies confirm that firms adapt to corruption abroad by developing new strategies (Rodriguez, Uhlenbruck, and Eden 2005; Uhlenbruck *et al.* 2006) and ways to reduce their exposure to these institutional pressures (Spencer and Gomez, 2011; Lee and Weng, 2013), while reaping benefits from having close relationships with public officials (de Jong, Tu and van Ees, 2012; Jeong and Weiner, 2012).

Building on these insights, I examine firms' responses to corruption by looking at the effect of bribery (defined as cash payments seeking to influence the actions of public officials) on their product innovations. More specifically, prior research provides conflicting arguments on the potential impact of bribes. Some scholars suggest that bribes "*sand*" any economic activities through higher transaction costs and uncertainty (Shleifer and Vishny 1993; Fisman and Svensson 2007), misallocation of resources (Rose-Ackerman 1998) and barriers to foreign investors (Cuervo-Cazurra 2006). In contrast, others suggests that bribery is a necessary "*grease*" to circumvent bureaucratic obstacles, inefficient public procurements and rigid legislation (Leff 1964; Lien 1990; Huntington 1968), supporting new business endeavors in dysfunctional institutional settings (Egger and Winner 2005; Levy 2007; Méon and Weill 2010).

Given the documented importance of governmental regulations, policies and provisions for firm innovation (D'Este *et al.*, 2012), I develop and test the idea that in emerging markets which lack strong institutional foundations, bribes will facilitate more product innovations. This occurs through several mechanisms: (i) by granting firms access to decision-makers, therefore reducing uncertainty around the decision process (Leff 1964; Rose-Ackerman, 1998; Bertrand *et al.*, 2007), (ii) by providing firms with a faster alternative than the common institutional route that overcomes bureaucratic obstacles and sub-par public services (such as licenses, permits) associated with introduction of new innovative products (Lui 1985; Hadjimanolis, 1999; Luo, 2005), (iii) by counteracting the negative long-term effects of political risk in the form of frequent regime changes and legislative incoherence (Acemoglu and Verdier, 2000), and (iv) by granting firms access to important public resources such as credit (Barth *et al.*, 2009), infrastructure (Gillanders, 2013) or privileged information (Della Porta and Vanucci, 1999) that conserve internal resources and enable the introduction of more innovations (Lederman 2010; Ayyagari, Demirgüç-Kunt and Maksimovic 2011).

Furthermore, subscribing to the view that corruption may serve as a substitute for weak institutions (Vaal and Ebben 2011), I argue that the impact of bribes on product innovations is negatively moderated by the quality of existing formal and informal institutions. Better regulatory environments, resulting from well-functioning control of corruption laws and regulations, will reduce the ability of bribes to facilitate product innovations by increasing both the risks of being caught, and the severity of penalties associated with corrupt behaviors (Cuervo-Cazurra, 2008). Similarly, societies with higher levels of trust exhibit lower transaction costs (La Porta *et al.*, 1997) and encourage “quid pro quo” mechanisms and reputation effects (Hunt 2004) between firms and bureaucrats, which in turn reduce the effectiveness of monetary exchanges (e.g., bribes) as facilitators for deployment of more innovative products to markets.

These hypotheses are tested using data on 7,000 firms in 30 emerging markets from Central Asia and Eastern Europe which exhibit significant heterogeneity in terms of corrupt practices (Uhlenbruck *et al.*, 2006), institutional quality (Meyer *et al.*, 2009) and innovative performance (Krammer, 2009). Employing an instrumental variable approach to tackle endogeneity, I find that bribes have a positive and robust effect on product innovations. Furthermore, the quality of existing institutions (both formal and informal) reduces the ability of bribes to ease the deployment of new products, in accordance with my theoretical conjectures. These findings support the “greasing the wheel” hypothesis, suggesting that firms can employ bribes strategically to promote their product innovations.

With this study I contribute to the extant literature in two ways. First, I show that corrupt practices (i.e., bribes) can facilitate innovation in certain institutional settings by allowing firms to introduce more product innovations in these markets. While the few studies that examine the corruption-innovation link have employed theoretical arguments (Murphy *et al.*, 1993; Blackburn and Fogues-Puccio, 2009) or country-level empirical analyses (Anokhin and Schultze, 2009), I allow for heterogeneous responses to corruption across firms and industries and focus on the last stage of the innovation process, namely the introduction of new products in markets (Daneels, 2002). My arguments stress the links between firm strategies and bribing decisions (Uhlenbruck *et al.* 2006; Vial and Hanoteau, 2010; De Jong *et al.*, 2012), suggesting that certain firms are able to harness corruption (Galang, 2012) to reduce uncertainty and speed-up the deployment of product innovations, as an alternative to going through the excessive bureaucratic apparatus (i.e., approvals, permits, licenses) that characterizes many emerging markets.

Secondly, my results document the moderating impact of institutions on the relationship between bribes and innovation, complementing previous findings on the direct effects of institutions on the innovative performance of firms (Lederman, 2010; Berronne *et al.*, 2013) and countries (Krammer, 2009; Dias and Tebaldi 2012). Better regulatory prescriptions and enforcement of anti-corruption laws, as well as informal environments characterized by high levels of societal trust, deter significantly the ability of bribes to grease the bureaucratic barriers to product innovations. Together, these findings contribute to the advancement of institutional literature, emphasizing the interactions between institutions, individual strategies and innovative performance of firms.

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Dmitry G. Kucherov
Organizational Behavior and Human Resource Management Department, Graduate
School of Management,
St. Petersburg State University, kucherov@gsom.pu.ru

Evgenia I. Lysova,
Faculty of Economics and Business Administration
Management&Organisation Vrije Universiteit Amsterdam e.lysova@vu.nl

**Organizational investment in employee development and employee
turnover intentions: The mediating role of affective organizational
commitment.**

The purpose of this paper was to test the relationship between perceived organizational investments in employee development (PIED) and turnover intentions. We also tested the mediating role of affective commitment in relationship between PIED and intentions to quit. Using the data collected during a large scale study about career priorities in Russia (N=386), we found PIED to lead to lower employees' turnover intentions. We also found that affective organizational commitment partially mediated the negative relationship between PIED and turnover intentions.

Human resource development, turnover intentions, affective commitment.

1. Introduction

Today in the conditions of turbulent and rapidly changing business environment steady development becomes a crucial factor of success both for employees and their organizations. Being distinguished from training and education, learning refers to activity that changes a person in substantial way and helps him or her to grow, going above and beyond changes in his/her vocational skill level or academic knowledge (Gibb, 2008, p. 5). In the organizational context, continual development of the individual means that an employee is motivated to learn and that he or she takes proactive approach towards his/her career. In other words, he or she can develop himself/herself by engaging in individual career management activities. According to Greenhaus and Callanan (2006, p. 378), individual career management refers to the process of the individual making reasoned, appropriate decisions about his or her work life as well as the relationship between the work and nonwork domains.

But how can organizations can keep talented employees?

Contemporary studies confirm that strongly committed employees have a stable intention to stay with the organization. Meanwhile, the corporate HRM practices established for making employees highly committed could be different. In our research, we focus on the employees' perception of human resource development practices, which are connected with learning and career management activities. The relationship between these perceptions and intentions to quit are investigated. We also explore the role of affective commitment in the relationship between organizational investments in human resource development and turnover intentions.

We suggest that providing employee development opportunities is important for keeping employees in the organizations. Specifically, we suggest when employees would perceive their organization as investing in their development, they would be more affectively committed to their organization, and, respectively, thinking less of leaving the organization.

The paper consists of three main sections. In the first part, the literature review which covers social identity, organizational commitment, human capital management and human resource development issues is presented. In the next, methodological part the sample and the research methods are described. In the third section the main findings and results of the paper are considered.

2. Literature Review

The term 'Human Resource Development' (further – HRD) was introduced to the 1969 Miami Conference of the American Society of Training and Development by Leonard Nadler. Galagan described it as “an omnivorous discipline, incorporating over the years almost any theory or practice that would serve the goal of learning in the context of work” (Galagan, 1986, p.4). In the broad sense HRD could be seen both as an area of professional practice and an emerging interdisciplinary body of knowledge.

In Russian organizational context HRD usually indicates training and development as an organization's investment in the learning of its people as part of an HRM approach. It “comprises the procedures and processes that purposely seek to provide learning activities to enhance skills, knowledge and capabilities of people, teams and the organization so that there is a change in action to achieve the desired outcomes” (Bratton, Gold, 2003, p. 316). Thus, HRD creates, manages and improves the internal practices that maintain and develop both the professional competencies of individual and core organizational competencies. In general, the main purpose of HRD is to help people in organizations to face the challenges created by technological and other changes, to adapt to new requirements and achieve levels of performance needed for survival and staying competitive thereby being the tool for motivating the workforce.

From the human capital theory perspective, employees could have a unique set of abilities and acquired skills (called “human capital”) to improve labor productivity. As Schultz stated: “Consider all human abilities to be either innate or acquired. Every person is born with a particular set of genes, which determines his innate ability. Attributes of acquired population quality, which are valuable and can be augmented by appropriate investment, will be treated as human capital” (Schultz, 1981, p. 21). Investments in human capital include formal education, on-the-job training, health care, personal beautification expenditures, migration (occupational and geographic), preschool nurturing of children, job search. Human capital scholars suppose that employers need to invest in firm-specific training which provides workers with firm-specific skills or skills that will increase his or her productivity only with current employer (in comparison with general training). The amount of such investments could be calculated using “Employee Development Investment” (Fitz-enz, 2009, p. 58) which is the cost of all education, training, and development programs as a percentage of payroll.

“Perceived investment in employee development (PIED) is developed through employees’ assessment of their organizations’ commitment to help employees learn to identify and obtain new skills and competencies that will allow them to move to new positions, either within or outside these organizations” (Lee, Bruvold, 2003, p. 983). It facilitates greater obligation by employees towards the organization and, in turn, a willingness by employees to work hard to increase the organization effectiveness. Thus, employer investments in its internal human capital could reinforce organizational commitment.

Organizational commitment refers to a psychological state that characterizes an employee’s relationship with the organization for which he or she works. It reflects the psychological attachment to the company and desire to remain part of it.

Mowday et al. (1982) made the distinction between two types of organizational commitment, attitudinal and behavioral. Attitudinal commitment focuses on the process by which people come to think about their relationship with the organization. Behavioral commitment relates to the process by which individuals become locked into a certain organization and how they deal with this problem.

According to (Meyer and Allen, 1991) organizational commitment consists of three components: affective, continuance and normative. Three features of organizational commitment are (Joo, Park, 2009, p. 485):

1. A strong belief in and acceptance of organization’s goals and values.
2. A willingness to exert considerable effort on behalf of the organization.
3. A strong desire to maintain membership in the organization.

Affective commitment arises when an employee shares organizational objectives and values and feels a sense of loyalty. It refers to the employee’s emotional attachment to the organization, characterized by an enjoyment of the organization and a desire to continue membership in it. Continuance commitment refers to the extent to which the employee perceives that leaving the organization would be costly. Normative commitment refers to the employee’s feelings of obligation to the organization and the belief that staying with it is the “right thing” to do.

Sturges et al. (2005) tested a series of linked hypotheses regarding the relationship between different career management aspects and fulfillment of psychological contract and affective commitment. It was founded that both individual and organizational career management behaviors are linked to psychological contract fulfillment. Also organizational career management help was associated with affective commitment and job performance. Finally psychological contract fulfillment played a key role in mediating the relationship between career management help and such attitudes and behaviors

The research conducted by (Joo, Park, 2009) revealed that organizational learning culture, developmental feedback, and learning goal orientation were the significant predictors of organizational commitment. At the same time organizational learning culture, career satisfaction, and organizational commitment turned out to be the predictors of turnover intention.

In the study (Lee, Bruvold, 2003) the relationships among PIED, job satisfaction, organizational commitment and intent to leave were examined. The authors identified that PIED was positively associated with job satisfaction and affective commitment. Besides, job satisfaction and affective commitment fully mediated the relationship between PIED and intent to leave. Thus, this research revealed that employees who believed their organization was committed by providing knowledge and skill development responded by the high level of affective commitment and the strong intention to stay in current employing organization.

Drawing on the social exchange theory (Settoon et al., 1996; Cropanzano and Mitchell, 2005), we suggest that organizational investment in human resource development would help organizations to retain their employees as it would have a negative association with employees' turnover intentions. Furthermore, we argue that this relationship would be partially mediated by employee organizational commitment – the psychological attachment to the company, arising from employees sharing organizational objectives and values and feeling a sense of loyalty to the organization (Meyer and Allen, 1991). Specifically, when provided with development opportunities employees would perceive their organization as valuing them and their input. In return, they would develop commitment to the organization and would be less willing to leave it.

Our researcher aims to respond to the following questions:

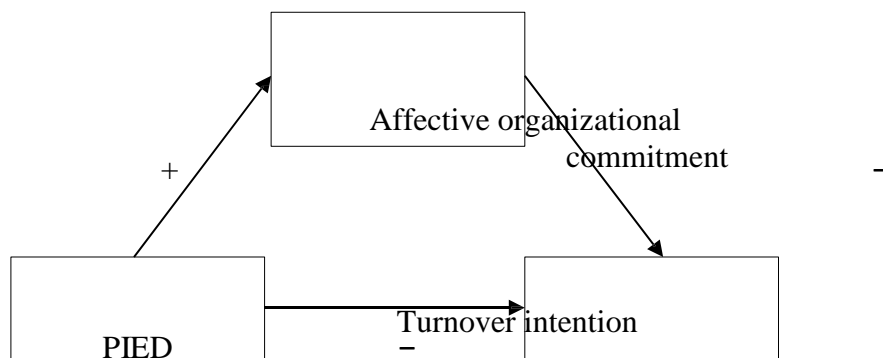
1. *What is the relationship between PIED and the intention to quit?*
2. *What is the mediating role of the affective commitment for this relationship?*

The following *hypotheses* were advanced:

H1: PIED will be negatively associated with turnover intentions.

H2: PIED will be positively associated with affective organizational commitment.

H3: Affective organizational commitment will partially mediate relation between PIED and turnover intentions.



3. Data and Methods

Sample and procedure. We collected data as a part a part of a large survey about career priorities of Russian employees, which was distributed online and was mainly addressed to employees living in Saint-Petersburg.

The final sample (N=386) included 68.1% women, with 41.2% being married. Respondents were on average 31.36 years old with the average organizational tenure of 3.67. They represented three following categories: a) managers (N = 116), b) professionals (N=183), and c) service and clerical workers (N=87).

Measures

We employed well-established scales to collect the data and asked the participants to respond to the questions using a 7-point Likert scale (1=Strongly disagree; 7=Strongly agree).

PIED was measured by a seven-item scale developed by Kuvaas and Dysvik (2009). The reliability of seven items in this study was 0.91. A sample item was, “By investing resources in employee development, my organization demonstrates that it actually invests in its employees”

Affective organizational commitment. We measured with five items from the Affective Commitment Scale (Allen & Meyer, 1990). An example of one item is, “I would be very happy to spend the rest of my career with this organization”. Cronbach’s alpha of the measure was .88.

Turnover intentions. We measured with three items from Michigan Assessment Questionnaire (Cook, Hepworth, Wall & Warr, 1981). A sample item included, “I will probably look for a new job in the next year”. Cronbach’s alpha of the measure was .93.

Control variables. In this study, we controlled for occupational category, age, gender and organizational tenure. Because previous research showed that these factors might influence turnover intentions (e.g., Griffeth, Hom, & Gaertner, 2000).

Construct validation. Prior to hypotheses testing we conducted a confirmatory factor analysis (CFA) to demonstrate discriminant validity among our three latent constructs: PIED, affective organizational commitment, and turnover intention. The hypothesized three- factor model demonstrated reasonable fit to the data ($\chi^2 = 310.47$, $df = 87$, $p < .001$, CFI = .97, TLI = .96, RMSEA = .08, SRMR = .07) (Hu & Bentler, 1999; Browne & Cudeck, 1993), and was also superior to a model where all factors loaded on a single factor ($\chi^2 = 1497.10$, $df = 90$, $p < .001$, CFI = .80, TLI = .77, RMSEA = .22, SRMR = .13).

4. Results and Findings

Table 1 presents the means, standard deviations and correlations among variables.

Table 1
Means, Standard Deviations, and Correlations

Variable	M	SD	1	2	3	4	5	6	7
1. Gender	.68	.47							
2. Occupation	1.92	.72	.12*						
3. Age	31.36	6.29	-.08	-.08					
4. Organizational tenure	3.67	3.39	-.02	-.05	.43**				
5. PIED	2.87	.90	.01	-.07	-.08	-.04			
6. Organizational commitment	4.45	1.23	-.01	-.19**	-.06	.03	.48**		
7. Turnover intentions	3.66	1.84	-.03	.08	-.08	.04	-.46**	-.46**	

Note. Sample (N=386). Gender (0 = male; 1 = female). Occupation (1 = managers, 2 = professionals, 3 = service and clerical workers).

* $p < .05$. ** $p < .01$.

To test Hypothesis 1, we conducted an ordinary least squares (OLS) regression. The results showed that employees who perceive their organization as investing in employee

development show lower intention to leave the organization ($\beta = -.46, p < .001$). Thus, our Hypothesis 1 was supported.

Hypotheses 2 and 3 together argued for the mediating effect of affective organizational commitment in the relationship between PIED and turnover intentions. We used SPSS macro Process (Hayes, 2013) to test this mediation model. The analysis showed that PIED was positively associated with affective organizational commitment ($\beta = .46, p < .001$), which, in turn, was negatively associated with turnover intentions ($\beta = -.33, p < .001$) (see Table 2). Thus our Hypothesis 2 was supported. Further, entering affective organizational commitment in the model testing the relationship between PIED and turnover intentions resulted in diminished but still significant effect of PIED on turnover intentions ($\beta = -.31, p < .001$). This suggested that affective organizations serves as a partial mediator in this relationship. The results of bootstrapping analysis performed on 10,000 samples confirmed this since the confidence intervals did not include zero (indirect effect = $-.15, 95\%$ CI[-.21; $-.10$]). Thus, our Hypothesis 3 was supported.

Table 2
Results of Regression Analysis of Moderated Mediation

Variable	Dependent variable = <i>Organizational commitment</i>			Dependent variable = <i>Turnover intentions</i>		
	B	SE	t	B	SE	t
Gender	.01	.04	.16	-.04	.05	-1.04
Occupation	-.16	.04	-3.61**	-.01	.04	-.31
Age	-.06	.05	-1.23	-.18	.05	-3.73**
Organizational tenure	.07	.05	1.39	.11	.05	2.36*
PIED	.46	.04	10.43**	-.31	.05	-6.47**
Organizational commitment				-.33	.05	-6.69**
R2			.26			.32
F			26.49**			29.23**

* $p < .05$. ** $p < .01$.

5. Discussion

The study aimed to examine the effect of PIED on employees' turnover intentions. As expected, we found PIED to lead to lower employees' turnover intentions. Furthermore, we found that affective organizational commitment partially mediated the negative relationship between PIED and turnover intentions. This suggests that employees who perceived their organizations as investing in their development would be more commitment to the organization and, respectively, less thinking of leaving the organization.

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Dmitry Kudryavtsev,
Graduate School of Management St.Petersburg University
d.v.kudryavtsev@gsom.pu.ru

Systematization of ontological and non-ontological information resources for knowledge management system development

Abstract: Knowledge management system is an essential attribute of the XXI century company and helps to provide relevant knowledge to the right person at the right place and time. Knowledge items (e.g. best-practice report, lesson learned, expert profile, rules) require complex description/indexing for future findability and applicability. Knowledge organization system (KOS) should be used for indexing, locating and selection of knowledge items, in order to improve search capabilities and to help worker to comprehend information. KOS may include vocabularies, classification scheme, thesaurus and/or ontology. Contemporary methods for the development of enterprise-specific KOS promote knowledge reuse. The paper provides a systematization of information resources for reuse.

Keywords: *knowledge organization system, knowledge management system, ontology, reference models, reuse*

1. Introduction

Knowledge management (KM) is an essential part of any successful company in the information age. KM is a complex discipline which includes people, process and technological aspects. Technological aspect of KM is typically associated with the development of corporate memory / knowledge portal / knowledge base, which can be generalized into a concept of knowledge management system (KMS). KMS is a subclass of information system, which helps to capture structure and disseminate knowledge. One of the KMS specialties is the superior role of knowledge organization (or “organization of information” or “information architecture”). Knowledge organization (Hjørland, 2008) is about activities such as document description, indexing and classification performed in libraries, databases, archives etc. These activities are done either by human (librarians, content managers, subject specialists etc.), or by computer algorithms. Knowledge organization implies the creation and usage of the knowledge organization system (KOS) in the form of classification system, taxonomy or ontology (Maedche, 2003; Van Rees, 2003). The current KOS development paradigm emphasizes the reuse of existing knowledge resources.

The main goal of the paper is to structure ontological and non-ontological information resources for knowledge management system development. In order to achieve this goal the following objectives are solved in the paper: clarify KOS types and components; build a backbone catalog of reusable information resources for domain and context knowledge; suggest recommendations for application and maintenance of the catalog of reusable information resources. Future work includes the evaluation of the suggested catalogs and recommendations.

The paper is in line with design-oriented information system (IS) research (Österle et al, 2011), which aims to develop and provide instructions for action (i.e., normative, practically applicable means-ends conclusions) that allow the design and operation of IS and innovative concepts within IS (instances). Design-oriented IS research aims at the development of artifacts, namely constructs (e.g., concepts, terminologies, and languages), models, methods, and instantiations.

2. The need for knowledge organization system

2.1. Knowledge item description dimensions and example

Knowledge management system may include different knowledge items: best-practice reports, lessons learned, expert profiles, rules, instructions etc. In order to provide knowledge items findability and applicability they must be described. The knowledge description enables the system to select relevant information and the users to comprehend and interpret the knowledge correctly. Examples are the attachment of key words or document classification. According to (Abecker et al, 1998) knowledge item descriptions should include basic metaproperties, content and context metadata (Fig. 1). Information, content and context models provide corresponding vocabulary for such a description.

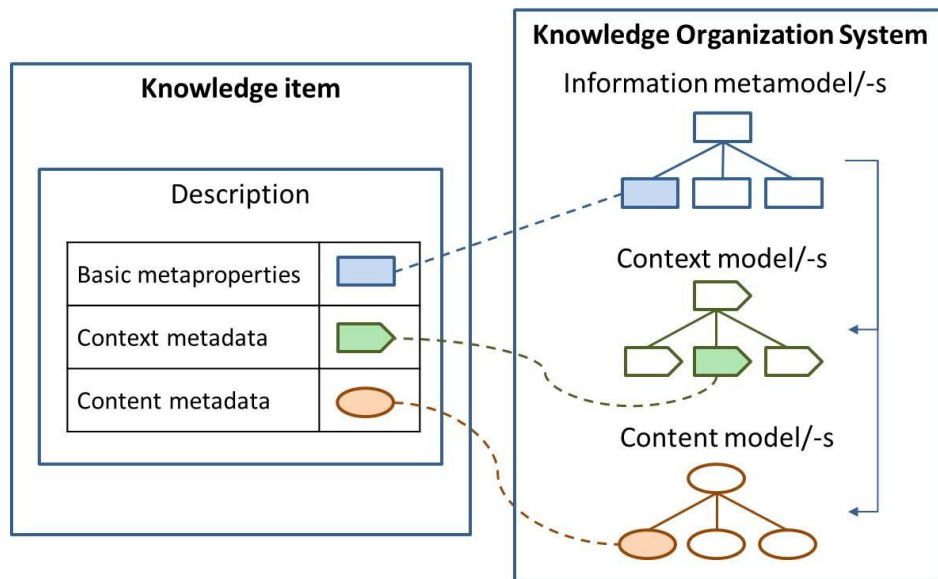


Figure 1: Knowledge item description model

The *information metamodel* describes the different kinds of information sources with their respective structure, access, and format properties. The information metamodel contains generic concepts and attributes that apply to all kinds of information—such as the timeliness, the author, the reliability of information, or the type of statements an information source makes. The information metamodel also introduces concepts and attributes specific for certain kinds of knowledge items. Essentially, the information metamodel comprises all aspects of information and knowledge sources that are not content-specific. It also provides links into the content model used for content description, and it provides links into the context model used to describe the creation context and the intended utilization context of knowledge items.

Content modeling allow to describe the content (subject) of knowledge items – what is item about. For example, such descriptions are used in libraries for many years.

In addition to the usual modeling dimensions of information retrieval, context is highly relevant for retrieval within an organization. *Context modeling* concerns two issues: 1. The intended application context of a knowledge item, 2. The context a knowledge item was created in. For instance, if a notice about some customer or supplier has been created within a certain business context—such as price negotiations— this context information can be very valuable in determining the relevance of this notice in a new application context. For particular kinds of information — such as best-practice reports, lessons-learned or formal design rules — the application task can be specified in advance. (Abecker et al, 1998) suggest expressing knowledge context in terms of the organizational structure and the process models, which constitutes enterprise architecture.

Figure 2 provides an example of knowledge description in lessons-learned archive.

Metaproperties	Name	"How to achieve good payment conditions From Borg Inc."
	Author	James T. Kirk
	Nature	Activity-related advice
	Type	Heuristic, experience-based
	Form	English text, MS Word source, version 28.0
	Source	File E:\home\experiences\ds9-12-99pn.doc
	Availability	Always
Context	Costs	None
	Creation process	Project ds9 for Starfleet Corp. in Dec. '99
	Creation activity	Price negotiation with hardware suppliers
	Creation department	Purchasing dept.
Content	Product	20 SUN Ultra
	Supplier	Borg Inc.
	Contact person	Dr. Darth Vader

Source: (Abecker et al, 1998)

Figure 2: Sample knowledge-item description in knowledge management system

Information, content and context models are parts of enterprise knowledge organization system.

2.2. Knowledge Organization System (KOS) and its types

The designation “*knowledge organization system*” was first used by the Networked Knowledge Organization Systems Working Group at its initial meeting at the Association for Computing Machinery Digital Libraries Conference in Pittsburgh, Pennsylvania, in 1998. Gail Hodge further expanded on it in an article in 2000 for the Digital Library Federation Council on Library and Information Resources (Hodge, 2000). The term knowledge organization systems is intended to encompass *all types of schemes for organizing information and promoting knowledge management*. KOS include classification schemes that organize materials at a general level (such as books on a shelf), subject headings that provide more detailed access, and authority files that control variant versions of key information (such as geographic names and personal names). They also include highly structured schemes, such as semantic networks and ontologies.

Knowledge organization systems are used to organize materials for the purpose of retrieval and to manage a collection. A KOS serves as a bridge between the user's information need and the material in the collection. With it, the user should be able to identify an object of interest without prior knowledge of its existence. Whether through browsing or direct searching, whether through themes on a Webpage or a site search engine, the KOS guides the user through a discovery process. In addition, KOSs allow the organizers to answer questions regarding the scope of a collection and what is needed toround it out.

The following types of KOS can be suggested based on the level of expressiveness (Stock, Stock, 2008; Stock, 2010):

Glossary: A glossary is an alphabetical list of terms or words found in or related to a specific topic or text. It may or may not include explanations, and its vocabulary may be monolingual, bilingual, or multilingual (Wright and Budin, 1997). An example of glossary is the FAOTERM¹, which includes both technical terminology from all the FAO (Food and Agriculture Organization of United Nations) areas of activity and titles from FAO and other international organizations.

Classification scheme: A classification scheme is the descriptive information of an arrangement or division of objects into groups according to the characteristics that the objects

¹ <http://www.fao.org/faoterm/en/>

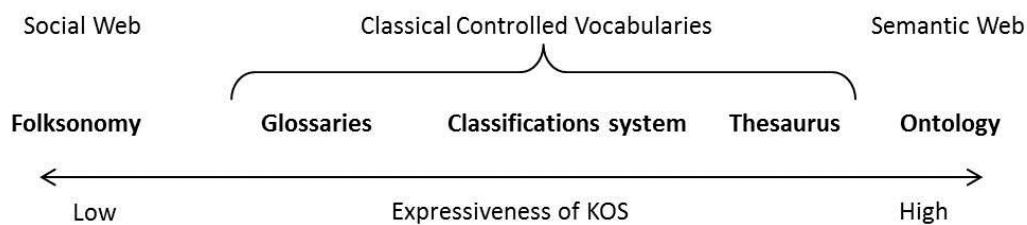
have in common (ISO/IEC FDIS 11179-1). A good example is the International Standard Industrial Classification (ISIC) of All Economic Activities².

Thesaurus: Thesaurus is a controlled vocabulary of terms in a particular domain with hierarchical, associative, and equivalence relations between terms. Thesauri are mainly used for indexing and retrieving articles in large databases (ISO 2788). An example of thesaurus is the AGROVOC³ thesaurus.

Ontology: The term ontology has its origin in philosophy and has been applied in many different ways. The word element onto- comes from the Greek ὄν, ὄντος, ("being", "that which is"), present participle of the verb εἶμι ("be"). The core meaning within information science is a model for describing the world that consists of a set of types, properties, and relationship types (Gomez-Perez et al, 2004).

Folksonomy: Folksonomies are Web 2.0 systems that users employ to upload and annotate their content effortlessly and without requiring any expert knowledge (Sinclair, Cardew-Hall, 2008). This simplicity has made folksonomies widely successful, and this success, in its turn, has resulted in a massive amount of user-generated and user-annotated web content. The main advantage of folksonomies is the implicit knowledge they contain. When users tag resources with one or more tags, they assign these resources the meaning of the tag. Furthermore, the co-occurrence of tags implies a semantic correlation among them. An example of how folksonomies are used can be seen in the delicious.com⁴ web site.

The term **controlled vocabulary** may cover any kind of knowledge organization system, with the possible exclusion of highly structured semantic networks or ontologies. At a minimum, a controlled vocabulary is simply a restricted list of words or terms for some specialized purpose, usually for indexing, labeling, or categorizing. It is “controlled” because only terms from the list may be used for the subject area covered (Hedden, 2010, a). Fig. 3 provides an overview of KOS types.



Source. Stock & Stock, 2008, p. 42 (modified).

Figure 3: Types of Knowledge Organization Systems (KOS)

Although KOS is a good designation for science, it has not caught on in the business world. Business typically uses the term “taxonomy” in its broad sense instead of KOS. Unfortunately, “taxonomy” can be used in the narrow sense, to mean a hierarchical classification or categorization system. It is ambiguous and leads to frequent misuse, yet taxonomy in its broad sense has gained sufficient popularity in corporate world, and a practical alternative term does not seem to exist (Hedden, 2010, b).

² <http://unstats.un.org/unsd/cr/registry/isic-4.asp>

³ <http://aims.fao.org/vest-registry/vocabularies/agrovoc-multilingual-agricultural-thesaurus>

⁴ <https://delicious.com/>

3. Knowledge reuse during KOS development

The evolution of KOS development methods is in line with the evolution of ontology engineering methodologies. Initially research on ontology engineering methodologies has provided methods and techniques for developing ontologies from scratch. During the last decade, specific methods, techniques, and tools were proposed for building ontologies from available knowledge resources. The analysis of the ontologies developed by distinct research groups in different international and national projects have revealed that there are different alternative ways or possibilities to build ontologies by reusing and re-engineering the available knowledge resources used by a particular community. Therefore, a new ontology development paradigm started approximately in 2007, whose emphasis was on the reuse and possible subsequent reengineering of knowledge resources, as opposed to custom-building new ontologies from scratch (Suárez-Figueroa et al, 2012; Villazón-Terrazas, Gómez-Pérez, 2012). However, in order to support and promote such reuse-based approach, new methods, techniques, and tools are needed.

3.1. Information resources for knowledge re-use

Information resources for knowledge reuse are typically coming from:

- A standardization body or any entity whose primary activity is to develop, coordinate, promulgate, revise, amend, reissue, or otherwise maintain standards; for example, the International Organization for Standardization (ISO), National Organizations for Standardization, the World Wide Web Consortium (W3C) etc.
- Large organizations across national governments, such as the Food and Agriculture Organization of the United Nations (FAO), the World Health Organization (WHO), the United Nations Educational, Scientific and Cultural Organization (UNESCO), the International Olympic Committee (IOC) etc.
- A large enough user community to make it profitable for developers to use it as a means of general interoperability.

Two catalogs of reusable information resources are suggested below. It is worth mentioning that these catalogs are neither exhaustive, nor complete. But even in such a condition they create value for practitioners and students. Besides these catalogs will be extended in future.

3.2. Domain knowledge reuse

Catalog of reusable information resources for domain knowledge:

1. Glossaries
 - 1.1. General English (or any other language) dictionaries
 - 1.1.1. Merriam-Webster Online Dictionary (<http://www.merriam-webster.com/>)
 - 1.2. Domain specific glossaries
 - 1.2.1. From standardization bodies (ISO, ANSI, W3C)
 - 1.2.1.1. ISO 5127:2001 Information and documentation - Vocabulary
 - 1.2.2. From professional communities (often as a part of Body of Knowledge guidelines)
 - 1.2.2.1. Enterprise Architecture Body of Knowledge glossary (<http://www.eabok.org/pdf/glossary.pdf>)
2. Classification scheme/systems
 - 2.1. International
 - 2.1.1. International Classification of Diseases (ICD), which is maintained by the World Health Organization (WHO) (<http://apps.who.int/classifications/icd11/browse/f/en>)

- 2.1.2. International standard industrial classification of all economic activities (ISIC), which is maintained by the United Nations Statistics Division
- 2.1.3. International Standard Classification of Occupations (ISCO), which is maintained by the International Labor Organization (ILO) (<http://www.ilo.org/public/english/bureau/stat/isco/isco08/>)
- 2.1.4. International Standard Classification of Education (ISCED), which is maintained by UNESCO (<http://www.uis.unesco.org/Education/Pages/international-standard-classification-of-education.aspx>)
- 2.2. National
- 3. Thesaurus
 - 3.1. Multi-domain
 - 3.1.1. WordNet (<https://wordnet.princeton.edu/>)
 - 3.2. Domain specific
 - 3.2.1. Agriculture: AGROVOC Multilingual agricultural thesaurus (<http://aims.fao.org/vest-registry/vocabularies/agrovoc-multilingual-agricultural-thesaurus?c=4813>)
 - 3.2.2. Art & Architecture Thesaurus (<http://www.getty.edu/research/tools/vocabularies/aat/index.html>)
 - 3.2.3. Education: European training thesaurus (ETT) (<http://www.cedefop.europa.eu/en/publications-and-resources/publications/4114>)
 - 3.2.4. Medicine: Unified Medical Language System (UMLS) (<https://www.nlm.nih.gov/research/umls/>)
- 4. Data model / Database schema
 - 4.1. Database Schema Samples Libraries (e.g. http://www.databaseanswers.org/data_models/)
 - 4.2. Schemas for structured data on the Internet, on web pages, in email messages (e.g. <https://schema.org/>)
- 5. Ontologies (or its components)
 - 5.1. Ontology search tools
 - 5.1.1. Swoogle (<http://swoogle.umbc.edu/>)
 - 5.1.2. Watson (<http://watson.kmi.open.ac.uk/WatsonWUI/>)
 - 5.2. Ontology libraries
 - 5.2.1. Multi-purpose
 - 5.2.1.1. Protege Ontology Library (http://protegewiki.stanford.edu/wiki/Protege_Ontology_Library)
 - 5.2.2. Domain specific
 - 5.2.2.1. The Open Biological and Biomedical Ontologies (<http://www.obofoundry.org/>; <http://bioportal.bioontology.org/>)
 - 5.3. Specific popular ontologies
 - 5.3.1. Multi-domain ontologies
 - 5.3.1.1. OpenCyc (<http://www.opencyc.org/>)
 - 5.3.1.2. COSMO (<http://micra.com/COSMO/>)
 - 5.3.1.3. BabelNet (<http://babelnet.org/>)
 - 5.3.2. Domain specific
 - 5.3.2.1. Gene ontology (<http://geneontology.org/>)
 - 5.3.2.2. CIDOC Conceptual Reference Model (ISO 21127:2014) for cultural heritage and museum documentation (<http://www.cidoc-crm.org/>)
 - 5.3.2.3. Gellish - A Product Modeling Language (<http://www.gellish.net/>)
 - 5.3.2.4. Plant ontology (<http://www.plantontology.org/>)

- 5.3.2.5. E-Commerce: GoodRelations
(<http://www.heppnetz.de/projects/goodrelations/>)

3.3. Context knowledge reuse and reference models

As we've mentioned enterprise knowledge context is expressed in terms of the organizational structure and the process models. Organizational structure is a very organization specific element and hardly can be reused. While enterprise process model can be reused to some extent using industry- or function-specific reference models.

Reference models are one approach to accelerate the development of enterprise-specific models (Fettke, Loos, 2003; Fettke, 2006). A reference model represents a class of domains (Becker 2001), e.g. a reference model for a production planning and control system or for a financial service provider. It is a conceptual framework and may be used as a blueprint for information system construction (Scheer and Nuttgens 2000). Reference models are sometimes called universal models, generic models, or model patterns. It is almost undisputed that a reference model is a conceptual model and that not all conceptual models are reference models. However, different distinguishing features are discussed in the literature (Fettke, 2006):

- Best practices: A reference model provides best practices for conducting business.
- Universal applicability: A reference model does not represent a particular enterprise, but a class of domains. Hence, a reference model is valid for a class of domains.
- Reusability: Reference models can be understood as blueprints for information systems development. Thus a reference model is a conceptual framework that could be reused in a multitude of information system projects.

Reference modeling provides both theoretical and practical benefits. From a theoretical perspective, a reference model provides a general description of an enterprise. From a practical perspective, reference modeling can be used in different application scenarios (Fettke & Loos, 2003): Deriving a particular enterprise model; Validating enterprise-specific models; Developing off-the-shelf-applications; Selecting information system packages.

Catalog of reusable information resources for context knowledge (classification of reference models):

1. Industry-specific
 - 1.1. Industrial/manufacturing enterprise: Y-CIM reference model (Scheer, 1998)
 - 1.2. Telecommunications: NGOSS / Framework (<https://www.tmforum.org/tm-forum-framework/>)
 - 1.3. Insurance: The ACORD Framework (<https://www.acord.org/resources/framework/Pages/default.aspx>)
 - 1.4. Banking: BIAN (<https://bian.org/>)
 - 1.5. Software development: SWEBOK (<http://www.computer.org/web/swebok>)
 - 1.6. Public administration: FEA Reference models (<https://www.whitehouse.gov/omb/e-gov/fea>)
2. Function-specific
 - 2.1. Production planning and control: Y-CIM reference model (Scheer, 1998)
 - 2.2. IT service management
 - 2.2.1. COBIT (<http://www.isaca.org/knowledge-center/cobit/Pages/Overview.aspx>)
 - 2.2.2. ITIL/ITSM (<https://www.axelos.com/best-practice-solutions/itil>)
 - 2.3. Supply chain management: SCOR (<http://www.apics.org/sites/apics-supply-chain-council/frameworks/scor>)
 - 2.4. Project management
 - 2.4.1. PMBOK Guide (<http://www.pmi.org/PMBOK-Guide-and-Standards.aspx>)

- 2.4.2. PRINCE2 (<https://www.prince2.com/>)
- 2.5. Human resource management: Business Reference Model Human Resources
- 3. Value configuration-specific
 - 3.1. Value chain (Stabell, Fjeldstad, 1998)
 - 3.2. Value shop (Stabell, Fjeldstad, 1998)
 - 3.3. Value network / Platform (Stabell, Fjeldstad, 1998)
- 4. Enterprise software producing companies
 - 4.1. SAP
 - 4.2. 1C
- 5. Management consulting companies and associations
 - 5.1. IBM
 - 5.2. Business Engineering Group SPb
 - 5.3. LEADing Practices

4. Recommendations for application and maintenance of the catalog of reusable information resources

The process of KOS development through the reuse of existing information resources is the following:

1. Problem definition and knowledge management system planning;
2. KOS requirements specification;
3. Search for the relevant information resources for reuse;
4. Information resources selection;
5. Enterprise-specific KOS construction.

The suggested catalogs of reusable resources support the step 3.

The selection is performed manually and (Villazón-Terrazas, Gómez-Pérez, 2012) recommend looking for resources with: 1. Consensus, 2. Quality, 3. High value of coverage, 4. High value of precision.

In order to extend and maintain the suggested catalogs of reusable information resources the online wiki-version of catalogs was developed. It can be accessed here: <http://knowledgereuse.pbworks.com/> Editing permission can be provided upon request.

5. Conclusion

The paper provided the catalogs of reusable information resources for domain and context knowledge, which can be used during KOS development for any specific enterprise. The paper also includes recommendations for application and maintenance of the catalog of reusable information resources.

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Nina Kulova,
Phd student at National Research University Higher School of Economics, Russian Federation
Kulova.baspik@yandex.ru

Valery Anshin,
Professor, Doctor of Sciences in Economics and National Economy Management
Head of the Department of Project Management, Faculty of Business and Management /
School of Business Administration, National Research University Higher School of
Economics, Russian Federation

Innovation project management based on network interactions

Abstract: Sustainable innovative performance of a high-tech company requires new approaches to the corporate R&D organization process. Enhancing significance of the key competitive advantages - the fast entrance onto the market and R&D costs reduction – get innovation companies to implement new organizational mechanisms such as R&D outsourcing, virtual team building and methods of professional growth and engagement of employees. The main purpose of this research is to investigate the core principals and strategies that can improve a company's return on its R&D investment thus increasing innovative performance. We argues that implementation of R&D model based on interdisciplinary and cross-functional collaboration both on intra and inter organizational levels could positively effect the triggering moment of entrance onto the market and help the company to meet its profit targets.

Key words: *innovation networking, open innovation concept, collaborative network, virtual communications, innovation project management, collaborative networked organizations, Innovation Network Scorecard*

1. The problem statement

Innovation process is known as generating new ideas and their implementation in new commercialized products, services or technologies. As shown by the experience of the USA, Japan, Korea, Finland and Singapore effective national innovation model implementation leads to economic growth and creates much more profit. National innovation model as a system of innovation management on a state level is formed by effective corporate innovation management schemes. In highly developed countries private sector is the main investor in national innovation development. Thereby understanding the ways to optimize corporate management systems is of utmost importance.

We are aimed at working out a link between the new collaboration models both on internal and external levels of an innovation company and the corporate ability to decrease transaction costs, increase the quantity and quality of input and output information at all stages of innovation cycle, facilitate coordination of innovation process.

An organizational model of innovation project management for high-tech companies is supposed to be based on scientific virtual network interaction and internal corporate processes optimization.

Within the broad aim the following questions will be addressed:

1. What are the main features of the contemporary innovation stage of economic development?
2. Is it possible to identify the key principles of the effective innovation process organization in high-tech companies?
3. What mechanism of interdisciplinary and cross-functional interactions of innovative actors could be developed using virtual communications?
4. What innovation cycle optimization is required to speed up entrance onto the market and to reduce R&D costs?
5. How could a new knowledge transfer model between the participants of innovation collaboration be organized?
6. What group of innovation efficiency indicators could be applied for the assessment of high-tech companies' progress?

2. Methodology

The researchers have analyzed such scientific sources of information as articles in professional journals based on empirical data and surveys. It has helped to collect data on the role of different factors and framework conditions for developing corporate innovation activities. Prospectively two research methods are going to be used: quantitative survey and qualitative interviews with innovative company's managers who can evaluate the significance of the organizational principles and methods. Data of the previous research in this field will also be used for the comparison with our empirical results. Thus we intend to get a holistic vision of an effective collaboration model for innovative high-tech companies.

3. Contemporary innovation management concepts

The last twenty years witnessed various concepts and methods of effective changes in innovation project management which were validated after a period of implementation in corporate sector. This data give the researchers opportunity to conceptualize the main trigger points of innovation process efficiency.

The reason of emerging demand in new management tools is connected with the era of market supply glut and reduction of product life cycle. These changes make manufactures and all the supply chain participants deliver new market proposals many times faster. Currently R&D orientation moves from incremental to breakthrough innovation products. Thus there formed three main strategies for innovation actors – «need seekers», «market viewers» and «technology drivers» and each of them ought to be executed well despite differences (Jaruzelski et al, 2014). Theoretical background to the problem of effective innovation management shows that it is necessary to design firm's innovation process holistically, using system approach as a main concept. There is a vast range of empirical research studies dedicated to the most important success factor of innovation activity. It is learnt that corporate innovation strategy should be tightly aligned with the business strategy in order to get a broad-stroke picture of how innovative concept will create economic value for the ultimate user, for the firm, its stakeholders and partners. The second significant factor is a proper change in the sequence of innovation cycle stages with the view of the revealed customer needs which trigger the whole process of quick addressing to them with the best product or service proposal. Thorough technological trend monitoring as well as application of innovation competencies of other actors are very important too.

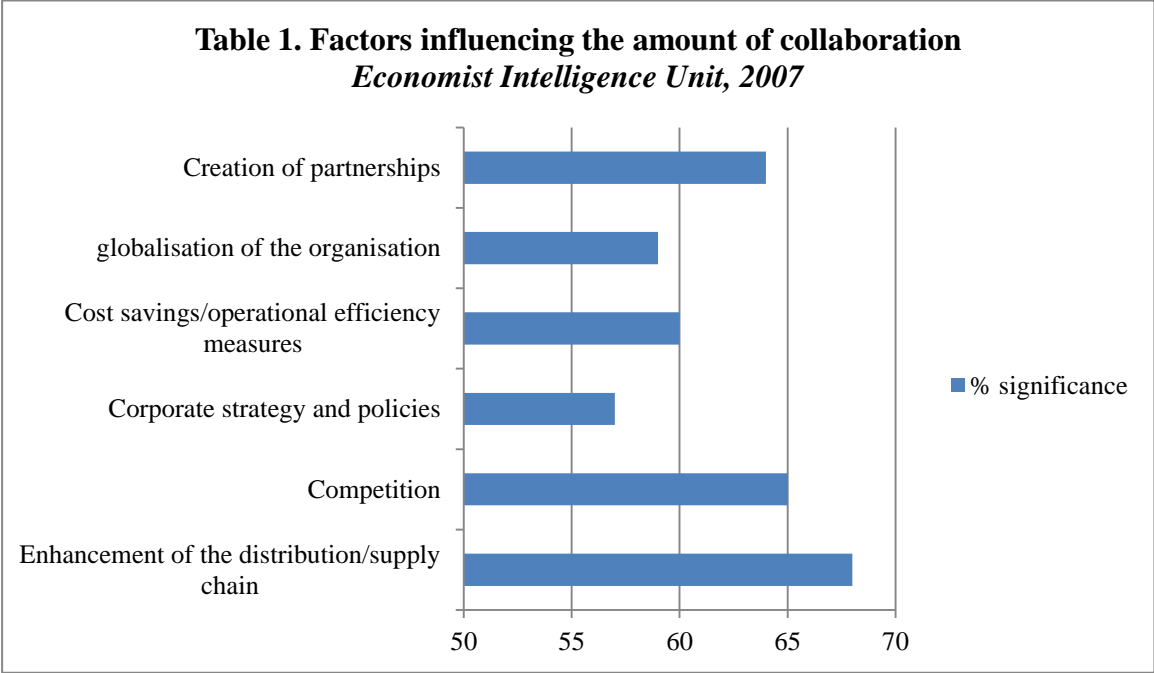
4. Benefits of innovators collaboration

Environmental factors that support innovators' creativity should include an open exchange of information, engaging diverse perspectives, demonstrating risk and conflict tolerance, shared learning, experimentation and collaborating (Matthew et al, 2006). Term "collaboration" have got many definitions in the scientific literature. Wood and Gray (1991) marked that collaboration occurs when a group of autonomous stakeholders of a problem domain engage in an interactive process, using shared rules, norms, and structures, to act or decide on issues related to that domain. The created social system differs different from such institutional structures as hierarchies and markets. Collaboration models are tightly connected with Chesbrough term "Open Innovation" which describe the systematic integration of external inputs at different stages during the innovation process (Chesbrough, 2003). Collaboration model is not a new one. It has been effectively implemented through more than fifty years. For example project SAPPHO aimed to comparatively analyze 'paired' successful and unsuccessful technological innovations proved that technically progressive firms were far more cosmopolitan than their inwardlooking counterparts. Hargadon (2003) argues that even Thomas Edison and Henry Ford used the network dynamics of innovation.

Formally it was Peter Gloor who proposed the first complex collaboration mode for innovation companies - Collaborative Innovation Networks, COINs. The author consider it to be an effective managerial tool for contemporary business environment based on virtual communications (Gloor, 2005). There are several benefits from collaboration in innovation sphere: leveraging complementarities between internal and external sources of innovation (design capability); capitalizing and disseminating knowledge outcomes (knowledge management capability); aligning product and organizations in a dynamic way (adaptive governance capability) (Barbaroux, 2009). But it is often hard to foster high level of collaboration among the participants in cross-functional teams instituted for product innovation initiatives. The firms with high-collaboration teams develop new procedures for feed-back, assessment and accountability in order to intensify cross-functional communications. It is important to identify the main steps to collaboration improvement which leads to acceleration of innovation activity of high-tech companies.

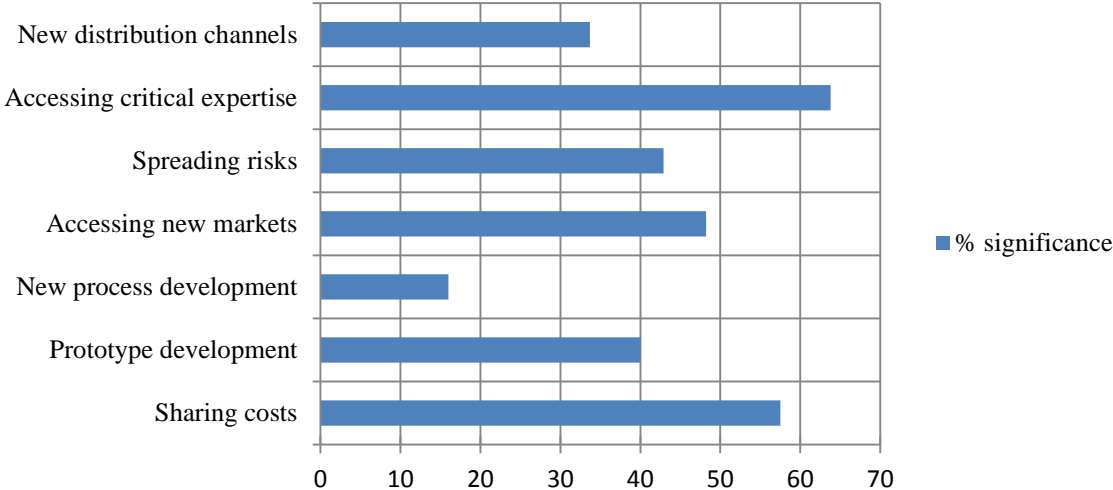
Many authors mark that traditional vertical collaboration with suppliers and distributors is not enough to be agile to keep up with changing environment. As it is stated in the report from the Economist Intelligence Unit (2007) innovation companies need to

collaborate with thousands of specialized players, from customers and partners to competitors, regional distributors and university researchers. In its survey of 394 business leaders and over 35 in-depth interviews with senior corporate executives and collaboration experts, the Economist Intelligence Unit defined the extent to which collaboration is being encouraged, managed and measured in different sectors. Among the most stimulated factors were found attitude of senior management, competition, cost savings, creation of partnerships, globalization of the organization.



As it was reported by CEMEX Global Center for Technology and Innovation collaboration among innovative firms is conducted primarily for new technology and product development, knowledge capital creation, share growth within existing market, entrance into a new market (Flores et al., 2009). According to the Canadian survey two significant factors are added to the above mentioned: accessing critical expertise and spreading risks.

Table 2. Reasons for involvement in collaboration
Statistics Canada, 2001-2003



5. Types of collaboration. Scientific virtual networking

There are several types of collaboration classifications. The main types are: trans organizational collaboration on R&D stage, collaboration based on customer involvement, collaboration within supply chain, collaboration within integrated marketing platforms (Berasategi et al., 2009). Processes formalization during collaboration depends on networking durability. Such forms as ad-hoc collaboration, collaborative networked organizations differ by its aims and prospects as well as continuous production driven net. In order to conduct thorough market monitoring grasping opportunity driven net are used. Long-term collaboration is connected with special infrastructure arrangements. It is vital to involve virtual team building, virtual labs, network risk assessment procedures.

One of the main tool of the necessary collaboration process is a scientific network through which it is possible to establish and speed up effective R&D project communication. It is considered to be an effective instrument which helps to solve several problems simultaneously. First of all it helps to find the necessary «out-of-company» participants of the project with a high level of specific competencies. Its evidently cheaper for the company to engage such innovative actors for a period of time than to hire them. The constant connection to a scientific network enhances the culture of innovation by forming atmosphere of professional engagement. It gives perfect opportunities for knowledge transfer not only within the defined scientific sphere but within different spheres as well. Currently it is important to understand the main directions of technologies development in other fields to keep up with actual innovation products for them. It is particularly addressed to high-tech companies that develop intermediate units applicable in complex devices of different functionality. Virtual interdisciplinary communications within the scientific network could give an across-the-board vision for its participants thus triggering new prospective insights.

6. Key collaboration performance indicators (KCPI)

There are several factors that define the level of corporate collaboration effectiveness. Among them are marked atmosphere of trust, created due to open and frequent virtual and real communications, transparent and harmonized process standards, leadership in highly decentralized networks. A main task of a leader is to define aims and create a collaborative and inspiring atmosphere (Kouzes & Posner, 2011). There are many point of views on the problem of geographical proximity of the collaborating firms. Some studies suggest that physical proximity remains an important factor in providing an innovation infrastructure that encourages the interaction of agents. From the other hand proximity is defined not only by geographical distance. Coughlan (2014) argues that the distance between two individuals is a function of the disparity of their cultures, not the physical distance between them. He underlines the importance of cognitive distance - the level of diversity in the skills, knowledge. There are also defined: organizational proximity - the distance felt by members of the same large or multi-site organization; technology proximity - the level of overlap between the firms' technology or patent portfolio; vision proximity - the similarity in vision; virtual proximity - the level of emotional closeness developed through the use of information and communications technologies. Most of the authors acknowledge the holistic, systematic and integrating vision based on a networked innovation model which embraces the different aspects to be managed taking into account the different collaboration types and with an eminently practical focus. (Berasategi et al, 2009).

Special key collaboration performance indicators (KCPI) are used to assess and control the main factors of collaboration effectiveness. Flores, Al-Ashaab and Magyar proposed the following KCPI:

1. *Competitiveness*. It is assessed by annual budget invested in collaborative R&D and number of new business models or frameworks developed and implemented through collaborative projects per year.
2. *Sustainable development*. Is measured by: 1) number of collaborative projects that improved environmentally or socially any region, community or facility; 2) number of key internal and external stakeholders integrated in collaborative projects to improve sustainability concerns in the construction value chain; 3) number of projects that developed new models, methods and/or standards to improve sustainability practices: health and safety, recycling methods, sustainable construction, etc. 4) number of Knowledge Transfer Sessions (KTS) organized to present Sustainability trends, novel technologies, etc.
3. *Innovation*. It is assessed by number of intangibles per year as a result of collaborative projects with universities, in the form of patents, licenses, copyrights, trademarks, etc.
4. *Strategic knowledge partnerships*. It is revealed by: 1) number of partnerships with which strategic collaborative projects are developed; 2) number of collaborative projects with universities per year; 3) number of collaborative projects with consulting companies per year; 4) number of successful proposals developed collaboratively to obtain external funding, such as the European Seventh Research Framework (FP7) (Flores, et al., 2009).
5. *Human capital*. Is assessed by: 1) number of new highly skilled employees per year hired in a company as a result of collaborative projects; 2) number of international conferences, which employees have attended to track trends and develop new projects.
6. *Internal business processes*. Is measured by: 1) number of new best practices developed and adopted in the company per year in each business process; 2) number of new tools, methodologies and methods developed to improve any internal business process to increase its efficiency as a result of a collaborative project with external partners.

As it is defined in literature review KCPI also include such results as ROI, investment per year on collaborative projects, gross profit of the new product developed thanks to the collaborative project, percentage of cost savings per year thanks to collaborative research, amount of CO₂ produced per year, percentage of recycled materials used, number of applied environmental-friendly methods in the company per year, number of patents by the company per year.

It is evident that BSC measuring the impact of collaborative research projects is not complete. Structured questionnaire to design a novel scorecard that integrates different collaborative aspect is to be developed for different business fields.

7. Project management of collaboration in R&D

Complex innovation project based on networking and collaboration should include additional working stages. Phase of collaboration sector definition as well as search for partners and their selection are added to the traditional processes (Ollus, 2009). It is vital to develop special tools to accumulate and codify new knowledge capital, emerged through networking.

Many researchers account for the popular LEAN-concept typically applied to manufacturing process. It can be successfully used for innovation process organization as well. For example to reduce time for communication and clearly define standard collaboration processes a collaboration pattern is used. It is a prescription which addresses a collaborative problem that may occur repeatedly in the environment. (Papageorgiou, 2009). But LEAN is proposed to be not only a group of tools applicable to those parts of R&D in which value is created by objects, or by processes that repeat the same or a similar thing many times (Barnhart, 2013). It is a complex management philosophy for the continuous improvement in R&D and innovation process within the company.

Currently sustainable innovation capabilities depend on a firm's capacity to quickly identify, access, and mobilize external resources as well as enhancing its inner R&D, production, marketing and strategic competencies. The results of future research based on structured questionnaire addressed to representatives of high-tech companies will be useful for innovative companies in their efforts to establish and improve collaboration processes.

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G.D. Laptev
Lomonosov Moscow State University, Faculty of Economics,
Innovation Business & Entrepreneurship Lab
glaptev@econ.msu.ru

Growth Product Innovation Mindset: Managing the Fuzzy Front-End Properly

The high rate of failure of product driven startups and entrepreneurial projects is because of mistakes or deficiencies in the management of their front-end (early phases). These failings are usually explained by lack of analysis, poor planning and rarely by use of the insufficient management tools. Customer development and agile development methodologies underpin the management in the early stages of creating an innovative product. They favor experimentation over elaborate planning, customer feedback over own intuition, and iterative design over traditional linear new product development model. In this paper we discuss the profile of critical importance entrepreneurial competencies, practical experience and management tools in the front-end of innovation process that were developed during acceleration programs for entrepreneurial teams.

Entrepreneurship, entrepreneurial management, innovative product development, fuzzy front- end innovation.

1. Process of innovative product development

In a product driven startups and entrepreneurial projects a huge challenge is creation of a breakthrough innovation. In the management of process of innovative product development there are three phases (see Fig.1)

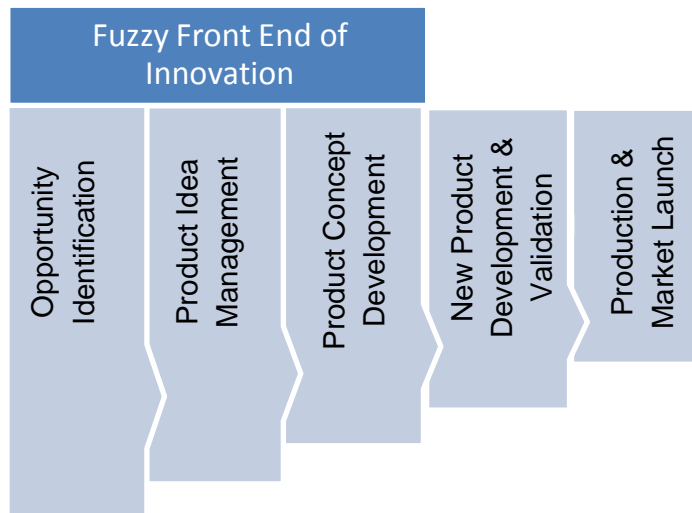


Fig.1. Process of innovative product development

The early phase of the process called “Fuzzy Front End of Innovation (FFEI)” consists of analyzing customer/ market/technology opportunities, developing product ideas to meet the customer demand and developing the product concept. The activities in the FFEI are often unpredictable and unstructured. The second phase of the process called “New Product Development and Validation (NPD&V)”. NPD&V is mainly formal and more structured and focused on implementation of the project. The third phase ‘Production &Market Launch (P&ML)’ consists of production, marketing and sale activities.

Methodologies and techniques used in the NPD&V portion of the innovation process often will not work in the FFEI because the FFEI is fundamentally different. From the managerial point of view the FFEI remains one of the weakest areas of innovative product development. In the past decades, the attention was mainly set on the NPD&V and P&ML phases. But the early phase of innovation, also known as FFEI (“confusing front-end”) was not the focus of the analysis. Most companies utilize either a Stage Gate™ (Cooper, 2001) or PACE® (McGrath & Aklyama, 1996) approaches to manage incremental product development process. In the case of breakthrough, the earliest stages (“Planning” and “Concept Development”) (Ulrich & Eppinger, 2008) have become the FFEI. The FFEI is a zone of uncertainty, tacit knowledge and conflicting organizational pressures. Activities in the FFEI are often difficult to anticipate and perform. Yet they are crucial to successful outcomes of the process of innovative product development because a concept of new product and its target specifications are determined here. It is therefore important to identify success factors which allow technology entrepreneurs and managers, and their companies, to increase their proficiency in managing the FFEI.

The tools and techniques discussed were determined from the best practices within Innovation Business & Entrepreneurship Lab (innovationStudio.ru) during acceleration programs for entrepreneurial teams working in area of wearable devices and big data. For example, author was the managers of the Development Track of the Intel global program “Make It Wearable”. The responsibilities included training, coaching, mentoring, and application composition for these 36 projects. This work made us possible to gather the whole picture necessary to understand wide spread problems of the FFEI stage in entrepreneurial startup teams that were product driven and base on engineering experiences.

We start discussion with issue of involvement of potential customers (clients) in the early stages of innovative product development process.

2. Customer integration in innovative product development process

The great uncertainty of innovation, especially in its early stages (FFEI), require a high level of cooperation insight entrepreneurial team/company and potential customer (client) can give clues to the company about unsolved problems in the market and ideas for developing solutions and opportunities to implement certain existing technologies.

Startup companies that involve customers more in obtaining ideas and their development processes, increase the successful launch of the product to market despite the high degree of uncertainty of these innovations. Companies which actively involve clients in the product development process frequently appear more among the pioneers of the market. The client's involvement is usually gives positive results in a case of adaptation of a new product or improvement based on the customer's demands. But it must be recalled, that customer capacity to predict his tastes and needs has a limitation. In most of the cases, customers refer only to their current problems, needs and desire, which are within the scope of their direct experiences and imagination. Suggestion to breakthrough innovation, which can be distinguished for being functions or configurations so far unknown, cannot be expected from the part of the customer. When an entrepreneur bases its innovation activities only on client's recognizable needs, it leaves apart many market opportunities.

How can entrepreneurs/developers/designers identify needs that customers themselves may not recognize? How can they develop ways to meet those needs, if even in the course of extensive market research, customers never mention their desires because they assume those desires can't be fulfilled? A set of techniques called Empathic Design can help resolve those dilemmas (Leonard, Rayport, 1997). At its foundation is observation—watching consumers use products or services. The details of the technique will be discussed in the next section.

3. Management of the fuzzy front end of innovation (FFEI)

As we mentioned previously, methodologies, tools and techniques used in the NPD&V portion of the innovation process often will not work in the FFEI. There are significant differences between NPD&V and FFEI. (1) FFEI work is not structured and often involves individuals instead of multifunctional teams; (2) FFEI work is so early that prediction of success in sale of the new product and revenue expectations are uncertain; (3) FFEI work results in strengthening a product concept, not achieving a planned milestone. Sequential Stage Gate™ process for NPD&V is not appropriate for FFEI. And furthermore, differences in both terminology and content among FFEI activities greatly complicates management of FFEI phase of innovative product development for technological (innovative) entrepreneurs and requires additional competencies also.

In our practice we accept and manage the following activities in the FFEI phase of activities innovative product development (Koen et al., 2002):

- opportunity identification,
- opportunity analysis,

- idea generation and enrichment,
- idea selection
- concept definition.

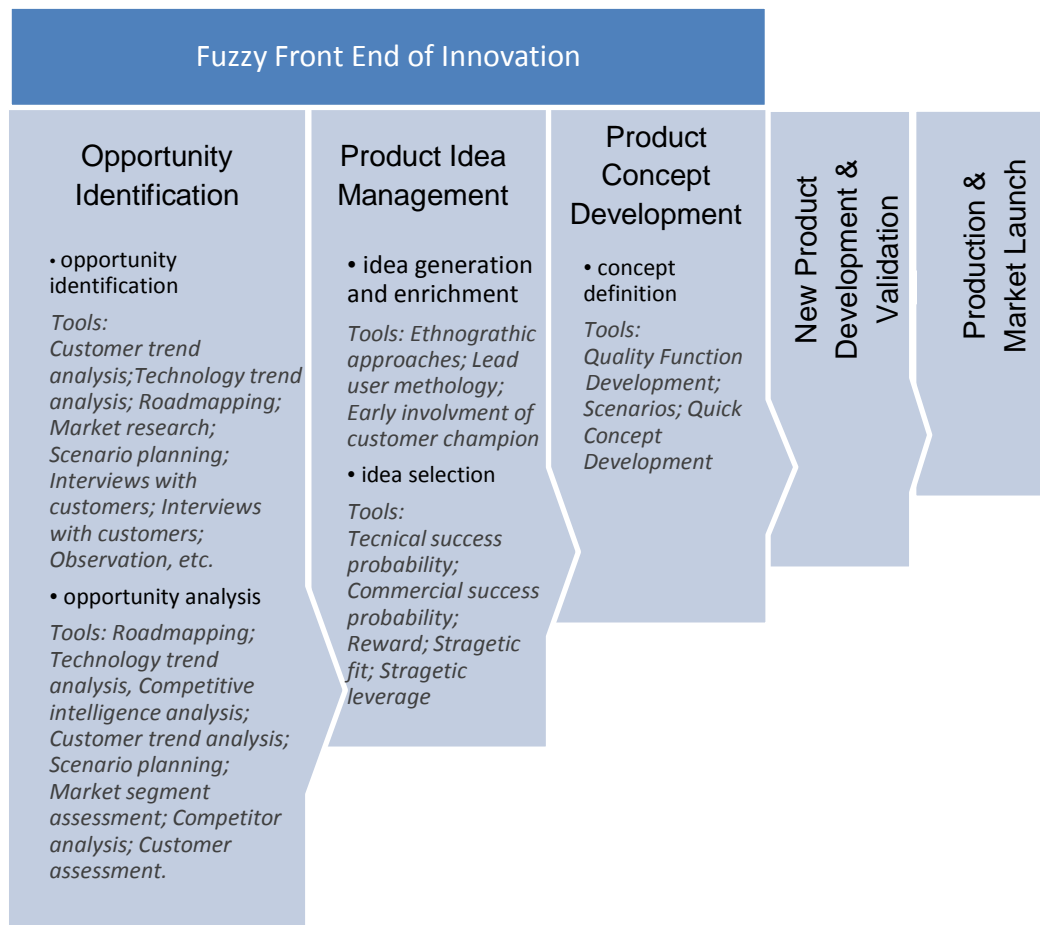


Fig.2. The front end phase of the innovative product development process

3.1. Opportunity identification

The organization identifies opportunities that it might want to pursue. Business, market and technological opportunities are explicitly considered so that resources will be allocated to new areas of market growth, operating effectiveness and efficiency. Opportunity identification may occur from a single person recognizing an unmet customer need or previously undetected problem. For opportunity identification the following tools are used: *Customer trend analysis; Technology trend analysis; Roadmapping; Market research; Scenario planning; Interviews with customers; Interviews with customers; Observation, etc.*

In our practical activities we also used the IDEO tools, such as *Shadowing* – observation of the people who use the product/service, at home, at work, on the street, in a store, etc.

Consumer journey – keeping track of all interactions that the consumer has with the product/service.

Camera journals – consumers write down all their impressions and actions related to the product.

Extreme user interview – "Interview with extreme users". Interviews with people who really know everything or do not know anything about the product/service.

Storytelling – provoke people to tell stories related to their personal experience to use the product.

Unfocus groups – interview with non-targeted audience to identify insights and new ideas.

3.2. Opportunity analysis

Opportunity analysis may be part of a formal process or may occur iteratively. Business capability and competency are assessed in this element, and sponsorship for further work will be determined. Usually the additional information is needed for translating opportunity identification into specific business and technology opportunities. This involves making early and often uncertain technology and market assessments.

Many of the same tools used in opportunity identification are used here. *Roadmapping; Technology trend analysis, Competitive intelligence analysis; Customer trend analysis; Scenario planning; Market segment assessment; Competitor analysis; Customer assessment.*

3.3. Idea generation and enrichment

Idea generation and enrichment concerns the birth, development, and maturation of a concrete idea. Idea generation is evolutionary. Ideas are built up, torn down, combined, reshaped, modified, and upgraded. An idea may go through many iterations and changes as it is examined, studied, discussed. Direct contact with customers and users and linkages with other crossfunctional teams as well as collaboration with other companies and institutions often enhance this activity.

Idea generation and enrichment may be a formal process, including brainstorming sessions and idea banks so as to provoke the organization into generating new or modified ideas for the identified opportunity.

There are many creativity and brainstorming techniques for enriching the idea stream. Other methods for enriching the idea stream utilize TRIZ and design thinking (Brown, 2009).

3.4. Idea selection

Problem is not coming up with new ideas. Even when businesses are being downsized, there is no shortage of new ideas. The problem for most businesses is in selecting which ideas to pursue in order to achieve the most business value. Making a good selection is critical to the future health and success of the business. However, there is no single process that will guarantee a good selection. Most idea selection involves an iterative series of activities that are likely to include multiple passes through opportunity identification, opportunity analysis, and idea generation and enrichment, often with new insights from the influencing factors and new directives from the engine. Selection may be as simple as an individual's choice among many selfgenerated options, as formalized as a prescribed portfolio management method, or as complex as a multistage business process. Formalized decision processes in the FFE are difficult due to the limited information and understanding that are available early in product development.

In idea selection, decision makers need to adopt a positive attitude rather than to approach the task as a filtering out of less attractive ideas. Decision makers need to ask how an idea can be helped to move forward or how an idea can be modified to make it more attractive, rather than how to determine which ideas to kill. Screening should be done in a way that encourages creativity and should not be so restrictive as to stifle new ideas.

3.5. Concept definition

Concept definition is the final element of the new concept development model. In order to pass through the gate, the innovator must make a compelling case for investment in the business or technology proposition. Some companies specify guidelines for gatekeepers, who make decisions at the outset of the development process.

These may address: Objectives; Fit of the concept with corporate and/or divisional strategies; Size of opportunity, such as financial impact; Market or customer needs and

benefits; Business plan that specifies a specific win/win value proposition for value chain participants; Commercial and technical risk factors; Environmental, health, and safety “showstoppers”; Sponsorship by a receiving-group champion; A project plan including resources and timing

Formality of the business case varies because of several factors: Nature of the opportunity (e.g., new market, new technology, and/or new platform); Level of resources; Organizational requirements to proceed to NPD&V.

Reality is that flexibility and iterating are becoming the key characteristics of modern innovation product development process. The methodology “Lean Startup”, based on experimentation, customer feedback and iterative design has quickly taken root in the start-up world (Ries, 2011; Blank, 2013a,b). Entrepreneurs and product managers use its concepts “minimum viable product (MVP)” and “pivoting” to create successful products and businesses. In our research we demonstrate that this is applicable not only to startups but also to mature innovative businesses.

4. Entrepreneurial competencies to manage fuzzy front end

Innovative entrepreneurship as an area of human professional activity is inseparably connected with the formation of the new economy based on knowledge, creativity and customer experience. In today’s world of uncertainty there is an urgent need for people with competencies in entrepreneurial management. People who start innovation business or operate as intrapreneurs inside large organizations and making radical changes vary in the degree of entrepreneurial abilities and skills.

The competence model (key entrepreneurial tasks) and the competencies model (personal qualities, abilities and skills for the successful existence in the profession of entrepreneur and for the implementation of key tasks of activity) of an innovative entrepreneur were developed (Laptev, 2010).

Over the past five years we conduct training and acceleration programs for startup entrepreneurial teams in the field of entrepreneurial management. We interview participants and measure the level of competencies in entrepreneurial management and refine previously created model. According to the results of the research were formulated competencies in entrepreneurial management of critical importance and very difficult to develop. Note that all of them are concentrated in two clusters: Cogitative and Personal. See below.

<i>Cogitative competencies</i>	<i>Risk tolerance</i> is tolerance to the situation of chaos, disorder and uncertainty; <i>Decision-making</i> is the ability to make quick decisions.
	<i>Creativity</i> is striving for high variability of decisions, generating a large number of ideas; <i>Intuition</i> is instant catching of prospective possibilities; <i>Analyticity</i> is ability to organize information, identify key inconsistencies, errors or problem areas, identifying cause-and-effect relationships and trends; <i>Flexibility of thinking</i> is ability to quickly rebuild integrating newly arrived information in their proposals, the ability to offer different solutions to the same task, susceptibility and tolerance for different ideas.
<i>Personal competencies</i>	<i>Pro-activity</i> is ability to quickly translate ideas and words into action, proactive behavior; <i>Ambition</i> is desire to change the world, and the inclination to put hard-achievable

Personal competencies	goals; Motivation of achievements is ability to cope with difficulties on a way of achievement of the purpose, to do it so quickly and independently as far as it is possible, to overcome obstacles and to reach high level. To surpass itself most; Competitiveness is propensity to competitive behavior.
	Perseverance is ability to not retreat, repeat attempts to reach the result until it is reached, go all the way, to defend their interests; Self-confidence is self-reliance and confidence, high self-esteem; Focus on the result is ability to build a systematic sequence of actions to achieve the result, to control it and to be patient in waiting for "fruits"; Optimism is tendency to believe in a positive outcome; Perfectionism is desire to do everything possible the best way.

Conclusion

The FFEI is defined by those activities that come before the formal and structured NPD&V process. Even though there is a continuum between the FFEI and NPD&V, the activities in the FFE are often chaotic, unpredictable and unstructured.

Differences in both terminology and content among FFEI activities greatly complicates management of FFEI phase of innovative product development for technological (innovative) entrepreneurs and requires additional competencies also.

The FFEI exists in an environment of influencing factors. The factors are the corporation's organizational capabilities, customer and competitor influences, the outside world's influences, and the depth and strength of enabling sciences and technology.

Sustained successful product development can occur only when FFEI activities can be accomplished with the company's organizational capabilities. Organizational capabilities determine whether and how opportunities are identified and analyzed, how ideas are selected and generated, and how concepts and technologies are developed.

The element of leadership, culture, and business strategy sets the environment for successful innovation. A culture that encourages innovation and creativity is a key enabler.

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A.V. Logacheva
Assistant, Department of operations management
Graduate school of management
St-Petersburg State University
St-Petersburg, Russian Federation
logacheva@gsom.pu.ru

A.K. Kazancev
Doctor of Economics, Professor, Department of operations management
Graduate school of management
St-Petersburg State University
St-Petersburg, Russian Federation
kazantcev@gsom.pu.ru

Innovation capabilities of industrial companies in Russia

Abstract: An innovation capability is a core element of innovation system, developing competitive advantages and profitability of the modern company. Capabilities are responsible for efficient process of planning, creation and utilization of resources. Those capabilities that create basic competitive advantages are core competences of the company. The study focused on identifying the core factors in the organizations innovative capabilities development. The empirical analysis carried out on the basis of industrial sector in allowed to reveal innovation capabilities elements and to offer methodology of capabilities development planning.

Keywords: *Innovation capability, innovation activity measurement*

According to the authors definition innovation capabilities are skills and opportunities of the company to plan, create, integrate and implement innovation resources in operation activities in order to fulfil strategies goals in the sphere of innovations. Innovation resource is a complex of scientific, technological, organizational, financial internal and borrowed funds needed for innovation activity implementation. Classification of resources is well investigated topic and traditionally includes financial, technological, information and human fields. Classification of factors crucial for innovation capabilities is the disputed area in management science. In order to formulate conceptual model of innovation capability factors we conducted a large-scale analytical study of existing methods for innovation activity measurement and made a special accent to the innovation capability estimation. Additionally we analyzed such regulation documents as Oslo Manual and recommendations developed by McKinsey and Boston Consulting Group in order to combine both theoretical and practical aspects of innovation measurements methods.

To test the developed theoretical system of indicators and identify key factors of innovation capabilities of the organization we conducted a survey of 55 industrial organizations of Russia. Methods of factor analysis techniques allowed specifying the structure of the indicators of innovation system and identifying the key factors shaping the innovation capability of the organization. Similar steps of analysis have been carried out for indicators of innovation resources, which were structured according to the traditional classification: financial, human, technological and information.

The aim of this survey was to estimate the level of development of their innovation capabilities in accordance with the proposed system of indicators. As a result we got a refined system of indicators, consisting of six components:

- Financial – the ability to accumulate financial resources from different sources, rationally distribute them and implement according to innovation development goals;
- Human – the ability to shape and control the structure of qualified personnel, ensuring the implementation of innovative development programs;
- Technological – the ability to search, develop and apply advanced technology solutions for innovation progress;
- Information – the ability to create and deploy advanced information and communication technologies and intellectual property;
- Intellectual – the ability in the field of formation and use of the flow of new ideas and solutions;
- Organizational – the ability for balanced organizational decisions, resource planning, and forming of an effective management style of innovation activity.

The empirical study revealed that the most crucial factors are information and intellectual, responsible for the ability to apply modern advanced information technology and forming a pool of promising innovative ideas. Additional to that, technological factor also demonstrated high level of importance and validity, stressing the need of continuing search and implementation of progressive technologies during the innovation process. The organizational factor placed only on the third place according to the level of influence on innovation capability development. Human factor as a fourth confirms the importance of routines but not individual characteristics of personal inside the organization. As we should orient on the stable routines development process, innovation capabilities of the organization become operational in nature. The financial factor influence on innovation capabilities less than other factors because the main role of finance should be at the resource level, when all the resources needed for further capabilities development. Detailed numbers of influence coefficients of six factors are presented in the Table 1.

Table 1. Confirmatory factor analysis results

Model characteristics	CMIN/DF	GFI	AGFI	TLI	CFI	RMSEA
	,683	,944	,870	1,038	1,000	,000
Composite validity	0,93					
Average explained variance	0,68					
Factors	Factor loading					
Financial	,612***					
Human	,828***					
Technological	,894***					
Information	,907***					
Intellectual	,816***					
Organizational	,850***					

Using factors coefficients we developed a model for integral innovation capability metric, using linear equation. Integral values of innovation capability of all respondents were divided into four groups: leaders, followers, laggards and outsiders. Qualitative analysis of the factor scores of innovation capabilities of the respondents belonging to a group of leaders showed that they are characterized by high values of technological and information factors. This result suggests that the key factors for innovation capability of the organization is the ability to use modern technology in the operation and the managerial activities, the ability to effectively use their potential, as well as the company's ability to manage the flow of innovative ideas and apply modern methods of communication.

It may be added that the empirical data obtained on a representative number of Russian industrial organizations, confirmed the willingness of companies to manage the innovation process in the framework of operations and constantly generate, maintain and develop the innovation capabilities of the organization.

For the analysis of each factor of innovation capability we proposed certain indicators characterizing the state of the organization's resources: the level of resources, quality of resources, structural adequacy of resources according to goals of innovative development, utilization and dynamic of change in the organization. Thus, the decomposition of the obtained six factors allowed formulating specific indicators to measure and control the characteristics of innovation activities.

Developing innovation capability, management of the organization should focus on the provision of particular competitive advantage, based on the distinctive, or core competencies. Presented planning model allows following every step of the objectives of a higher level, to assess the possibility of execution and correct possible solutions. By specifying the required quantitative level of development of innovation capabilities, the management of the organization can apply different strategic guidelines, decomposing factor values, and then the specific indicators of innovation for the cascade principle. Formulation of the required level of development of the innovation capability factors can be carried out on the basis of its own analysis of trends from previous periods, the maximum theoretically possible value or progress of key competitors.

In the first step an organization needs to clarify the relevance of measurement models for the industry which are used to calculate the integral index of the innovation system performance and to assess the impact of the coefficient of innovation resource for innovation capability in the sample. Assessing indicators, components and integral values of the elements, the organization should match the values of the resources and capabilities to analyze the level of compliance and the degree of balance in the system. Then we can talk about the possibility of the formation of the target values of integral indices of elements that enable the organization to balance the innovation system. The principle scheme of innovation capabilities development consists of six stages presenting on the Figure 1.

Planning steps, dedicated in the Figure 1 with the frame, carried out with the use of working measurement models developed during the first stage of planning. Formation of a specific profile of the factors of the innovation system includes the organization of an iterative process of calculation of each indicator. Decomposition of elements to specific indicators allows calculating the most attractive profile for the development of the innovation system.

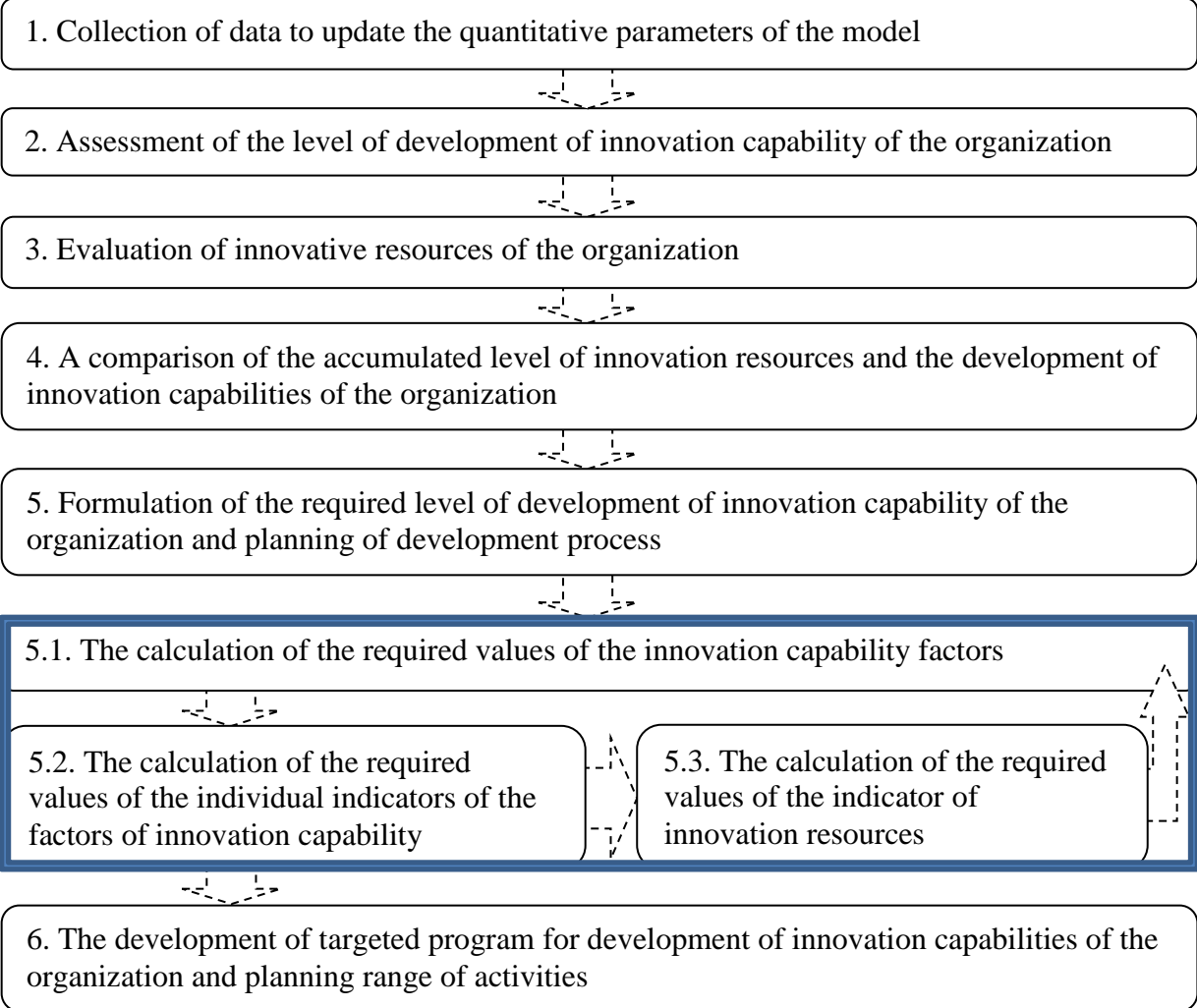


Fig. 1. Planning process of innovation capability development

Depending on the goals of development a variety of strategies could be applied: a balanced development of all the factors of innovation capabilities; maximization the growth rates of each factor of innovative capabilities; benchmark and the development of the key factors of innovation capabilities specific for the company. The first two strategic approaches are typical for leading companies in the industry which are forwards in the field of innovation. These strategies are also could be implemented by organizations with very limited information about the external actors of the industry. The third type of strategy is typical for companies named followers who have an example of a leader and who are actively focused on effective benchmarking. The fourth type of strategy is most promising in terms of the theory of strategic management approaches. It is typical implementation of the resource based management concept, as is focused on development of key competitive advantages of the company, making them even more unique and hard copied.

Obtained in the empirical study of Russian industrial companies working models of innovation system factors evaluation proved that, the most promising strategy should be the development of information and technological factors of innovation capability, since they

have the highest factor loading coefficients in the integral index (0.894 and 0.907). As for the components of innovative resources, the resulting models allow to allocate as a priority financial and information factors. So the development of these factors of innovation capability and innovation resources should be the first priority for Russian industrial companies which are interested in innovation success and obtaining core competences in innovative field.

The practical significance of the conducted study is formulated in the form of methodical planning proposals to increase the level of competitiveness on the basis of interaction of innovation resources and the development of innovation capabilities of the company.

The study allowed firstly on the theoretical level, to formulate the basic factors of innovation capability of the organization, and then on the basis of empirical evidence to clarify the structure and to identify the key of them. The final structure of the factors of innovation capabilities is formed of six components: financial, human, technological, information, intellectual and organizational. Key factors can be called the information, technological, and organizational, according to the empirical data for Russian industrial companies. These three factors have the greatest influence on the formation of innovation capabilities of the organization, allowing it to gain a sustainable competitive advantage through innovation. Human and intellectual factors are not the key that allows us to state that the formation of innovation capabilities of the organization takes place at the operational level by established and stable routines. The factor responsible for the financial component occupies the last place in terms of influence on innovation capabilities. That means that the innovation capability is determined as the established practice of the company and is not subject to significant changes under minor changes in the participants of innovation process or amounts of funding. Nevertheless, it is important to remember that although these factors have relatively little effect on the change of innovation capability, they are very significant and should be under control.

The results of empirical research allowed generating quantitative models that can be used in the practice of the development of innovation capability of organization.

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A.E. Loukianova

PhD, Associate Professor, Finance and Accounting Department, Graduate School of Management, Saint-Petersburg State University

Anna.Loukianova@gsom.pu.ru

E.A. Smirnova

Doctoral Student, Graduate School of Management, Saint-Petersburg State University.

ekaterina_a.smirnova@yahoo.com

The Indicators of the Economic Crisis on the Emerging Markets

Abstract: The aim of the article is to find the industry indicators of the coming economic crisis.

Several suggestions about such indicators were approved using different branches of the economy in different emerging markets.

This research is one of the first such attempts to find the indicators of the coming economic crisis for Russian market, in particular. The comparison of the proposed indicators dynamics for the developed and emerging markets was provided (and for Russian market, in particular).

The research is based on the econometric methods of the time series analysis.

The developed crisis indicators can be used in the company management practice.

Keywords: *specific risk, decision-making mechanisms in managing the organization, emerging markets*

1. Introduction

In the contemporary circumstances the company needs the system of indicators that will help the company to understand and to predict the process of the risks development: how the risks emerge, how the threats for the company arise, how much the risks menace the company. The crisis period data considered reports the special value for the risks analysis. In this research Russian markets are considered in order to find the financial contagion indicators.

In order to identify the crisis the special indicator is needed, that would be able to identify the degree of the threat. Such indicators had been proposed and tested many times (Longstaff, 2010; Brunnermeier & Pedersen, 2005; Allen & Gale, 2000; Kodres & Pritsker, 2002; Aragon & Strahan, 2009). In this work some financial contagion indicators are considered, which are the significant interconnections between the companies securities indexes return and the main financial indicators return.

Financial contagion in the situation on the financial market during which the financial market different indicators interconnections became stronger after the shock that had took place in one financial indicator dynamic (Longstaff, 2010).

The research is conducted with the use of Russian market and the emerging markets (Chinese, Brazilian and Indian). The results allow to make conclusions concerning the crisis indicators in different markets in different periods.

2. Financial Contagion

F.A. Longstaff defined **financial contagion** as an episode in which there is a significant increase in cross-market linkages after a shock occurs in one market. The standard definition in the literature of contagion is “a change in the linkages between markets following a distressed event” (Longstaff, 2010).

The liquidity-induced contagion mechanisms were presented in the number of papers (Allen & Gale, 2000; Kodres & Pritsker, 2002; Brunnermeier & Pedersen, 2005), and the risk-premium contagion mechanisms were implied by some authors (Vayanos, 2004; Acharya & Pedersen, 2005; Longstaff, 2008). This classification is depicted in the Table 1. In this research three hypothesis based on three channels were considered (in Table 1 the hypothesis are driven for the case of the crisis in Russian market in 2014-2015).

3. Data and Methods

To measure the return on securities, we use price indexes of the securities of the major companies in the corresponding countries. For example, in the case of Russian companies it were the time series of the bonds price index values (daily from 1.01.2010 to 8.06.2015, that made the dataset long enough and capturing the crisis period 2014-2015). We searched in Thomson Reuters Datastream data.

Only the companies that have their headquarters in the particular country and that are separate companies themselves (not the branches of other companies). The selected companies have different credit ratings. Some of them don't have the credit ratings from Moody's or S & P, that's why it was necessary to obtain their credit ratings in Thomson Reuters Eikon according to SmartRatios model in order to compare the companies. For example, the list of selected Russian companies and their credit ratings is depicted in Table 2 (all companies are from the oil & gas industry).

Table 1: The theoretical model and the hypothesis

The channel	the correlated-information	the liquidity	the financial
the definition	the dissemination of the information about the price	the fall of the liquidity and its influence on the investor's strategies and the asset prices	the risk premium adjustments
the threats	the price effects	the liquidity fall the switch in the business activity from one market to another	psychological (the rise of the risk-averse investors number) the decrease in return
the hypothesis based on the channel (the case of the crisis in Russian market in 2014-2015)	H₁ : during the crisis of the 2014-2015 years in Russia the financial contagion was widespreading through the correlated information channel	H₂ : during the crisis of the 2014-2015 years in Russia the financial contagion was widespreading through the liquidity channel	H₃ : during the crisis of the 2014-2015 years in Russia the financial contagion was widespreading through the risk-premium channel

Source: [Longstaff, 2010; Loukianova & Smirnova, 2015]

Table 2: The list of Russian companies selected for the research

The company	The credit rating according to SmartRatios model
Lukoil	A-
Surgutneftegas	BBB+
Tatneft	BBB-
Bashneft	B
Rosneft	B-

As different companies securities indexes are not comparable, securities indexes return were used. For example, Russian oil & gas companies bond indexes return dynamic analysis lets it possible to divide the entire period into three parts (Picture 1):

1. the restoration after the crisis 2008-2009: 2010-2012 (520 observations);
2. the transitional period: 2012-2014 (520 observations);
3. the crisis period: 2014-2015 (374 observations; the lengths of this period is only 1,5 years in comparison with 2 years in previous two periods).

The autocorrelation function analysis gives the following hypothesis (also for the case of Russian companies):

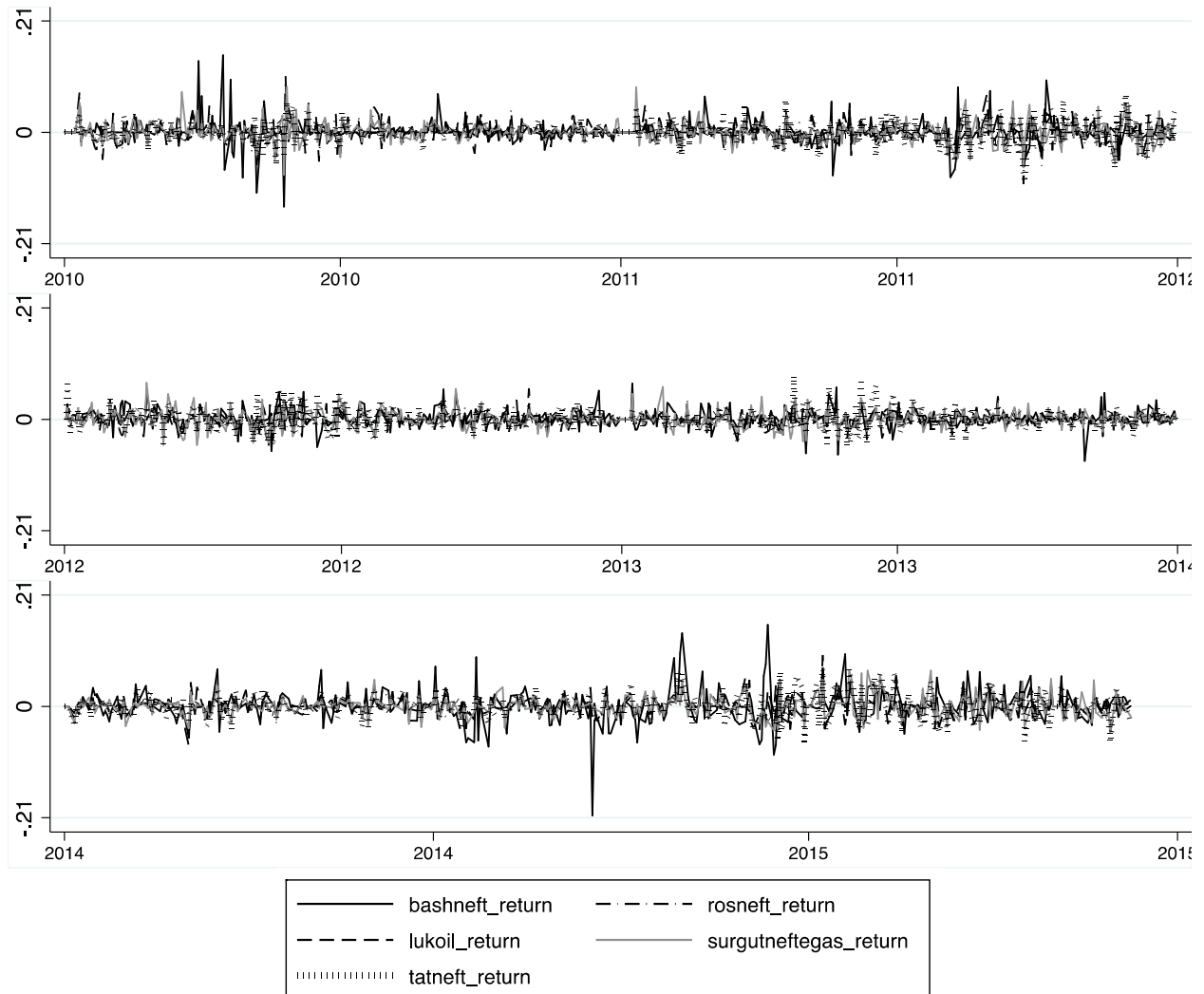
- the bond indexes return time series don't contain autocorrelation;
- the hypothesis concerning the presence of autocorrelation in the dependent variables time series are shortly summarized in the Table 3.

In order to analyse the time series Breush-Godfrey test, Akaike information criterion, Bayesian information criterion (or Schwarz criterion) and Hannan-Quinn information criterion were used. The hypothesis that "the time series are stationary" was also tested with Dickey – Fuller and Phillips – Perron tests and the following list of the variables for the research was built (Table 4).

The model of interconnection between the companies bond indexes return and the main macroeconomic indicators has the following configuration:

$$Y_t = \alpha + \sum_{k=1}^4 \beta_k Y_{t-k} + \gamma_k B_{t-k} + \varepsilon_t,$$

Y_t - the macroeconomic indicator;
 B_{t-k} - the company bond index return;
 ε_t - the error term.



Picture 1. Russian oil & gas companies bond indexes dynamics

4. Results

The results for one pair of the variables for Russian companies is presented in the Table 5. In this case the independent variable is Lukoil bond index return and the dependent variable is the treasury bond index return.

On the base of the Table 5 analysis the following conclusions were made. During the period 2012-2013 the model was significant in general, while the period was not the crisis situation. The significance of the model during the period 2014-2015 and its insignificance during the period 2010-2011 can be explained with the use of economic circumstances. So during the period 2012-2013 the model significance is the financial contagion indicator (the financial contagion had been presented before the crisis 2014-2015 and provoked the crisis afterwards).

Table 3: The hypothesis concerning autocorrelation based on the dependent variables autocorrelation function analysis

Legend: ✗ - "presense"
 ! - "undecided"
 ✓ - "absense"

The variable	The hypothesis		
	2010-2011	2012-2013	2014-2015
<i>treasury_return</i>	✓	!	✓
<i>corporate_return</i>	✗	✗	✗
<i>industry_return</i>	✓	✓	✓
<i>futures_return</i>	✓	✓	✓
<i>open</i>	✓	✗	✗
<i>volumes</i>	✗	✗	✗
<i>interest</i>	✗	✗	✗

Table 4: The variables that are used in the research

The first letter D in the name of the variable shows that this time series was differentiated

The time series	The interpretation
the independent variables – Russian oil & gas companies bond indexes return	
<i>bashneft_return</i>	
<i>rosneft_return</i>	
<i>lukoil_return</i>	
<i>surgutneftegas_return</i>	
<i>tatneft_return</i>	
the dependent variables	
<i>treasury_return</i>	treasury bond index return
<i>corporate_return</i>	corporate bond index return
<i>industry_return</i>	oil & gas companies industry index on Moscow Stock Exchange return
<i>futures_return</i>	Brent oil futures return
<i>Dvolumes</i>	Brent oil futures trade volumes growth
<i>Dopen</i>	oil futures open contracts on the closing of the trading day on Moscow Stock Exchange return
<i>Dinterest</i>	interbank 6 month credit interest Moscow Prime Rate growth

Table 5: The vector autoregression model (VAR) estimation results – the case of the interconnection between Lukoil bond index return and the treasury bond index return

Y	B	γ_1	γ_2	γ_3	γ_4	R^2	p
<i>treasury_return</i>	2010-2011	0.01	0.001	0.005	-0.002	0.02	0.17
	2012-2013	0.02*	-0.002	0.003	-0.003	0.11	0.00**
	2014-2015	0.06**	-0.03	-0.005	-0.01	0.04	0.06*

This table reports the Newey-West t-statistics for the indicated coefficient from the estimation of the VAR, where each VAR is estimated separately for the indicated year. Also reported is the p-value for the F-test of the hypothesis that $\gamma_1 = \gamma_2 = \gamma_3 = \gamma_4 = 0$. In this specification, Y denotes the financial market variable that appears as the dependent variable while B

denotes the independent variable that is bond index return (for Lukoil) in the three periods. The superscript ** denotes significance at the 5% level; the superscript * denotes significance at the 10% level. The sample period is January 1, 2010 to June 8, 2015.

With the use of such results it is possible to separate the distribution of the financial contagion through three channels. And the main conclusion after this is that each channel of the financial contagion distribution is connected with the special strategic plan of the company. Different variables made it possible to distinguish between the main financial markets and therefore between the mechanisms of the financial contagion distribution.

For example, for Russian market the hypothesis H_1 was tested using *treasury_return*, *corporate_return*, *industry_return* and *futures_return* as the dependent variables. The hypothesis H_2 was tested with the utilization of *Dvolumes* and *Dopen* as the explained variables, and the hypothesis H_3 was tested with the application of *Dinterest* as the response variable.

5. Discussion

The results obtained in the survey don't conflict with the results got by the other researches (Longstaff, 2010; Brunnermeier & Pedersen, 2005; Allen & Gale, 2000, Kodres, Pritsker, 2002, Aragon, Strahan, 2009) for US financial market. The financial contagion indicators analysis results can be useful during the company risk management strategy building. For example:

1. If the financial contagion is propagated primarily through the risk-premium channel, the company should expect difficulties in its financial activities (the growth of credit rates, new credits conditions will be able to become more severe);
2. In the case then the financial contagion is promoted through the liquidity channel, the firm's operational activities are under threat. So, the organization should analyse properly its contracts with the partners and look for the potential risks;
3. If the financial contagion is distributed with the help of the information-correlated channel, the company will have problems in its investment activities (because the investment decision risks are mostly interconnected with the negative market dynamic).

The financial contagion itself doesn't mean the crisis, but it usually accompanies it. Also the significant interconnection between the financial market indicators doesn't show that the company has had losses. However, the market indicators negative dynamic leads to uncontrollable deficits for the company in consequence of the systematic risk realization. The risk management means the risk foresight. The organization isn't able to influence on the market, but it can minimize its risks by choosing its strategy professionally if it has got the information concerning the prognostic risk distribution. In other words, the risk is the value of the opportunities missed, and the company should employ its chances on the upper limit.

The systematic risk of the company is conditional upon its inner features, but the company systematic risk reveals itself though the interconnection between its internal properties and the market processes. The market risk traditionally isn't evaluated because it is impossible to count absolutely all the factors that influence company during the assessment. The amount of the factors mentioned should be countable, because the company's sphere of activities is limited, therefore the company faces the final number of factors influencing it. But to pick out certain factors effect is rather difficult, for example, this elements makes indirect or insignificant influence on the company separately, but their quantity is high, and they all together make great impact.

6. Conclusion

One can in some extent judge about the specific risk on the base of the interconnection degree between the market indicators and the company state measures. Exactly this idea lies in the base of this research. Each company would like to use the market risk evaluation in the decision making process.

The research is devoted to the comparative analysis of different emerging markets financial contagion indicators. The financial contagion indicators presented in this paper for the case of the crisis in Russian market in 2014-2015 can be adapted for the other markets and periods and the results are similar. The comparable research has been conducted for Brazilian, Indian and Chinese markets.

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Daria Luzina, National Research University Higher School of Economics at St.-Petersburg, darialuzina@hotmail.com

Elena Rogova, National Research University Higher School of Economics at St.-Petersburg, erogova@hse.ru

The effect of mergers and acquisitions on companies' fundamental values in emerging capital markets (the case of BRICS)

The study is aimed at the assessment of the effect of mergers and acquisitions on the fundamental value of acquiring companies in BRICS countries. The approach based on the residual income model was applied. The pre-acquisition expected fundamental value of the acquiring company and its realized post-acquisition fundamental value are compared.

The study is fulfilled on the sample of 366 M&A deals in BRICS countries, collected from Zephyr, Bloomberg and Thompson Reuters databases. Econometric modeling is applied to reveal factors causing the value creation or destruction among which there were the company's size, the mode of deal funding, the industrial specifics and the method of payment.

Mergers and acquisitions; emerging capital markets; BRICS countries; fundamental value; residual income valuation model.

1. Introduction

Mergers and acquisitions (M&A) are actively being discussed in the academic literature. In these deals, the emerging markets have become a major centre of activity. Currently, companies from emerging markets are involved in every fourth merger or acquisition. The ultimate leader is China; Brazil holds the 3rd place in the ranking of the most active countries, Russia is the 4th. Among the countries with the most attractive targets India (3%) has the same rate as the USA. As for acquirers, a lot of them are also allocated at the emerging capital markets.

From the standpoint of companies initiating M&A, it is crucially important to answer the question whether the net present value of a deal is positive? In this case, the fundamental value of the deal is expected to increase, to the benefit of the shareholders of the acquiring company.

In this paper, the approach based on the residual income model (Residual Income Valuation - RIV) is used to evaluate the effect of M&A on companies' fundamental value. In addition, an econometric analysis of deals' characteristics, affecting the creation or destruction of the fundamental value, is performed.

Thus, the aim of this study is to analyze the effect of mergers and acquisitions on fundamental values of acquiring companies in emerging capital markets. The paper is organized as follows: we provide a literature review related to the research problem and develops hypotheses to test. The third part describes the research methodology and data sampling. At the next part we discuss the results hypotheses testing. In the conclusion the contribution of the research to theory and its managerial implications are discussed.

2. Literature Review

The basis of the RIV model is developed by Ohlson (1995) on the assumption that the fundamental value of a company's equity consists of two components: the book value of equity at the time of the valuation and the discounted flow of residual incomes, which provide the surplus between the fundamental value and the book value of equity.

In (Dechow et. al, 1999) the RIV model was analyzed in terms of its practical implication. Comparing the RIV model with other valuation models, the authors praised its potential for future empirical research. Ferreira et al. (2008) explored the behavior of the three valuation models - the residual income model (RIV), the abnormal earnings growth model (AEG) and the free cash flow model (FCF) – for companies traded at BOVESPA, at 1995 - 2002. The authors conclude that the RIV model had the greatest explanatory power for the period from 1995 to 1999, which could be explained by special features of the Brazilian stock market, with its heavily regulated accountancy, the high rate of concentration at capital markets and prevailing of bank loans as the main source of financing. When in 2000 the market has changed, there was an inflow of companies traded at BOVESPA, and the AEG model has become equal to the RIV model. The FCF was the least productive.

The high explanatory power of the RIV model was confirmed by other studies. Thus, Frankel and Lee (1998) reported that estimates obtained on the base of the RIV model explain more than 70 % of variation of the spatial data. Since the model determines the company's value with such indicators as the book value of equity, net income, and the amount of dividends, the explanatory power of these variables is also very important. The regression constructed for these variables in (Hand, Landsman, 1998) had the R^2 over 80 %. Volkov and Berezinets (2006) tested the accuracy of equity valuation models based on accounting

indicators at a sample of Russian companies in 2000-2005 and argued for the reliability and high explanatory power of the RIV model.

Buhvalov and Akulaeva (2014) made an attempt to search an estimation model for Russian companies, suitable for most sectors of the economy. The authors propose a modification of the RIV model and report the results of its application to Russian companies for 2011 - 2013. They conclude that the fundamental value of companies better corresponds to their strategic value than their market capitalization observed.

Concerning the studies of M&A in emerging capital markets, academics provide controversial results. For India, Mantravadi and Reddy (2008) reported that for the period of 1991 – 2003 these deals led to a slight profitability increase in the financial and banking sectors, while the pharmaceutical, textile and electrical industries were faced with a reduction in operating margins and return on investment. In the chemical and agricultural industries M&A led to a significant decline in both operating margin and return on investment. From the other hand, Rani, Yadav and Jain (2014), who had analyzed the impact of domestic and international mergers and acquisitions on the performance of acquiring companies in the period of 2003-2008, reported that both types of transactions led to an increase in the performance, but the abnormal return of international deals was higher than of domestic ones.

Wong et al (2009) explored the abnormal return of M&A in the Hong Kong, China, Taiwan, Singapore, South Korea and Japan in 2000 - 2007 before, during and after the announcement of the deal. They revealed that in the short-term period information on the deal had a positive impact on share prices. The similar conclusion was made by Chi et al. (2011) on the sample of 1148 deals of Chinese companies for 1998-2003.

Ivashkovskaya, Shamraeva and Grigoriadi (2009) tested the hypothesis on the positive influence of corporate diversification at the company's value at a sample of Brazilian, Russian, Indian and Chinese companies. Results of the study allow to ascertain the prevalence of positive effects on corporate diversification, which confirms the first hypothesis put forward by the authors, that diversification does not lead to the destruction of value.

In an empirical study of the financial sector in BRICS countries Grigorieva and Grinchenko (2013) analyzed the impact of M&A on the value of target companies. In 2000 – 2012 the positive effect of these deals on the value of target companies was confirmed for a short-term time horizon for companies in Brazil, India, China and South Africa. As for the Russian deals, effect was negative. The authors also identified determinants of M&A effectiveness, which were roughly similar for all the countries of BRICS: method of payment, the size of the deal, the presence of intangibles from the acquiring company, experience in M&A and the countries' specifics.

Grigorieva and Troickiy (2012) used an approach based on the financial reportings to evaluate the impact of M&A at the operating efficiency of companies of BRIC countries in 2005-2009 and identified the growth of operating performance (EBITDA / Sales) in two years after the deal completion. Grigorieva and Petrunina (2013) have used both approaches: short-term assessment was conducted by event study, and long-term one - on the basis of the financial statements. Having analyzed 80 deals in emerging capital markets in 2002-2009, they concluded that deals destroyed values of target companies.

Despite some differences in the results, in general, researchers have come to conclusion that M&A have a positive impact at the company's value. In accordance with these conclusions we develop *our hypotheses*.

H1. Mergers and acquisitions in BRICS countries lead to the growth of their fundamental value.

H2. International mergers and acquisitions lead to greater growth of a company's fundamental value of the company than domestic deals.

H3. The size of the acquiring company has a negative impact on the effect on the fundamental value of the company as a result of M&As. Considering economies of scale, it is assumed that smaller acquirer should more benefit from the deal, than larger companies. In addition, smaller target company, the easier to an acquirer is to integrate it into its activities.

H4. The deal size affects negatively at the effect on the fundamental value of the company. It is assumed that the costs of large deals lead to a reduction in the financial and operating performance of the acquirer, which affects negatively on its fundamental value.

H5. Type of transaction has an impact at the fundamental value of the acquiring company.

H6. Type of financial transaction has an impact at the fundamental value of the acquiring company.

H7. Deal payment in cash has a positive effect on the fundamental value of the acquired companies. It is assumed that, in comparison with payment transactions via debt and equity transactions, payments in cash are easier to perform that helps to improve a company's financial performance.

H8. Deal payments via debt or shares lead to the destruction of the fundamental value of the acquirers.

H9. Deal payments with deferred payments or earn-outs lead to the creation of the acquirers' fundamental value. It is expected that such payments reduce the risk of adverse selection, because the second part of the payment depends on the operating results of target companies.

H10. The industry affiliation has an impact on the fundamental value of the acquirer.

3. Methodology and Data Sampling

The impact of M&A deal at the company's fundamental value is determined with the difference between the expected fundamental value of the acquirer before the deal (pre-acquisition expected fundamental value) and a fundamental value of the company after the transaction (realized post-acquisition fundamental value). The basic model for the study is the residual income valuation model (RIV). The fundamental value is the present value of the expected dividend payments:

$$V_t = \sum_{i=1}^{\infty} \frac{E_t[D_{t+i}]}{(1+r_e)^i}, \quad (1)$$

where V_t is the fundamental value of equity at the moment t , $E_t[\cdot]$ is the expected mean based on information available at moment t , D_{t+i} – dividend payments at $t+i$, r_e denotes the cost of equity.

Changes in the book value of equity are reflected in the financial statements as follows:

$$B_t = B_{t-1} + NI_t - D_t, \quad (2)$$

where B_t , B_{t-1} is the book value of equity in periods t and $t-1$, NI_t denotes the net income at t , D_t denotes dividend payments at t .

By combining expressions (1) and (2), we obtain the following equation:

$$V_t = B_t + \sum_{i=1}^{\infty} \frac{E_t[NI_{t+i} - r_e \times B_{t+i-1}]}{(1+r_e)^i} - \frac{E_t[B_{t+\infty}]}{(1+r_e)^\infty}. \quad (3)$$

It is assumed that the last part of the equation (3) equals to zero. The second term of the equation is the present value of future residual incomes. Thus, the fundamental value is the sum of the book value of equity and present value of future residual incomes:

$$V_t = B_t + \sum_{i=1}^{\infty} \frac{E_t[NI_{t+i} - r_e \times B_{t+i-1}]}{(1+r_e)^i}. \quad (4)$$

For practical application, equation (4) requires a time horizon, based on the assumption on a terminal value. To do this, we modify the model as follows:

$$V_t = B_t + \sum_{i=1}^{\infty} \frac{E_t[NI_{t+i} - r_e \times B_{t+i-1}]}{(1+r_e)^i} + \frac{E_{t+T}[NI_{t+T} - r_e \times B_{t+T-1}]}{(1+r_e)^{i+T-1} \times r_e}. \quad (5)$$

The evaluation of the impact of a merger or acquisition at the fundamental value is based on the equation (5). For the forecast period, four reporting periods from the date of the transaction were assumed. To obtain the fundamental value of the acquiring company after the deal (V_{post}), equation (5) has been modified as follows:

$$V_{post} = B_{-1} + \frac{NI_0 - r_e \times B_{-1}}{(1+r_e)} + \frac{NI_1 - r_e \times B_0}{(1+r_e)^2} + \frac{NI_2 - r_e \times B_1}{(1+r_e)^3} + \frac{NI_3 - r_e \times B_2}{(1+r_e)^3 \times r_e}. \quad (6)$$

The first term represents the value of equity in the period -1, the last accounting period before the merger. Period 0 is the year of companies' consolidation, the first reporting period after the transaction. The fifth term describes a terminal value, which equals to the excess profits of period 3, discounted at infinity.

M&A are often accompanied by the issue of new shares for the shareholders of the target company. Issue of new shares may increase the total company's fundamental value while reducing the fundamental value of a share. Thus, for more reliable results it is reasonable to focus on the impact of the deal at the fundamental value per share as follows:

$$V_{post} = B_{-1} + \frac{EPS_0 - r_e \times BPS_{-1}}{(1+r_e)} + \frac{EPS_1 - r_e \times BPS_0}{(1+r_e)^2} + \frac{EPS_2 - r_e \times BPS_1}{(1+r_e)^3} + \frac{EPS_3 - r_e \times BPS_2}{(1+r_e)^3 \times r_e}, \quad (7)$$

where BPS denotes the book value of equity per share, EPS are net earnings per share.

To avoid dirty surplus effects in defining the company's fundamental value after the deal, the first and second terms of the equation (7) are later replaced with the book value and dividends (dividends per share, DPS) for period 0 (Penman, 2007):

$$V_{post} = \frac{DPS_0}{(1+r_e)} + \frac{BPS_0}{(1+r_e)} + \frac{EPS_1 - r_e \times BPS_0}{(1+r_e)^2} + \frac{EPS_2 - r_e \times BPS_1}{(1+r_e)^3} + \frac{EPS_3 - r_e \times BPS_2}{(1+r_e)^3 \times r_e}. \quad (8)$$

To calculate the pre-acquisition expected fundamental value, we construct the same components as in equation (8) for the year prior to the transaction (-1):

$$V_{pre} = \frac{E_{-1}(DPS_0)}{(1+r_e)} + \frac{E_{-1}(BPS_0)}{(1+r_e)} + \frac{E_{-1}(EPS_1 - r_e \times BPS_0)}{(1+r_e)^2} + \frac{E_{-1}(EPS_2 - r_e \times BPS_1)}{(1+r_e)^3} + \frac{E_{-1}(EPS_3 - r_e \times BPS_2)}{(1+r_e)^3 \times r_e}. \quad (9)$$

Expectations in the equation (9) are based on the assumption of the absence of the deal (or lack of information on it). Comparison of equations (8) and (9) provides an estimate of the impact of M&A at the fundamental value per share of the acquiring company:

$$\Delta V = V_{post} - V_{pre}. \quad (10)$$

To make this assessment comparable for different companies use the percentage increase in value is used as follows:

$$\% \Delta V = \frac{(V_{post} - V_{pre})}{V_{pre}}. \quad (11)$$

For valuation of the pre-acquisition value future earnings per share (EPS) were calculated by multiplying the forecast of return on equity (ROE) at the predicted value of the book value of equity per share (BPS) at the beginning of the year for each future period. For a forecast of ROE an average ROE of the acquiring company in period from -3 to -1 were used (Frankel, Lee, 1998).

The book value of equity per share for the period 0 is calculated as the book value of equity per share for the period -1, added to the predicted value of EPS and diminished at expected dividends of the period 0. Similar calculations are made for other periods.

For calculation of future dividends per share the expected value of EPS is multiplied at the expected dividend payout ratio. Dividend payout ratio is calculated as the average of dividend payout ratios for periods from -3 to -1. The period where the income is negative is excluded from the calculations. If the company carries losses at all pre-acquisition periods or if the predicted value of EPS is negative, it is assumed that future dividends equal to dividends for period -1.

As the cost of equity (r_e) we used a time-varying discount rate for every company calculated on the base of the CAPM. To reflect the specifics of emerging capital markets, the country risk premium was calculated in accordance with the approach proposed by Damodaran (2009). As the risk-free rate of return the US Treasury bonds were applied. The cost of capital calculated for the period -1, is used to calculate the expected pre-acquisition fundamental value, whereas for the calculation of the post-acquisition fundamental value the average value r_e for periods 0-3 is considered.

If the terminal value is negative, it is replaced by a null value. If acquirers cease their existence within four years after the transaction, then the year of "death" is taken for the final period of the analysis.

For data sampling database Zephyr (Bureau van Dijk) was used. To collect financial information on companies, databases Thomson Reuters Advanced Analytics and Bloomberg were used, as well as financial statements of the analyzed companies. The sample included deals completed from January 2009 to March 2012. For the formation of the final sample following criteria were used: acquirers should be public companies whose shares are listed on the stock exchange. We considered only completed deals with the minimum size of USD 100 million. The sample included 473 deals but, due to the absence of some data, it was reduced. The groups of deals made by acquirers in the short term (up to 1 month) have been combined and further treated as a single deal. The final sample consists of 366 deals (Fig. 1).

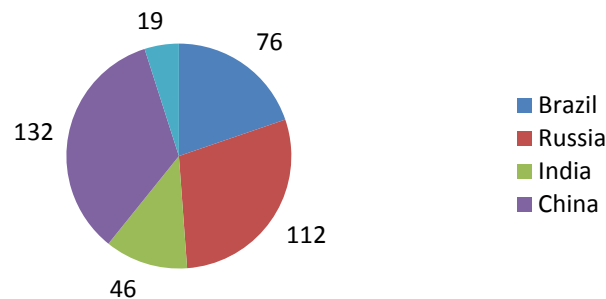


Fig. 1. Distribution of deals in the sample according to their countries

4. Results and Discussion

Table 1 demonstrates the results of calculating the effect of deals on the fundamental value per share: the positive effect of the transaction at $\Delta V > 0$, and a negative effect at $\Delta V < 0$.

As a result, of 366 analyzed deals, 295 (80%) led to an increase of fundamental value per share, while 71 deal led to the destruction of the value. Thus, the hypothesis 1 of this study cannot be rejected.

To assess the influence of various characteristics of the deal at its effect expressed by ΔV (equation 10) the following regression equation was estimated by OLS:

$$\text{difinvalue} = \beta X_i + \varepsilon_i, \quad (12)$$

where ΔV is the dependent variable, calculated value of the difference between the fundamental value per share of the acquirer before and after the deal i , β denotes the vector of parameters; X_i is the vector of independent variables, characterizing the deal i ; ε_i is the model error. A complete list and description of the variables is presented in Appendix.

Table 1
The deal effect on acquirers' fundamental value

Country	Total number of deals	Positive effect ($\Delta V > 0$)	Negative effect ($\Delta V < 0$)
Brazil	76	57	19
Russia	97	76	21
India	46	38	8
China	128	106	22
South Africa	19	18	1
Total	366	295	71

Despite the presence of significant factors in the OLS-model, its effectiveness is dubious. First, the dependent variable of the model cannot be compared for different companies and different deals, due to incompatibility of their absolute size. In this regard, we also used as the dependent variable the relative increase in value for each of the acquirers (equation 11), but in this case none of the evaluated factors has proved its significance. Also, because of the low coefficient of determination (0,16), the explanatory power of the OLS model is low. Then, it is impossible to judge on the adequacy of the obtained coefficients of the model, due to their very high values that makes them incompatible for different deals.

To improve the results, we applied binary choice model with the dependent variable as the qualitative effect of the deal, the creation or destruction of the fundamental value of the company per share as follows:

$$\text{Eff}_i = \gamma Z_i + \varepsilon_i, \quad (13)$$

where γ is the vector of parameters; Z_i means the vector of independent variables, characterizing the deal i ; ε_i is the model error.

The evaluation was performed in two modes. Mode 1 applied less number of explanatory variables (thus, it does not take into account a number of quantitative variables and the variables describing the method of deal payment), but covers all transactions in the sample. Mode 2 considers all the variables listed in Appendix, but due to lack of data on some of the characteristics estimated, sample is reduced to 259 deals. For better interpretation of the results, we calculated the marginal effects for factors Z_i . The combined results of evaluating the deal effect are demonstrated in Table 2.

By comparing the results of modeling, it is revealed that following factors have a significant impact at the creation or destruction of the fundamental value per share.

Deal type. According to the results of two models of binary choice (mode 1), deals related as acquisitions (dtypeacq), have a negative impact on the probability of creating a fundamental value for the acquiring company.

The method of deal financing. All four models of binary choice report that the deal funded with the capital increase (dfincspincr) improves the probability of a positive effect on the company's fundamental value.

Sector of economy. Models of binary choice have shown the negative impact for acquirers in the chemical industry (iduschem). This result correlates with the findings of Mantravadi and Reddy (2008). A similar effect is observed for the oil and gas companies (indusoilgas) and to the steel-processing industry (indussteel). If an acquirer is operating in the coal industry (induscoal) and real estate (indusrealest), there is a greater likelihood of creating fundamental value as a result of M&A. So the hypothesis 10 is confirmed.

Table 2
Total results of models estimation

Variable	OLS, sign	Binary logit model, mode 1: marginal effect	Binary logit model, mode 2: sign	Binary probit model, mode 1: marginal effect	Binary probit model, mode 2: sign
dtypeacq		-0,092(***)		-0,189(***)	
dtypecapincr	+ (***)			-0,808(***)	
dtypeminorst	+ (**)			- (**)	
dfincapincr		0,234(***)	+ (***)	+ (***)	+ (***)
dfinconvert	- (***)			+ (***)	
dfinprivplac	- (***)			+ (***)	
indusbank	+ (***)				
induspow	- (**)				
induschem		-0,154(***)	- (***)	- (***)	- (***)
indusoilgas		-0,279(***)	- (***)	- (***)	- (***)
iduscoal			+ (***)		+ (***)
indusrealest			+ (***)		+ (***)
indussteel		-0,383(***)	- (***)	- (***)	- (***)
industelec					+ (***)
indusfinsvcs				+ (***)	
dmpaymconvdt	- (**)				
dmpaymdefpaym			+ (***)		+ (***)
dmpaymdtassum					- (**)
dmpaymeout			+ (***)		+ (***)
predmarkcap			+ (*)		+ (*)

Note: In brackets the level of significance is marked: *** - 1%, ** - 5% * - 10%

Method of deal payment. As a result of a binary choice model (mode 2) deals paid through deferred payment (dmpaymdefpaym) and earn-out payment (dmpaymeout), have a greater chance of creating a fundamental value for the acquiring company. Thus, the hypothesis 4 cannot be rejected at the 1% level of significance. This result contradicts the conclusion by Grigorieva and Grinchenko (2013), who had come to the conclusion that the cash payment has a positive effect on the value.

Quantitative factors. Models of binary choice (mode 2) shown that acquiring companies with greater market capitalization before the deal (predmarkcap) have a greater chance of creating a fundamental value. If we assume that the market capitalization is the characteristic size of the company, this result is also different from the results by Grigorieva and Grinchenko (2013), which revealed negative dependence of the size of the acquirer and the deal effectiveness. Thus, the hypothesis 3 is rejected at the 10% significance level.

Deal country of origin turned out to be insignificant in all the models, which does not allow, in the framework of the research, to test the hypothesis 2.

With regard to other significant covariates there are contradictions in different models that do not allow asserting their influence on the dependent variable.

As a result of empirical research, it revealed that mergers and acquisitions in BRICS countries lead to an increase in the fundamental value per share of the acquiring company. There were also defined the factors that have a significant impact on the effect of mergers and acquisitions, resulting in a higher probability of value creation. These include: transaction type, company size, industry affiliation, way of deal financing and the method of payment.

These results have not only theoretical but also practical importance, since they allow the financial management of companies operating in emerging markets, including Russian, to design and implement mergers and acquisitions so as to create value for investors.

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Appendix

List of variables for the regression model

Variable	Description		
Dependent variables			
difinvalue	Effect of M&A deal at the acquirer's fundamental value per share (equation 10)		
Eff	Effect of M&A deal impact at value creation or destruction: 1 – if $\Delta V > 0$; 0 – if $\Delta V < 0$		
Covariates			
dom	Deal's country of origin: 1 – domestic deal (acquiring and target companies are from one country); 0 – international deal (acquirer and target are from different countries)		
comdealyr	Year of the deal: 2009-2012		
dealval	Value (size) of the deal, thousands of Euro		
dtottargval	Value of a target company, thousands of Euro		
modfeeinc	Premium paid for an acquisition, thousands of Euro		
acqstake	The stake acquired via the deal, %		
predmarkcap	Market value of an acquirer before the deal, thousands of Euro		
Dummy variables	1 – matching the type; 0 – others		
Deal type			
dtypeacq	Acquisition	dtypecapincr	Capital increase
dtypeminorstake	Acquisition of a minor stake		
Deal financing			
dfincapincr	Capital increase	dfincapinj	Capital injection
dfinconvert	Convertibles issue	dfinnewbankfac	New banking financing
dfinprivplac	Private placement		
Sector of industry			
indusairtrans	Air transportation	indusbank	Banking
induschem	Chemicals	induscoal	Coal manufacturing
ndusconstrsup	Construction materials	indusfinsvcs	Financial services
ndusfdproc	Food processing	indusmach	Machine building
indusmetmin	Metals mining	indusoilgas	Oil and gas
induspow	Energy production	indusrealest	Real estate
indussteel	Metals processing	industelec	Telecommunications
Method of deal payment			
dmpaymcash	Cash	dmpaymconvdt	Convertible debt
dmpaymdtassum	Debt	dmpaymdefpaym	Deferred payment
dmpaymeout	Earn-out	dmpaymshar	Share-paid

**Markova T.L., Ural State University of Economics, Business Foreign Languages
Department
tmark@mail.ru**

**Glazkova I.G., Ural State University of Economics, Business Foreign Languages
Department
glazir@mail.ru**

Distance learning of foreign languages: developing and monitoring programs

Annotation: The purpose of this paper is to identify the key challenges business students may face in their online language learning experience and make suggestions on how to ensure successful implementation of language e-learning at higher schools. Cost-effectiveness as well as flexibility of time, pace and place of learning is a big promise made by distance learning. Yet, despite obvious advantages, the research carried out at the Ural State University of Economics on distance learning argues that language e-learning is most likely to fail the expectations of business students and language instructors unless there is used a blended approach with a compulsory classroom language learning component. This will enable language instructors to address the main concerns of distance language learners.

Key words: distance language learning programs, business education, blended approach.

1. Introduction

Online education being the fastest growing sector of higher education, tertiary institutions and business schools throughout the world are introducing technology-delivered education into their curricula. Currently, online education is growing in popularity both on and off campus. Even well established and reputable business schools with “a long tradition of face-to-face, discussion-oriented education” are seeking for the ways to integrate online component into their teaching and learning process (DeLacey and Leonard, 2002). This trend is brought about by obvious opportunities technology-enhanced education can deliver, including time, space and place flexibility resulting in higher enrolment rates and cost effectiveness. Yet, despite the fact that education is becoming increasingly technology-driven, researchers are concerned whether distance-learning programs are able to completely replace traditional teaching patterns (Kuzminov and Philonovitch, 2004). This also holds true for distance foreign language learning.

Proficiency in a foreign language or languages is a must for graduates of universities and business schools. Global heavyweights in business education set high standards for professional (English) language and cross-cultural communication skills. These can considerably enhance international career prospects and employment opportunities. Therefore, language instructors at Russian higher schools are to design foreign business language programs so that to fully reveal the educational and communicative potential of online distance learning. To achieve this goal university educators are to overcome the main challenges of distance language learning, which are isolation, lack of control and immediate feedback.

In virtual environments, language students have to take responsibility for their own learning and to meet the demands of the learning environment in autonomous and strategic way (Walker & Haddon, 2011). Autonomous learners are to learn how to take responsibility for setting goals, planning and evaluating learning rather than only control such aspects of their study as time, pace, scope and place.

Another important issue for e-language students is lack of motivation due to the challenges of learning a language by distance. Researchers argue that motivation is impacted by course, method, support and technology-related factors (Harris, 1995). Others point out that “technologies per se neither motivated nor satisfied students” (Bekele, 2010), contents, methods and support services being reportedly crucial. Failure to achieve motivation leads to the feeling of isolation, which in its turn, triggers negative emotions, demotivation and anxiety.

We argue that foreign language e-learning should be tightly integrated with classroom learning in a blended approach.

2. Literature review

Blended learning is a rich and complex concept. There are almost forty cases and models of blended learning throughout the world (Bonk and Graham, 2005). Unlike distance education, blended or mixed-mode or hybrid education “capture the idea of using face-to-face and ICT instructional tools in conjunction with one another” (Altbach et al, 2009). The Sloan Consortium defines a blended course as the one in which “online course activity replaces at least 30 percent of required face-to-face meetings”. The definition emphasizes the fact that blended courses “integrate online with traditional face-to-face class activities in a planned, pedagogically valuable manner.” Thus, blended education uses online technology to not just supplement, but transform and improve the learning process. Many researchers argue that blended learning offers potential for improving the manner in which we deal with content,

social interaction, reflection, higher order thinking, collaborative learning (Norberg, Dziuban, & Moskal, 2011).

Although how best to “blend” seems to be quite challenging (Moskal et al., 2013), blended courses are used to accommodate the needs of students, faculty and the institution. For students these courses offer flexibility both in time and space. The online elements of blended courses enable them to reduce logistics demands, thus fitting easily into students’ busy lifestyles, while face-to-face elements encourage them to maintain the campus, faculty, and student interaction. It is lack of face-to-face experience that most students in fully online courses find most demotivating (Dziuban et al., 2011). Yet, students may become critical of the way time is spent in the classroom and develop opinions as to what activities could be done online and what might be done better in person.

Blended course is the best option for delivering effective language learning for a number of reasons. Importantly, the success in language learning depends on frequent exposure to the target language. Not surprisingly, foreign language classes that are more closely spaced tend to be more effective than those separated by large intervals (Serrano, 2011). Blended learning can effectively decrease intervals between study sections and increase the total amount of time a student spends studying English over the week compared with typical compulsory English courses (Fryer et al, 2014, 27).

Apart from increased exposure time, blended courses enable teachers to influence students’ autonomous learning both inside and outside the classroom. Research evidence has suggested that the quantity and quality of students’ autonomous use of technology are impacted by teachers’ instructional practices, encouragement and guidance. Students quite often lack a sophisticated understanding of the educational potential of technological resources, of the variety of technological resources they could utilize and of how to use technological resources effectively for learning. Therefore, students’ learning beyond the classroom is sure to improve, if teachers incorporate in-class technological activities that could be continued at home (Lai, 2015). Moreover, teachers’ encouragement and support shape both the quantity and the quality of students’ autonomous use of technology for learning outside the classroom (Carson & Mynard, 2012). So, teachers tend to play a key role in facilitating learners’ self-directed use of technology for language learning.

One more issue to resolve concerns motivation. This is one of the most important learner-related dimensions, which have a bearing on how learners interpret, relate and respond to the learning context (White, 2008). Substantial motivational problems persist with any form of independent study, regardless of whether it is traditional paper-and-pencil homework or online assignment. Yet, motivation is considered to be a critical condition for productive learning. It affects the acquisition and demonstration of higher-order thinking skills as well as the scalability and sustainability of virtual learning environments (Silktide, 2006). In a blended language course, classroom activities must be designed so as to improve students’ value for the online study component (Fryer, 2014). This can be achieved, for example, by integrating previously learned content into classroom instruction.

3. Research methods

Ural State University of Economics is one of the biggest institutions in the Ural region with about 25,000 students. The university has an annual enrollment of approximately 5,000 students and provides baccalaureate and graduate degrees in Yekaterinburg and many small town and rural areas in the region. For about 7000 students every year get their education at the university on-line.

This research study consisted of an on-line survey designed to identify the main problems and issues of learning foreign languages on-line and to understand how the use of technology

affects self-directed language learning outside the classroom. The study attempted to reveal the demands of language learning without the mediating presence of a teacher in the classroom.

3.1 Data Gathering

Second year foreign language students in their fourth semester were selected to take an on-line survey. These students were chosen due to their familiarity with the distance-learning program offered through the university. In March 2015, the researchers from Business Languages Department worked in combination with the University Distance Learning Department to collect the quantitative data using an online link of the university email system. The questionnaire took approximately 15 minutes to complete and all responses were anonymous and confidential.

3.2 Instrument

The online questionnaire had 23 questions including 4 questions with a 5-point Likert scale, ranging from 1= strongly disagree to 5= strongly agree. In some questions, the “not applicable” variant was used. The questions were based on the results of the literature review. The questionnaire focused on e-learning awareness, online language learning issues, self-assessment issues and motivation challenges. Basic demographic information was also collected from the students.

4. Findings

4.1 Demographic Profiles

The study included 155 students aged from 19 to 46 years old. They come from 27 big and small towns of the Ural region as well as 4 other larger cities (of around a million people) of Russian Federation. The vast majority of student-participants were female (71, 6%) which may be explained by the gender composition of the university. There are professional programs at the university, which traditionally attract female students such as accounting, food technology, and quality management. While the students in other fields such as Finance, Law, Labor Economics, International Management and Economic Security tend to skew more male. Most of the students get their professional education fully through distance learning (including online learning of a foreign language) – 80%, a part of them are involved in correspondence education – 16,1 %, the rest of students belong to such form as “ accelerated education”. It is also worth noting that the majority of students combine their work and study (92, 9%), and of those, 83, 9% have full time jobs.

4.2 Data Analysis

The participants were asked about their motivation for using distance learning. The top three reasons for online language study included the possibility to combine work and study (68, 4%), the possibility to get an education at home (46,5%), and the choice of training time (16,1%). Among other reasons, they named flexibility in choosing the workload (5, 2%) and reasonable tuition fee (8, 4%). Since students had more than one choice for their basic motivation, their total responses are a combination of two or even three reasons.

The collected data illustrates that in many ways students’ expectations motivated them to choose an online foreign language study were met. They highly evaluate just the same points that were mentioned in motives – they really have flexibility in training time. On the 5- point scale 49, 7% of students marked “strongly agree” and 27, 1% marked “agree”. The majority of them met the expectations as well in flexibility of choosing the workload (respectively “strongly agree” and “agree” are 41, 3% and 29%) and possibility to study at the place of

residence (45, 8% and 18, 1%). These results showed the justified increase in popularity of distance learning among people of different age groups and living in rural areas.

The participants were found to hold positive perceptions of the usefulness of technological resources for language learning and were quite confident about their abilities to use the technology. One of the reasons for their satisfaction was the level of technological support provided by the university (the students' call-centers). Fifty eight percent of the students rated support services from good to excellent, so these positive views about technology-enhanced learning need to be supported and promoted. However, there is a lot of room for improvement by the university technical staff. The research revealed the controversy between students' willingness to use online resources and their negative evaluation of personal progress in language proficiency. A wide range of resources and media available to students in online language learning include the website of the university (51,6%), individual teachers methodical materials (45,2%), websites of the open access (60%), online textbooks edited in Russia (21,9%) and abroad (7,1%). Such learning environment demands from the student ability to utilize these resources effectively. At this point, we face the first conflict issue in the survey. Though almost half of the students (46, 5%) agreed with the statement that "This method of learning has helped me realize that I am capable of organizing and carrying out autonomous learning", many of participants (43, 9%) say that "My level of motivation with regards to learning English hasn't experienced a positive change". They also did not agree that "The system of independent work with software allowed me to have more opportunities to develop my linguistic abilities than a traditional class" – about half of students (44,5%) say "no" and the third part of them (33,9%) say that they are "not confident". In fact, these responses supported our main hypotheses that studying in isolation presents a crucial barrier to their learning. Among difficulties which students face while learning online they name "high degree of self-learning" (52, 9%), lack of teacher control (23, 2%), lack of emotional communication with the teacher (27,7%) and 11% of participants say directly about the "sense of isolation" and feeling need in more interaction with other students. Studying "without a teacher in the classroom" heightened this sense and meant limited opportunities to receive feedback or have questions answered straight away in spite of the fact that students positively assess opportunity to get additional consultation from the teacher. Here we see issues that depend mainly on the teacher: encourage and guide students how to use resources and organize interaction between individual participants of online language course.

Strategies to enhance language learning often relate to the four skills: listening, speaking, reading and writing. Participants were asked, if they have noticed any changes of online learning over time and evaluate their progress in the named skills. The results show an approximate parity of positive and negative evaluation if we take into account that besides "yes" and "no" answers there was "can't assess it" variant. Progress in speaking was positively assessed by 41, 3% of the participants, 27, 7% of them did not improve, and the remaining 31% could not say definitely. The same effect of improving listening skill mention 44, 5% of participants, in comparison with those who answered "no" (34, 5%) and those who have difficulty in assessing (20, 6%) they present relatively equal "positive" and the other group. The students in regards to their reading skills showed better results. While 40% didn't perceive any progress or were not certain, 59,4% agreed that they had improved. Unfortunately, only 38, 7% of respondents noticed positive changes in their writing skills. High level of doubt and uncertainty in self-evaluation of language skills by respondents showed that teacher guidance and feedback are critical.

In general 44% of the participants considered distance learning of foreign languages a useful experience, though a relatively close number of them (34,8%) thought that online learning was not more effective than the traditional model or the blended courses combining online and face-to-face classroom activity. Ultimately, the idea associated with good language

learning in participants' opinion is implemented equally in blended learning and in-class activity but not in fully online study. The respondents' preferences were obvious in their answers to the question "What would you prefer if you had an opportunity to choose the form of learning a foreign language at this very moment?" Fully online distance learning was preferred by 20% of them, traditional in-class study was attractive for 36,8% of students, blended learning was preferable for 36,1% of participants and 7,1% were not sure. In their views, satisfaction and achievement would be higher if they were more involved in communication with classmates partly (as in blended courses) or fully (as with classroom activities).

5. Conclusion

In conclusion, the results of our survey showed that while students enjoy the convenience and cost effectiveness of distance learning, they were not fully satisfied with their experience. Distance learning will continue to play a pivotal role in higher education; it is necessary to determine the best practices to ensure that students' needs are being adequately met. Based on this limited research study, the following suggestions should be considered when designing an online language course.

The university authorities are to consider the needs of their students, who are willing to be engaged in face-to-face along with online language learning. To accommodate these needs the class design should be different to include several things. Since the students fail to monitor their progress accurately, they should be trained how to self-assess. The next consideration concerns the feeling of isolation, which can be offset by classroom activities that encourage them to interact and cooperate with each other at a distance. Finally, the faculty should develop a distinct program that will address the students need for guidance on how to access, navigate and utilize technological resources.

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Ju. E. Neumann
Senior Lecturer, Department of Business English
Saint Petersburg State University.
neyman-yulia@yandex.ru

THE FORMATION OF PROFESSIONAL COMPETENCES IN THE SPHERE OF MANAGEMENT

Abstract: This research investigates into the ways of presenting specific professional knowledge in the sphere of management through the course of academic and business language studies without being supported by the native language. The process of language learning is described from the point of view of the competence-based approach. The importance of the Foreign language business communication competence as a combination of communicative competence and professional knowledge is considered to be one the main outcome of the successful learning process. The common problems which occur during the process of learning are classified and the possible solutions for them are offered.

Keywords: *professional competences, content-and-language integrated learning, emotional intelligence, competence of business communication.*

Developing the ability to speak foreign languages is nowadays an important part of learning for the students of all educational programs, irrespectively from their future professions. The ability to communicate clear messages in foreign language and to be well-understood during the participation in the exchange-programs and international seminars as well as being able to perform in the international business sphere affects the future success of the alumni to a great extent. However, communication, even in language-specific spheres, is not constrained to the simple number of phrases and rules, typical for the official or academic style, it is also influenced by many other factors, such as the level of development of different competences, needed for a particular type of communication and other crucial details of the situations in which communication occurs. Therefore the changes in the educational programs are being made in order to develop these skills and abilities for the future specialists in a more thorough way. Especially the demand for the well-formed abilities and competences can be seen in the field of management, where misunderstanding on the senior level can cause serious financial damage and even put the welfare of a company under the risk.

The need for the development of the communicative abilities can be explained by the fact that these are the necessary components of the communicative culture of all managers as from 50 to 90% of their working time is spent on communication. American scientists conducted surveys which revealed that 73% of the American, 63% of English, 85% of Japanese managers consider communication failures to be the main problem preventing their companies from effective functioning, and mistakes made in exchange of information were named among one of the most complex problems reducing productivity of the companies [1]. Living in the epoch of globalization has caused the similar processes in Russia as well.

That is why today in the number of the documents of the 3rd generation of Russian State Educational Standards such competences for managers are listed:

1) «the ability to use Russian and any foreign language fluently as a source for communication», or

2) «the ability to participate in communication on the business and social level; ability to speak fluent Russian and, at least one of the foreign languages, as a source for a language-specific communication».

The communicative abilities mentioned in other regulative education-related sources can be even more vague and cumbersome but what unites all of them is the fact that they underline the need for the development of skills in terms of the competence-based approach. Apart from that the importance of the language-specific communication is increasing.

The aim of this research is to investigate into the ways of presenting specific professional knowledge for students receiving their education in the sphere of management through the course of academic and business language studies without being supported by the native language. What is meant by not being supported by the native language is education in foreign language which leads to the formation of a second linguistic identity [2]. In order to solve the aims of this research the following methods were used:

- theoretical (the analysis of regulations in education; the analysis of pedagogical literature on a research problem);

- empirical methods (supervision, experimental studying, polls, questionnaires, (selection of a training material, creation of lexical and grammatical tests, control measurement of knowledge, self-assessment method, statistical methods of data processing).

The typical feature of such bilingual education is putting the students into the circumstances highly-related to the real-life situations, determined by the sphere of communication. Among the situations only the useful ones from the pragmatic point of view are being taught, such as:

- giving lectures,

- listening to the lectures,
- taking part in tutorials,
- delivering presentations and so on - if we are talking about academic language;
- taking part in business-meetings,
- delivering business-presentations,
- taking part in job interviews and so on - for the business communication, respectively).

Such a way of receiving linguistic knowledge together with situational background can be called "applied art". Processes of the integration in educational systems of many countries have made an approach called CLIL very popular in modern pedagogics – an abbreviation which stands for – Content – and language integrated learning. This concept implies that some subjects are taught in foreign languages. It results in the fact that the foreign language from the object of learning becomes also its major means [3]. This approach is more progressive in comparison with traditional teaching of the foreign language for the special purposes, as it focuses not only on linguistic competence, but allows to take into account professional, linguistic and intercultural components of the education simultaneously. Being involved into the thinking process in foreign language enables the students to develop their cognitive skills, learn language-specific lexical and grammatical units in a more efficient way, practice both perceptive and productive language skills and even certain patterns of behavior. That is why such study can be called a combination of linguistic and extra linguistic information. The results of the education imply the ability to use the foreign language in the needed spheres as successfully as it could be with their native language.

Quite often, as a result of this process, there occurs a shift from the topic-based structure of a unit to a competence-based structure of a unit. The benefit of this shift is the possibility of practicing of various necessary skills and competences throughout the same educational module in different communicative situations, which are in less strict dependence with a topic of a lesson than in traditional teaching.

Speaking about the amount of competences, which are in focus of development during such studying, among the main ones, can be called those, lying in the field of interpersonal skills (communicative competence, ability to stay in good, polite relationship with each other). From the analysis of the professional sources for managers [4], it became clear that for the good productivity of the managers it is especially important for them to be able to communicate with the others in a friendly manner, to create a good working atmosphere, to establish a long-term partnership with other people both inside and outside of the organization. In fact it turned out to be even more important than some of their professional skills. Among the crucial abilities are the following: understanding the information, ability to persuade and also ability to work in team. All this shows us an existing demand for the development of a successful communicative strategy for the better language learning of the managers. This can be done by the activation of a psychological, rhetorical and linguistic components of the learning.

All in all, nowadays we can observe the high demand for what is called "emotional intelligence" as for the ability to recognize one's own and other people's emotions, to discriminate between different feelings and label them appropriately, and to use emotional information to guide thinking and behavior [5]. Emotions are the necessary part of human communication, and business communication today implies not only information exchange, but also small-talks and other forms of politeness, that is why students need to be taught to express them in an appropriate verbal form.

Therefore the Competence of business communication as a combination of communicative competence and professional knowledge can be considered to be one of the main outcomes of the successful learning process for the future managers.

The need for the allocation of the Competence of business communication into a separate category is caused by the demand to consider competence of business communication as the ability to interact with the others using a foreign language within the profession. It's the new unit of measuring of the language abilities considering at the same time knowledge, linguistic skills, experience and their application in practice. There are 4 components in the structure of the Competence of Business Communication:

- Informative component - the content of communication plays a crucial role in business life, any ambiguity in business relations isn't welcomed.
- Axiological component - the component serves as an important addition to the informative one– any information, anyway is analyzed and estimated depending on the common cultural, national, corporate values and is presented in the light of the corporate values shared in the organization.
- Suggestive component - is about the persuasiveness and it combines linguistic components, such as clear argumentation, communication strategies together with extra linguistic factors needed for the successful manager (gestures, mimics, manners).
- Behavioral component - the most difficult, also includes the main behavior patterns, typical for the role played by a person in the organization.

Among the possible tasks in order to develop these aspects of the competence of business communication the following ones can be used (as examples):

- Informative component - listening to podcasts, related to the business topics:
This is quite a new form of language learning, based on searching and finding the videos and audio-tracks in the Internet, devoted to a certain topic. The main positive point here is the relevance of the obtained information and possibility also to practice the skills of its searching and analysis. Listening can be done together or in separate groups, after the listening students receive tasks on vocabulary units or take part in a discussion of the topic.

Example: Podcasts on economy (German):

<http://www.mig-komm.eu/node/689> (management, marketing, cross-cultural communication);

<http://www.dw.de/deutsch-lernen/marktplatz/s-2203> (business communication);

<http://www.deutschlandfunk.de/marktplatz.771.de.html>.

- Axiological component - promoting cross- cultural communication:
Example: problem-solving - students receive a situation (or a problem) written on a card, typical for the interaction between the two cultures (usually having different patterns of behavior or contrasting with each other). The task is to find a compromise or solve a difficult dilemma, based on the knowledge of what is valued in the contrasting culture. Usually before the discussion a small text with information on this topic proceeds.
- Suggestive component - practicing argumentation.

Example: business simulation. This active method of learning intensifies the learning process and teaches students of how to work in team. For example one person from the group takes the role of the CEO, the rest of the people – are the workers of the company, who need to persuade him to make their salaries better. Before the task is explained and the roles are

taken, some expressions used for the argumentation in the form of the set with phrases should be discussed/worked out with the students.

- Behavioral component - role-play games, cases.

Example: job-interview, where the players perform in different roles, demonstrating the behavior expected from them in such situations. The students learn necessary patterns, how to avoid being dismissed at the job-interview, how to act under stress and react to difficult questions, as a result it prepares them for the real life.

However, the innovative character of this approach can cause a number of problems. In order to estimate them for the aims of this research a questionnaire was held on the Faculty of Management (GSOM) among the students of the first year of studying, learning English for academic purposes and students of the forth second year of studying, learning German for business purposes. The questionnaire included a list of the main problems, which occur during the process of bilingual learning of the language-specific materials.

The responses are as follows (according to the level of importance, beginning from the most important to the least important ones):

1. Not being able to systematize the material;
2. Difficulty with understanding professional lexis;
3. It isn't always clear what to do if you have a difficult role (in some simulations) and not enough professional experience;
4. Problems with finding materials in the web;
5. Difficulty with understanding the task.

In order to cope with these problems successfully it is advised to:

1. Use different kinds of tables and schemes in order to organize the logical order of what is discussed in the class on the blackboard.
2. Create a list of the lexical units and to discuss them before or during the task is being done.
3. Show examples of how such simulation may look like (using video, audio, supplementary materials of the teacher).
4. Give hints about which Internet recourses are more suitable for different purposes of practicing different aspects of the language.
5. Write short explanations before each of the tasks.

However, it shouldn't be forgotten that not only the students, but also the teachers as well may experience problems while preparation for such lessons.

The same question about problems was discussed among the teachers. A teacher faces a problem of...

1. A more careful selection of the language material;
2. Difficulty to combine linguistic and professional knowledge within one task;
3. Low level of linguistic and professional skills and abilities within the group.

Solutions of these problems can include:

- 1) The usage of the complementary teaching materials based on the international language tests for specific purposes (the academic communication - IELTS, business - Wirtschaftsdeutsch, CEMS);
- 2) To create introductory materials to some topics in the form of the short references about a problem and then combine it with another task which focuses on the linguistic side.
- 3) Activation of attention of students by a combination of analytical and active methods of training; distribution of responsibility in groups.

In conclusion it needs to be mentioned that the formation of the Competence of business communication is the long process as it bears the features of the holistic approach to

the learning, but the results of such studying can give a person in terms of their future profession, much more than the traditional approach, which is fully oriented on linguistic categories.

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Elena V. Orlova
St Petersburg State University, faculty of Philology orlova@gsom.pu.ru

Iuliia V. Goman
St Petersburg State University, faculty of Philology y.goman@spbu.ru

Tatiana A. Martynova
St Petersburg State University, faculty of Philology kovalyova@gsom.pu.ru,
t.martynova@spbu.ru

Ekaterina V. Zarutckaia
St Petersburg State University, faculty of Philology ekaterina.zarutckaia@gmail.com

Tatiana N. Rybina
St Petersburg State University, faculty of Philology tarybina@mail.ru

Languages at Business Schools: An academic and professional needs analysis as a prerequisite for development of skills-focused programmes

This paper aims to identify sets of communication skills in both academic and business English courses for the Graduate School of Management, SPbSU. This needs analysis survey conducted by the Research and Development group, predetermines the revision and redesigning of communication courses provided by the Languages for Academic and Business Communication department for students at both Bachelor's and Master's degree level. The findings from this survey reveal the communication needs identified by three target groups: academics, students and corporate partners. The research methods applied are participant observation; questionnaires of students, the LABC faculty, and GSOM corporate partners; and criterion-referenced performance tests. This research has specified academic and business communication skills which constitute the programmes' design and revision.

Key words: *needs analysis, academic and business presentation, oral communication skills, skill gaps, skills-focused programmes.*

1. Introduction

The new strategy of the Institute Graduate School of Management, Saint Petersburg State University, is the reflection of ongoing changes in global market competitive principles and changes in higher education standards on both national and international levels. These changes create new opportunities as well as new challenges for the faculty responsible for designing new education programs, developing and maintaining new approaches to both the theory and practice of their implementation. Business education is one of the fastest changing sectors of University education and thus programme modernisation underlies the success of the Graduate School of Management, its faculty and alumni.

For the Languages for Academic and Business Communication department (hereafter referred to as the LABC department), the year 2014 was the beginning of the new programmes' development. The result of this development was a set of new programmes with a skill- focused approach which enable students to develop their communication skills for academic and business English.

The main reasons for the shift from a topic-based approach to a skill/task-focused approach were due to the following factors:

1. The student factor: the increased level of students' English language proficiency (60% - level B2 upon enrolment) and the consequent changes in students' needs and perspectives in terms of language proficiency.
2. The Graduate School of Management (GSOM) factor: identifying internationalisation as one of the leading features of both educational programmes and career opportunities for graduates.
3. The corporate partner factor: the emergence of new competencies required from graduates of the GSOM.
4. New trends in the design of language programmes around the world.

Thus it was the culmination of these factors which led the LABC department Research and Development (R&D) Group to initiate a project aimed at developing new programmes in academic and business communication. One of the main obstacles facing this project was a lack of proper research on business students' needs based on the perspectives of multiple stakeholders which would enable us to define the critically important set of skills for academic and business communication to be incorporated into the programme.

In 2014 we started the investigation of students' needs from the following three perspectives:

- The students' own perceptions of their needs.
- The academic staff's perceptions of students' needs.
- Employers' expectations concerning the GSOM graduates' professional competencies and skills.

This paper outlines the process, procedures and outcomes of this research. It also endeavours to identify programme design development principles for further programme improvement.

The aim of this research was to describe an adaptable approach to language programme design and development based on: 1) the three-pronged analyses of undergraduate and graduate students' needs identified by employers, academics and the students themselves; 2) the gaps in oral communication skills revealed and specified by this research.

2. Methodology

Learners' needs are defined as 'the ability to comprehend and to produce linguistic features of the target situations' (Hutchinson & Waters, 1987). Needs analyses relate to the subject of needs (requirers/users), the character of needs (use, lack, key asset) and the object of needs (language, skills situations and possibly linguistic content) (Hest & Oud-de Glas, 1990). Recognizing its pivotal role as the means of collecting and assessing information relevant to course design (Hyland, 2006), we consider needs analysis to be a necessary pre-requisite for the development of business and academic communication programmes. Thereafter, needs analysis becomes ongoing acting as an element feeding back into various stages of a cyclical process (Dudley-Evans & St John, 1998) which encompasses curriculum design, materials selection, methodology, assessment and evaluation. Furthermore, the information obtained from a needs analysis is used in determining and refining the content and method of a developing course (Basturkmen, 2010).

There is no single approach to needs analysis which can be a reliable indicator of what is needed to enhance learning. Therefore, the current study relies on the following complementary aspects in the process of needs analyses (Songhori, 2008):

- Present situation analysis (Richterich & Chancerel, 1997) demonstrates students' communication skills at the beginning of the course and what students need to do by the end of the course. Hutchinson and Waters (1987), Bruce (2011) refer present situation analysis to learners' 'lacks' and 'wants,' estimating strengths and weaknesses in language and communication skills as well as their learning experience. Otherwise, 'lacks' and 'wants' represent learners' perceptions of their current needs.
- Target situation analysis focuses on the identification of those tasks, activities and skills needed in academic and business contexts which learners will be using. Target situation analysis is concerned with learners' needs (Songhori, 2008).

Thus, we define learning needs as the gap between learners' current proficiencies and ambitions, and their future roles and the communication skills and knowledge needed to perform competently in academic and business contexts.

Applying multiple stakeholder perspective (Huhta, 2013), which is recognized as an effective approach (Robinson 1991), needs may be investigated from the perspective of teachers, that of the learners as well as that of the employers. This approach is still considered effective as it gives a comprehensive overview of the issue. If learners and teachers are able to identify their own academic communication needs, then the perception of business communication skills by executives is indisputable serving as a pre-requisite for the design and/or development of a communication skills course. The dimension of business communication needs may range from 'participation in meeting and team projects' to 'engaging in small talks and professional interaction'. Namely, language activities 'in the social sphere of workplace communication' as well as 'occupational and professional language competency' ought to be taken into account while designing a new language programme (Huhta, 2013).

The research was conducted by the R&D group of the LABC department at St. Petersburg State University's Graduate School of Management from February to May 2015. Needs analysis was conducted through the genre of presentations as this genre is taught in both academic and business English communication courses; it is effectively used in academic and professional environments; and it thus allows one to effectively evaluate students' competencies.

3. The Research Questions

1. Which skill gaps do GSOM students have in delivering academic and business presentation according to employers, academics and the students themselves?

- Which skills are the most important for effective academic and business presentation delivery?

- How do employers, academics and students evaluate the presentation delivery skills demonstrated by GSOM students?

2. Which skills for academic and business presentations should be incorporated into programmes on academic and business communication skills for GSOM students?

4. Methods

4.1 Participants

The respondents for this study are Bachelor's and Master's degree students, the faculty of the LABC department and corporate partners of the GSOM. These groups were selected in order to get comprehensive information of how students, the faculty and employers perceive the academic and professional needs of the business school's students.

The first group of respondents is comprised of 142 Bachelor's and Master's degree students who have international academic experience studying at business schools - academic partners of GSOM: European (HEC-Paris School of Management, Stockholm School of Economics, University of St. Gallen), emerging markets (School of Economics and Management, Tsinghua University, Indian Institute of Management, Calcutta, COPPEAD Graduate School of Business, Federal University of Rio de Janeiro), and Canada (e.g. McGill University).

The faculty of the LABC department group is represented by 17 teachers who teach Academic Communication and Business Communication. The GSOM corporate partners' profile is comprised of 37 participants, including line managers and specialists of human resources departments (for more details see appendix 1).

4.2 Procedures

The information regarding the perceived needs and developed presentation skills was collected using 3 methods: questionnaires, participant observations and criterion-based performance tests.

The aim of the questionnaires was to find out the perception of needs and thus identify skill gaps in giving academic and business presentations. The questionnaires for each group of respondents included 2 target questions and responses were received anonymously.

The following questions were included in the questionnaires for academic representatives, corporate partners and students:

Academic representatives:

Q. 1: Which skills are the most important for effective presentation delivery in an academic / business context? Rate their importance from 1 (unimportant) to 5 (very important).

Q. 2: Rate the development of these presentation delivery skills of your 1st year / 3rd year students according to the scale provided: Fully developed (5), Developed (4), Acceptable (3), Needs a lot of training (2), Not developed (1).

Corporate partners:

Q. 1: Which skills are the most important for effective presentation delivery in a business context? Rate their importance from 1 (unimportant) to 5 (very important).

Q. 2: Evaluate the oral communication skills of GSOM graduates working in companies according to the level required in the professional arena. Rate their development according to the scale provided: Fully developed (5), Developed (4), Acceptable (3), Needs a lot of training (2), Not developed (1).

Students:

Q. 1: Identify the strengths of the presentation you delivered during an inclusive education semester at a business school. Did you get any feedback regarding your presentation from the panel?

Q. 2: Which presentation skills were not fully developed and prevented you from delivering an effective academic presentation?

Participant observation was aimed at assessing the development of skills using criterion-based performance tests while attending in-class presentations. These two methods were used together to assess academic and business presentations that students were delivering.

Two types of needs analysis were carried out: academic and professional. Academic needs analysis is based on the observation of academic presentations (GSOM undergraduates) using a criterion-referenced performance test; and the data gathered from the questionnaires of the LABC department faculty and the students who completed their studies at GSOM partner business schools.

Professional needs analysis is based on the observation of business presentations (Master's programme participants) using a criterion-referenced performance test; and the data gathered from the questionnaires of GSOM corporate partners and the faculty of the LABC department.

4.3 Instrument

4.3.1 *The importance of skills for effective presentation delivery*

The first aim of the questionnaire was to gather data on the importance of skills needed for delivering effective academic or business presentations. The tables below show academic presentation skills evaluated by students and faculty members in terms of their mean importance rating (Table 1) as well as business presentation skills evaluated by corporate partners and faculty members (Table 2). Depending on the specificities of the respondents' group, the skills rated were separated into two groups: variable skills and non-variable skills. Variable skills in both tables are given in italics.

Table 1

The importance of skills for an effective presentation delivery (from the perspectives of students and of faculty members)

The students' perspective			The faculty members' perspective		
Skills	Average perception	Standard deviation	Skills	Average perception	Standard deviation

Organise a presentation structure	4.7	0.71	Organise a presentation structure	4.9	0.33
Maintain audience rapport	4	0.80	Maintain audience rapport	4.7	0.43
Manage the content of a presentation	3.9	0.83	Manage the content of a presentation	4.7	0.40
<i>Maintain a reasonable pace of delivery, understand various accents in spoken English</i>	3.7	0.85	<i>Use visual aids effectively</i>	4.4	0.86
Use academic and professional vocabulary	3.7	0.80	Use academic and professional vocabulary	4.2	0.43
			<i>Use referencing</i>	3.5	1.09

Regarding business presentation, it is essential to take into account the specific contexts with which the two groups (Table 2, corporate partners and faculty members) evaluate business presentations - real-life professional situations in the workplace and business simulations in an academic context.

Table 2

The importance of skills for effective presentation delivery (from the perspectives of corporate partners and of faculty members)

The corporate partners' perspective			The faculty members' perspective ¹		
Skills	Average perception	Standard deviation	Skills	Average perception	Standard deviation
Organise a presentation structure	4.4	0.87	Organise a presentation structure	4.7	0.69
Manage the content of a presentation	4.3	0.90	Manage the content of a presentation	4.5	0.7
<i>Adhere to corporate culture norms</i>	4.0	0.93	Maintain audience rapport	4.5	0.7
• <i>Answer audience questions</i>	3.9	0.96	<i>Use high impact techniques</i>	4.2	0.82
• <i>Maintain audience rapport</i>	3.8	0.98	<i>Use professional vocabulary</i>	3.6	0.85
<i>Demonstrate time management skills</i>	3.5	0.91	<i>Use visual aids effectively</i>	3.5	1.2

4.3.2 Evaluation of skills' development

¹ It is worth mentioning the importance of non-verbal behaviour, a complementary skill marked as important by 25% of faculty members who regard it to be the key to a successful presentation.

The second aim of the questionnaire was to gather data regarding presentation skills' development, whilst at the same time identifying existing skill gaps observed by students, faculty members and corporate partners in presentation delivery. Given below are the results of a questionnaire of GSOM students who were asked to identify their own strengths and skill gaps in academic presentation delivery (Table 3) and the faculty's perspective on the development of these skills (Table 4).

Table 3

Strengths and skill gaps identified by students

<i>Strengths</i>	<i>Skill gaps</i>
<ul style="list-style-type: none"> • Manage the content of a presentation (53%) • Organise a presentation structure (13%) • Apply critical methods of analysis (13%) • Use visual aids effectively (7%) • Work collaboratively or work in a team (7%) • Understand various accents in spoken English (7%) • Participate in a group discussion (7%) • Plan a text for presentation (7%) 	<ul style="list-style-type: none"> • Maintain audience rapport (40%) • Maintain a reasonable pace of delivery (33%) • Understand various accents in spoken English (27%) • Organize a presentation structure (13%) • Use academic and professional vocabulary (13%) • Manage the content of a presentation (0%)

Table 4

The development of presentation delivery skills (from the perspective of faculty members)

The faculty members' perspective		
Skills	Average perception	Standard deviation
• Use visual aids effectively	4.2	0.66
• Organise a presentation structure	3.7	0.66
• Manage the content of a presentation	3.5	0.71
• Use academic and professional vocabulary	3.5	0.5
• Maintain audience rapport	3.4	0.86
• Use referencing	3.1	1.05

Corporate partners evaluated the oral communication skills of GSOM graduates who are currently working in companies according to the level required in the professional arena. Likewise, faculty members appraised the performance of 3rd year undergraduate students to rate their business presentation delivery skills (Table 5).

Table 5

The evaluation of skills for effective presentation delivery (from the perspectives of corporate partners and of faculty members)

The corporate partners' perspective			The faculty members' perspective		
Skills	Average assess-	Standard deviation	Skills	Average evaluation	Standard deviation

Organise a presentation structure	3.6	1.12	Use visual aids effectively	4.5	1.0
Adhere to corporate culture norms	3.6	0.94	Organise a presentation structure	4.0	0.7
Answer audience questions	3.6	0.98	Manage the content of a presentation	3.7	1.2
Manage the content of a presentation	3.5	0.87	Maintain audience rapport	3.3	0.9
Maintain audience rapport	3.4	0.95	Use professional vocabulary	3.3	0.9
Demonstrate time management skills	3.0	0.95	Use high impact techniques	3.1	1.0

5. Results

5.1 Academic presentation skills

The results of the survey conducted among faculty members and GSOM students regarding the importance of skills for effective presentation delivery (see Tables 1, 3 and 4) reveal that both groups of respondents have reached a consensus on their importance rating. As can be seen in Table 1, all of the basic skills were ranked in the same order of importance: from ‘organizing a presentation structure’ (rated the highest) to ‘using academic and professional vocabulary’ (rated the lowest). This implies that there is no conflict of opinions among the two groups of respondents and the data collected can be easily compared. In spite of this consensus, however, it is clear that faculty members tend to give these skills more importance than students (each skill was rated 0.2 - 0.8 points higher).

Apart from ‘organising a presentation structure’, which was almost unanimously recognised as critically important for effective presentation delivery by the majority of respondents (M=4.7 and 4.9), another highly appreciated skill is the skill of ‘maintaining audience rapport’ (M=4 and 4.7). As for the least important skills, in addition to the above-mentioned ‘using academic and professional vocabulary’, the lowest rating was given to ‘maintaining a reasonable pace of delivery and understanding various accents in spoken English’ (M=3.7) and ‘using referencing’ (M=3.5). Regarding the latter skill, it is important to mention that a high standard deviation (SD=1.09) implies that there are two distinct categories of teacher: those who recognise the crucial importance of this skill (rating 5), and those who consider it to be of moderate importance (rating 3).

The analysis of data in Table 3 shows that while giving their presentation in overseas business schools, half of the students perceived themselves as being efficient at managing the content of a presentation effectively. However, there is no strong evidence that students are fully aware of what contributed to this success as only 13% of them attributed it to their ability to ‘justify data’, ‘provide critical analysis’, and ‘apply new methods of analysis’.

Questions aimed at gathering data with reference to presentation skills’ development, demonstrated that 40% of students had problems with ‘maintaining audience rapport’. The second most frequent answer was ‘maintaining a reasonable pace of delivery’ (33%). 27% of students mentioned the problem of pronunciation which can be explained by the fact that for the majority of them it may have been the first serious experience of public speaking in an overseas academic environment and meeting the challenge of comprehending a different accent. Thus, the problem of pronunciation has become more noticeable. It should also be noted that only 13% of students did not experience any problems with presentation delivery.

It was also discovered that not all the students were provided with the feedback from a panel on the effectiveness of their presentation. Therefore, we can assume that students' appreciation of their skill gaps is based on self-evaluation only, and some of their needs might be still unrecognised by them.

Faculty members who evaluated the development of their students' communication skills (see Table 4) highlighted that most of the skills (5 out of 6) are developed at an 'acceptable' level as most of them received rank 3. Thus, according to the data presented, the only skill that first year students have at a 'developed' level (rank 4) is 'using visual aids' (M=4.2). It was rated the highest with 'organizing a presentation structure' in second place (M=3.7). The skills that need the most training, according to the faculty members, are 'maintaining audience rapport' (M=3.4) and 'using referencing' (M=3.1).

The observation of academic presentations delivered by 4th year students enabled us to make a more detailed list of sub-skills students have difficulties with²:

Skill	Sub-skill	Difficulties
Organise presentation structure	Complete each part of the structure with the necessary type and size of information	The length of presentation parts was irrelevant (long introductions, short bodies and conclusions); it meant that the students could not complete each part of the structure adequately and the presentations were not well-structured as a result.
Use academic and professional vocabulary	Use relevant academic language	The lack of awareness regarding academic register and the subsequent use of everyday language instead of academic.
Use visual aids effectively	Use graphs and diagrams professionally	Students could not underline necessary information using diagrams and graphs; incorrect sizing and formatting rendered visual aids unreadable for the audience.
Manage the content of the presentation	State the aims and objectives, main points and outcomes of the research clearly	Students could not provide the audience with clear information; their conclusions were often irrelevant (did not correspond the research aim).
Maintain audience rapport	Respond appropriately to audience questions during the Q&A session.	Students did not welcome audience questions.

As a result of the underdeveloped aforementioned sub-skills, it was difficult for the audience to get a full understanding of the content presented.

5.2 Business presentation skills

The results of the questionnaire conducted among faculty members and corporate partners reveal that both groups of respondents were in agreement on the importance rating of the two oral communication skills for effective business presentation delivery (Table 2) – “organise a presentation structure” and “manage the content of a presentation” (the average perception that is ≥ 4.0 accounts for being important).

² More sub-skills additional to the initially estimated were found and registered as underdeveloped, for example *the ability of the students to use references on the slides*.

The importance of “organise a presentation structure” for an effective business presentation received the highest rating of 4.7 and 4.4 by faculty members and corporate business partners respectively.

The indicators of importance of “manage the content of a presentation” skill ($M \geq 4$) serve as another measure of an effective business presentation.

It turned out that business executives rate “maintain audience rapport” as a moderately important skill ($M=3.8$), whereas academics tend to attach greater importance to it ($M=4.5$). Presumably, delivering a clear message during a presentation implies keeping one's audience focused at the same time for executives which explains their rather low evaluation of the “maintain audience rapport” skill. As for the least important oral communication skills, faculty members gave a low rating to “use visual aids effectively” and “demonstrate time management” skills (both have $M=3.5$), yet the former has rather high standard deviation ($M=1.2$). This means that 50% of teachers believe that the skill of using visual aids appropriately in a presentation must have been already developed by this stage, while the other half continue to pay attention to its importance. Attributing a low rating to “demonstrate time management” seems unexpected and infrequent in professional situations. A possible reason is that a valuable discussion can last more than the time allocated to it.

Analysing the data gathered on the oral communication skills evaluation of GSOM graduates working in companies, altogether, GSOM graduates receive lower ratings than undergraduate students. However, the average assessment changes slightly concerning the skills of “organise a presentation structure”, “manage the content of a presentation”, and “maintain audience rapport”.

Corporate partners are almost consistent in assessing the aforementioned skills: “organise a presentation structure” ($M=3.6$), “manage the content of a presentation” ($M=3.5$), and “maintain audience rapport” ($M=3.4$) in spite of the lack of consensus evaluating “organise a presentation structure” skill ($SD = 1.2$). In other words, not all GSOM graduates can transfer this skill to fulfil their job-related tasks effectively. The business executives’ assessment fluctuates from fully developed (25.9%), developed (37%), acceptable (18.5%), needs a lot of training (14.8%) to not developed (3.7%).

As for the faculty members, they reached a consensus ($SD \leq 1.0$) on the assessment of “organise a presentation structure” skill ($M=4.0$) and “maintain audience rapport” ($M=3.7$). In contrast, their evaluation of “manage the content of a presentation” skill ($SD=1.2$) ranges from fully developed (37.5%), developed (25%), acceptable (25%) to even not developed (12.5%), which could be explained by the lack of clear understanding of this assessment criterion among the faculty members.

In contrast, “use visual aids effectively” skill ($M=4.5$) received the highest rating in the evaluation of oral communication skills, which signifies that the majority of 3rd year undergraduate students (62.5%) have fully developed the skill, yet the teachers are not unanimous in their assessment ($SD = 1.0$). In fact, 25% of students have already developed this skill, while students of fair performance in English (12.5%) demonstrate the “acceptable” use of visual aids.

To summarize the findings of the “present situation analysis” (Richterich & Chancerel, 1997), it is worth mentioning that 14.3% of corporate partners pointed out that GSOM graduates need pre-service training in how to deliver an effective professional presentation.

The above-mentioned skills gaps were also observed during four days of Business Communication Skills seminars for GSOM Master’s Programme students. 19 (nineteen) Master’s programme students’ presentations delivered by 81 (eighty-one) students were evaluated to reveal the level of development of the same set of 6 oral communication skills for academic and business presentation delivery.

Among the main skill gaps for effective business presentation delivery, the following sub-skills were highlighted.

1. Structuring a presentation: imbalance in content allocation. The tendency not to deliver the main message at the beginning of the presentation leads to audience's confusion or lack of interest. The presenters fail to facilitate rapport while addressing the target audience.

2. Ability to convince the audience: failure to persuade the audience as credible and reliable decision-makers.

3. Poor techniques of establishing reaction-provoking contact with the audience.

These skill gaps make it all the more probable that the audience's expectations of the presentation will not be met.

6. Discussion

6.1 Academic Presentation

Comparing the results of the questionnaires aimed at identifying the students' academic needs and their skill gaps in delivering academic presentations, we have identified a set of skills that needs to be emphasised when planning a further development of the course program. Among these skills are the following:

- 'organise a presentation structure' since only 13% of GSOM students described it as their strong point and 13% identified it as one of their skill gaps. Faculty members, who evaluated the development of this skill among first year GSOM students, agreed that it is developed at an 'acceptable' level only (rank 3.7);
- "maintain audience rapport" as none of the students described it as their strong point compared with 40% who identified it as one of their skill gaps. Faculty members confirmed that students do not have this skill developed at a satisfactory level (rank 3.4);
- 'maintain a reasonable pace of delivery and understand various accents in spoken English.' This is of moderate importance (rank 3.7) according to the students' perspective, but as many as 33% and 27% of them identified it as one of their skill gaps. Only 7% mentioned that pronunciation was their strong point.

6.2 Business presentation

Based on the findings from the questionnaire, we evaluated the information about the learners - the "target situation analysis" and the "present situation analysis" (Richterich & Chancerel, 1997) concerning GSOM undergraduate and graduate students' oral communication skills for an effective business presentation delivery.

Employing the above-mentioned methods, we identified and specified the academic and professional needs which makeup the prerequisites for programme design.

Overall, at this stage of the findings' qualitative analysis, we can identify the skill gaps (SG) in oral communication skills for effective business presentation delivery.

Thus, major oral communication skills' deficiencies of GSOM 3rd year students refer to the skills "organize a presentation structure" (SG=0.7), "manage the content of a presentation" (SG=0.8), and "maintain audience rapport" (SG=0.8), which result in possible negative effects which can lead to a communication breakdown in professional situations. For example, we consider that the inability to manage the content of a presentation is caused by not maintaining an appropriate balance between known and new information. As a result, this leads to the audience losing interest. Moreover, failure to produce a feasible solution to a communication task can also contribute to a loss of audience interest in a presentation.

Consequently, there should be specified a set of oral communication skills and sub-skills essential to the delivery of an effective academic and (or) business presentation. The present research disclosed that while delivering academic or business presentation, GSOM students encounter similar difficulties, which arise because of their “lacks” (Bruce, 2011) in some critically important communication skills. To help student overcome these skills gap, certain changes should be made in the course programs, which are mainly aimed at putting special emphasis on the development of the communication skills students have difficulties with. The detailed set of skills to match academic and professional needs that we consider to incorporate into the course program is given below.

Oral communication skills

a. Organise a presentation structure

Sub-skills

Introduction

- introduce the topic (research question) clearly;
- state purpose clearly and early on in the presentation;
- provide an overview of the presentation;
- introduce group members.

Main body

- present information in a logical and interesting sequence with explanations and elaboration;
- maintain an appropriate balance in content allocation;
- use discourse markers and cohesive devices for effective transitions;
- summarise information selected from different resources with good reasoning.

Conclusion

- summarise the main points to match the conclusion with the purpose stated in the introduction;
- deliver the outcome or result of the task.

b. Manage the content of a presentation

Sub-skills

Communication task is completed

- produce the content and extent of the presentation consistent with that of a communicative task;
- keep the message simple;
- thoroughly elaborate on the topic of the presentation. Content management
- express ideas clearly in spite of the subject’s complexities;
- support statements with facts;
- give appropriate examples, illustrations, statistics;
- use well-selected information, avoiding ambiguous or unclear statements;
- describe, analyse and synthesize data, ideas and information correctly and effectively;
- make a clear distinction between information and data.

c. Maintain audience rapport

Sub-skills

Establish audience rapport

- adapt to a specific audience;
- show awareness and knowledge of the audience;
- gain immediate attention in an appropriate manner (understand an audience’s expectations);
- create introductions that 'hook';

- establish response-provoking contact. Keep contact with the audience
 - keep the audience focused on the topic;
 - use contact-setting techniques (checking understanding, reformulating, etc.);
 - maintain effective communication with the audience (show enthusiasm, voice, tone, energy);
 - use good posture, natural gesturing, controlled movement;
 - end with a memorable statement;
 - check understanding of questions from the audience by paraphrasing;
 - provide adequate answers;
 - check if the audience have given a satisfactory response;
 - demonstrate a depth of commentary.
- d. Maintain a reasonable pace of delivery

Sub-skills

- avoid being too slow and halting, or too fast and nervous;
- be audible in all parts of the room, and to all members of the audience;
- speak clearly and fluently;
- articulate clearly, with proper volume and a steady rate;
- speak with ease and little hesitation.

When interpreting the results of this study, there are a few limitations which should be considered. The study highlights needs analyses procedures in the programme design and development process although there should be close consideration of learning aims and objectives of a target group when extrapolating this experience.

By 'business presentation' in this study we mean a presentation based on some general communication principles which are more or less typical of all types of business presentations regardless of their purpose, i.e. to inform, persuade, build goodwill and etc., or their business context, i.e. sales results presentation, new product launch presentation and etc. However, the set of communication skills needed to perform successfully in each type of these presentations might vary to some extent, and, therefore, the lacks business graduates face when delivering them, might vary as well. However, this study sought to find out only a set of general business communication skills that the majority of business graduates need to have to do their job well.

The second limitation is connected with the perception of lacks and needs in academic communication identified by those students who reported in their questionnaires that during an inclusive learning semester abroad, the panel did not always provide feedback on their presentation performance. This means that the students' assessment of their strengths and weaknesses was sometimes based on self-evaluation only and we assume, therefore, that some of the needs have remained unrecognized by them.

Conclusion

The data from the multiple stakeholder questionnaires and the criterion-based performance tests have illustrated a number of issues which need to be considered as they offer significant implications for introducing programme development.

First of all, the three-pronged needs analyses enabled the researchers to gain insight into the specific needs concerning the academic and business communication skills that GSOM undergraduate and graduate students have.

The findings of the study revealed essential oral communication skill gaps for effective academic and business presentation delivery that underpinned the existing assumptions of the R&D group and the LABC department, and provided a comprehensive and objective picture

of what sets of communication skills at macro level and sub-skills at micro level should be incorporated into the academic and business communication skills programmes.

This fact underlies our decision to prioritise teaching specified oral communication skills so that they are tailored to specific academic and professional needs rather as opposed to generic teaching suitable for all cohorts of students. It is imperative for teachers of academic and business communication to explicitly teach students those skills and sub-skills in which the gaps were identified, i.e. structuring a presentation, establishing and keeping contact with the audience, managing the content of a presentation effectively, using appropriate pace of delivery, etc. By practicing these skills in language classrooms students may be able to effectively transfer them later into real-life academic and professional situations.

A further step of the research implies ranking the identified oral communication skills hierarchically on a simple to complex basis to incorporate them into the programmes organised by the LABC department: “Academic Communication Skills in English: basic course”, “Academic Communication Skills in English: subject-specific”, and “Business Communication Skills in English”.

To conclude, we suggest that the multiple stakeholders approach applied in this study can be extrapolated to design and development of similar academic and/or business communication skills programmes.

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Appendix 1

Corporate partners' profile

GSOM corporate partners who completed a questionnaire

Company	Number of respondents
IBM East Europe / Asia	11
JTI «Петро»	10
The Boston Consulting Group	3
«АЛЪТ» International Coach Federation llc	1
A.T. Kearney	1
ALT Research & Consulting	1
Baltika Breweries	1
Citibank	1
Coca-Cola Hellenic	1
EMC	1
Gazprom Export llc	1
Heineken	1
LVMH P&C	1
Metro Cash & Carry	1
Russian Railways	1
St. Petersburg Technopark OJSC	1
Unilever	1

Andrei Panibratov, Doctor of Economic Sciences, Professor, Strategic and International Management Department, Saint-Petersburg State University
panibratov@gsom.pu.ru

Desislava Dikova, PhD, Professor in International Business, Wien University of Economics and Business
Desislava.Dikova@wu.ac.at

Anna Veselova, Researcher, Graduate School of Management Saint-Petersburg State University
a.s.veselova@gsom.pu.ru

Liubov Ermolaeva, Doctoral Student, Graduate School of Management Saint-Petersburg State University
liubov.ermolaeva@gmail.com

DETERMINANTS OF RUSSIAN CROSS-BORDER ACQUISITIONS: THE JOINT EFFECT OF INVESTMENT MOTIVES AND INTERNATIONAL CONTEXT

Abstract: In this paper we apply the OLI paradigm to examine the impact of macroeconomic influences on the trends of Russian cross-border M&As over the period 2007-2013. Our analysis gives an understanding of what attracts Russian investors abroad or in other words what motives – market-seeking, resource-seeking, efficiency-seeking or asset (technology)-seeking – are critical for them. The main thrust of our paper is that not only factors associated with the M&A target (host) country are important determinants of Russian firms' investment-location decisions, but institutional differences between Russia and the host country play an important, moderating role. We test our model using current data, derived from open sources (e.g., international databases and national statistic agencies). Despite several limitations, our study reveals valuable insights about cross-border M&A determinants of Russian firms.

Keywords: *cross-border M&As, OLI paradigm, institutional distance, Russia*

1. Introduction

In the period 1999–2004 the outward foreign direct investment stock of the Russian Federation grew at unprecedented speed from 9.5 bln.USD to 90.8 bln.US\$. By 2004 Russia was already one of the 20 largest investors in the world. Russian foreign investment grew further in subsequent years reaching USD 369 bn. at the end of 2010. At the same time, foreign direct investment (FDI) flows into Russia remained relatively low. Several studies tried to explain this “Russian paradox” by putting to test existing paradigms of international investment (Andreff 2002; Kalotay 2005, 2008; Liuhto 2005). However, scholars typically examined the investment strategies of a few large corporations, like Lukoil, Gazprom, Severstal, Norilsk Nickel and produced mostly descriptive studies (Vahtra 2007; Panibratov and Kalotay 2009; Kuznetsov 2011). As a result, our understanding of Russian foreign direct investment remains incomplete (Kalotay and Sulstarova 2010).

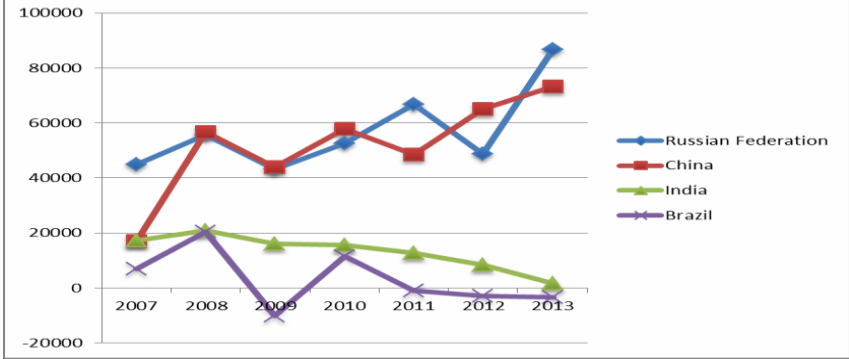
Most of the Russian outward foreign investment is created through cross-border mergers and acquisitions (M&As), a widely preferred strategy for international growth. Through aggressive international acquisitions in a wide range of industries, Russian firms have achieved important strategic objectives, such as fast market access, acquisition of technology, access to natural resources and marketing channels, among others (Kalotay and Sulstarova 2010). Russian foreign investment, and cross-border M&As in particular, continue a steady upward trend. As Russian multinationals gain more prominence, the driving forces and strategic implications of their foreign investments deserve more scrutiny, further analysis and better understanding. We contribute by advancing knowledge about global macro-economic factors that influence the location of Russian cross-border M&As.

International business literature has highlighted the increasing importance of macroeconomic factors in explaining the location of international production activity (for example Dunning 2009; Vasconcellos and Kish 1998). However the approach to studying cross-border M&As as a form of FDI reveals a predominant focus on firm-level and industry-level factors (for example, Agarwal and Ramaswami 1992; Somlev and Hoshino 2005; Dikova, Rao Sahib and van Witteloostuijn 2010). In an attempt to address this omission, several studies suggest that in order to explain the trends of aggregate cross-border M&A activities over time, it would be useful to examine the role of macroeconomic factors (Uddin and Boateng 2011; Vasconcellos and Kish 1998). In recent years, an increasing number of research has examined the location determinants of investments by emerging-market firms (EMFs) (e.g., Jain, Hausknecht and Mukherjee 2013; Ramasamy, Yeung and Laforet 2012). However, the literature on EMFs’ foreign investment, and particularly on cross-border M&As, is focused mostly on China and India (Deng and Yang 2014) which comes as a surprise considering that Russian foreign investment is the highest among the BRIC countries (Fig.1). Given that firms depend on their external environment to stabilize resource exchange and revenues (Pfeffer and Salancik 2003), a macroeconomic focus could provide a valuable new insight into the location of Russian cross-border M&As.

In this paper we apply the OLI paradigm to examine the impact of macroeconomic influences on the trends of Russian cross-border M&As over the period 2007-2013. Our analysis gives an understanding of what attracts Russian investors abroad or in other words what motives – market-seeking, resource-seeking, efficiency-seeking or asset (technology)-seeking – are critical for them. In the past, research has tackled this question as a dyadic interdependence between host market characteristics and firms’ investment propensity. A notable example of such approach is the study by Kalotay and Sulstarova (2010) of Russian FDI in the period 1993-2008. Despite its merits, their approach is somewhat limited as it fails to account for potential institutional differences that may get in the way of Russian firms’ investment motives. Thus, the main thrust of our paper is that not only factors associated with the M&A

target (host) country are important determinants of Russian firms' investment-location decisions, but institutional differences between Russia and the host country play an important, moderating role. We test our model using current data, derived from open sources (e.g., international databases and national statistic agencies). Despite several limitations, our study reveals valuable insights about cross-border M&A determinants of Russian firms.

Figure 1. BRIC countries' foreign direct investment (2007-2013)



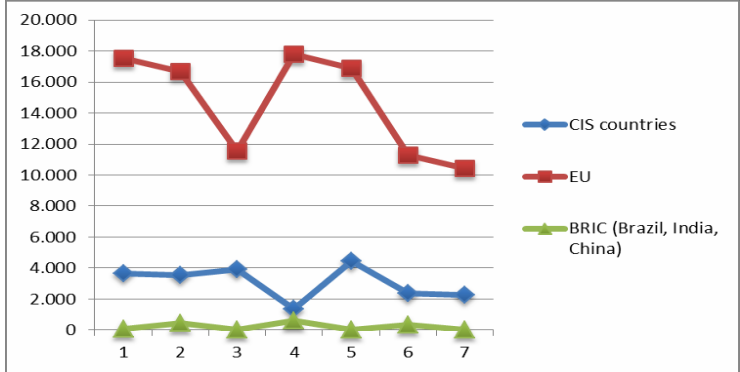
Source: UNCTADstat, 2015

2. Theory and Hypotheses Development

Early studies of the drivers of Russian FDI suggested that initial investment motives were primarily of 'system-escape' type, driven by a desire to diversify assets as a safeguard against poor domestic economic conditions and political instability (Sokolov 1991; Bulatov 1998; Andreff 2002) or to avoid excessive export duties and benefit from more favorable taxation abroad (Kalotay 2005). Currently, Russian firms' foreign investments encompass a diverse range of strategic reasons such as strengthening of market positions, expanding markets overseas, increasing the control over value chains, access to natural resources and acquisition of strategic assets to improve overall competitiveness (Vahtra 2007).

Anecdotal evidence and our graphical representation of Russian investment (Fig. 2) show that most of the Russian investments were mostly made in developed countries, such as EFTA countries and the United States. CIS countries have received relatively small fraction of the Russian investments regardless of their historical links and geographic proximity to Russia. Albeit informative, this information cannot demonstrate the presence or the absence of an effect of a specific investment-location driver of Russian M&A activity. We cannot rule out that other factors actually influenced location preferences of Russian investors. In order to account for such effects, a more systematic approach is required.

Figure 2. Location of Russian FDI (2007-2013)



Source: UNCTADstat, 2015

Most academic research on cross-border M&As is still driven by an emphasis on the firm-specific determinants of this type of international economic activity, however, we intend to add to the literature showing a renewed interest in the special aspects of FDI and how these affect firms' competitive advantages (Dunning 2009). Literature has acknowledged that the location preferences of foreign direct investors will not depend so much on the types of economic activities but on the motives for the investment such as resource-seeking, market-seeking or efficiency-seeking (Dunning 1993). Dunning (2009) observed a change in the global motives for FDI caused by the growth of strategic asset-seeking investments which aim less at exploiting existing ownership advantages and more at protecting or augmenting these advantages by acquisition of new assets. Luo and Tung (2007: 481) suggest different reasons for this change that are more applicable to emerging-market (EM) firms' internationalization motives—EM firms acquire strategic assets through aggressive acquisitions to compete more effectively against developed-market multinationals and to 'reduce their institutional and market constraints at home'. Albeit we acknowledge these recent developments, for the sake of inclusivity we develop our theory by addressing four possible types of internationalization motives of Russian firms that aim at launching market-seeking, resource-seeking, knowledge-seeking and efficiency-seeking cross-border M&As.

One of the most important drivers of FDI is market size. Large markets attract M&A deals because of the possibility to benefit from economies of scale in production and distribution of goods and services in the host market (Kyrkilis and Pantelidis 2003; Tolentino 2010) and agglomeration economies that can reduce the costs of all producers in that market (Dunning, 2009). As market size increases, so do opportunities for efficient utilization of resources and for exploitation of economies of scale and scope (UNCTAD 1998). Cross-border M&As can be an efficient way for Russian firms to gain more power and control over new markets and ensure less dependence on home markets (Pfeffer and Salancik 2003). We expect that market size will be associated with a higher number of cross-border acquisitions initiated by Russian firms.

H1: There is a positive association between Russian cross-border M&As and host country market size.

Resource-seeking drivers of foreign investment are important to consider because firms rely on resource availability for future economic activity (Deng and Yang 2014). A focus on resource-drivers of acquisitions is critical because cross-border M&As require matching the resources provided by the target firm with the need of the acquirer (Haleblian et al. 2009). We expect that resource-rich countries would be preferred as investment location by Russian acquirers, a large number of which are active in resource-intensive industries that are of critical importance for Russia. Acquiring and securing a continuous supply of natural resources is critical for Russian firms, hence, the number of Russian cross-border M&As will be positively associated with local (host-country) availability of natural resources.

H2: There is a positive association between Russian cross-border M&As and host country natural resource-endowment.

Knowledge seeking investment is undertaken in order to develop new advantages and/or to upgrade existing ones. In information-intensive industries, various kinds of knowledge, both tacit and codified, replace physical assets as the most critical resources (Nachum and Zaheer 2005). Knowledge-seeking drivers stem from a desire to gain quick access to technological innovations and advanced marketing and management know-how through foreign acquisitions. Past studies suggest that patent-protected technology and managerial knowhow create major motivations to EM firms to engage in cross-border M&As (Jullens 2013; Rabbiosi et al. 2012). Many EM firms have resorted to aggressive acquisitions in order to access novel product technology, established brand names and distribution networks abroad (Nicholson and Salaber 2013). A large number of Russian firms operate in traditional,

resource-intensive industries characterized by mature technologies; a search for new technology is not expected to be of primary importance for them. However, we do not exclude the possibility that M&A by Russian firms in resource-intensive sectors are partly driven by technology-access motivations.

H3: There is a positive association between Russian cross-border M&As and host country strategic (knowledge-based) assets.

Efficiency-seeking investment is driven by the intention to spread value-adding activities geographically in order to take advantage of differences in the availability and the cost of production factors in different countries (Nachum and Zaheer 2005). Essentially this is a decision of the firm how best to configure its activities internally, in line with the comparative advantage of different locations (Zaheer and Marakhan 2001), in order to maximize efficiency and reduce costs. It can be argued that locational advantage induced by low wages increases the prospects of low production costs for Russian manufacturing firms. We expect that Russian firms will engage in efficiency seeking M&As in target countries with relatively low wage rates.

H4: There is a positive association between Russian cross-border M&As and host country (low) labor costs.

Previous research discovered that cross-border M&A deals are associated with a great deal of complexity and uncertainty because of the need to pass major procedural hurdles. For example, cross-border M&As have to comply with domestic and international regulations, such as antitrust laws and procedures for merger/acquisition evaluations (Dikova et al. 2010). The national institutional context in which Russian firms operate is a key driver of their ways of organizing, conditioning their practices and members' understandings as well as constraining their organizational choices (Mtar 2010). The differences between Russian institutional context and the host-country institutional context will exaggerate the complexity of the M&A transaction, because acquirers typically understand and adjust more easily to an institutional environment that is similar to the one in their home country (Kostova and Zaheer 1999). The pressure for compliance with host-country rules and laws that Russian acquirers cannot easily comprehend may deter them from engaging or completing otherwise lucrative M&A deals providing access to a large market, to valuable resources and knowledge or cheaper labor. Furthermore, the greater the institutional differences (or distance) between Russia and the host country, the more problematic the transfer of an acquired resource is likely to be, especially in the case of intangible resources such as knowledge, technologies or strategic assets in general (Kostova 1999). It is of critical importance to consider the complexity of the institutional context surrounding a cross-border M&A deal because the level of institutional complexity may have an impact on the location choices of Russian foreign investors.

H5: Institutional differences will have a negative moderating effect on the association between Russian cross-border M&As and host country's market size, natural resources, strategic assets (knowledge) and (low) labor costs.

3. Data, Variables and Methods

Data sources for this study include ZEPHYR Bureau van Dijk database, OECD database, World Bank reports, The Central Bank of Russian Federation – for Russian OFDI by countries, Thomson Reuters Eikon – for macroeconomic figures, Transparency International web site- for CPI index. We obtained a sample of 322 country/year observations for cross-border M&As launched by Russian firms in 46 countries for the period 2007-2013.

As a dependent variable we use the number of Russian cross-border M&A. It was measured as the number of complete annual M&A deals in each host market for the period 2007-2013. We include a number of independent variables that allow us to capture the different motives for Russian firms to engage in M&A deals. *Purchasing power* of host market is measured as GDP per capita in host country. It allows identifying the relevance of market-seeking motives in cross-border M&As by Russian companies. The choice for a certain destination of investment stimulated by resource-seeking motives depends on the richness of host market with natural resources. This motive is captured by the *Percentage of natural resources export* in total merchandised export. Export of natural resources includes export of fuel, ore and metal. Our choice of measure as based on the assumption that the larger the export of natural resources in a host country is, the more attractive it is for investments aiming at natural-resources exploitation. The variable *Number of patents* is used to capture (knowledge) technology-seeking motives. It is measured as a number of applications to European Patent Organization and United States Patent and Trademark Office by applicants whose country of residence is the M&A-target host country. Another variable associated with technology-seeking motives is the *Volume of R&D expenditure*. It is measured as R&D expenditures as a percentage of host country GDP. *Average monthly wage* in manufacturing sector is widely used as a measure of production efficiency. Emerging markets firms often invest in developing markets to benefit from lower labor costs.

We use several variables to capture institutional differences. First, we have *Corruption perception distance* which is measured as a difference between home and host country CPI (Corruption Perception Index), a composite index calculated annually for a number of countries by Transparency International organization which reflects the view of observers and experts all around the world on the level of corruption in the public sector of a certain country. Another institutional variable is *Cultural distance* which represents cultural difference between home (Russia) and host country environment and is aimed at capturing ‘soft’ institutions (e.g., norms of behavior and local customs). We calculated a composite variable using the Kogut and Singh’s formula (Kogut and Singh 1988) to combine four Hofstede’s cultural dimensions into one parameter. Finally, we also consider the level of political instability in a given country, which reflects the level of a threat by social protest posed to national governments. We employ *Political stability distance*, measured by the difference between home (Russia) and host country Political Instability Index (PII). PII values are provided by the Economist database. In addition, as control measures, we include *Russian GDP per capita* to measure the level of development of the home market. The decrease in Russian GDP per capita could be considered as a push factor to internationalize. Two dummy variables, *CIS membership* and *Developed country* were included. CIS countries share common cultural, legal and historical links with Russia and they may be preferred by Russian companies as ‘comfortable’ or familiar investment locations. *Exchange rate* of US dollars to Russian rubles and interest rate in Russia are also used as control variables.

Due to the nature of our dependent variable (number of M&As), we use non-negative integers, i.e. count data. Count data could be processed with Poisson regression or negative binomial regression. Negative binomial regression is preferable as it has advantages over Poisson regression and also concedes the variance in the rate of underlying process across observations according to a gamma distribution.

4. Results

Table 1 presents the descriptive statistics for the number of cross-border M&As by Russian companies in 2007-2013 and all variables included in our model.

Table 1. Descriptive statistics

Variable	Obs.	Mean	Std.Dev.	Min	Max
Number M&As	322	1.440994	2.559801	0	19

GDP per capita, Russia	322	11742.46	2202.066	8615.673	14611.7
GDP per capita, host country	322	27996.9	25001.46	523.061	113738.7
GDP, host country	322	1036669	2453809	.5641139	16768100
Exchange rate, Russia	322	29.2824	2.699059	24.8546	31.8561
Corruption perception distance	322	3.199689	2.332454	0	7.2
Number of patents	322	3346.29	7636.348	0	41967.7
Average annual wage in host country	322	30094.96	24858.04	2724	91573.55
Cultural distance	322	17.7205	17.21305	0	56
Political stability distance	322	1.643789	1.21772	.1	5.3
Export of natural resources (% of total merchandised export)	322	19.80904	22.06701	0	97.37
R&D expenditures (% of GDP)	322	1.385901	1.062989	0	4.52
Interest rate, Russia	322	6.28	1.236669	5.26	8.71

Table 2 reports the results of negative binomial regression analysis for the Model 1 which includes all the variables and test direct effects.

Table 2. Negative binomial regression results for the number of M&As by Russian companies in 2007-2013.

Independent variables	Coef.	Std.Err.	z	P> z	
GDP per capita, host country	1.060797	**	.3380313	3.14	0.002
GDP, host country	.0042836		.0359505	0.12	0.905
Export of natural resources (% of total merchandised export)	-.0143064**		.0050742	-2.82	0.005
Number of patents	.0000356**		.0000127	2.81	0.005
R&D expenditures (% of GDP)	-.5218105**		.1794692	-2.91	0.004
Average annual wage, host country	-.342822		.4075001	-0.84	0.400
Corruption perception distance	-.1160926		.1047536	-1.11	0.268
Cultural distance	-.0217282*		.0086091	-2.52	0.012
Political instability distance	.3964649**		.1142536	3.47	0.001
GDP per capita, Russia	.3011259		.6248259	0.48	0.630
Exchange rate, Russia	-.8780238		.8803877	-1.00	0.319
Interest rate, Russia	.0894814		.0944702	0.95	0.344
Host country – CIS member	.9151287**		.2949627	3.10	0.002
Host country – Developed country	-.5587762		.4042509	-1.38	0.167
_cons	-6.040383		6.923574	-0.87	0.383
Log likelihood = -489.83166					
Wald Chi-square = 61.08					
Prob>chi = 0.0000					
Sample size = 322					

Our results provide support to hypothesis *H1*. There is a statistically significant positive association between the number of Russian cross-border M&As and host country GDP per capita. Hypothesis *H2* is rejected as our results show a significant negative association between the number of Russian cross-border M&As and host country's natural resource endowment. This is an interesting finding as it seems that contrary to theory (and our expectations)—despite the economic predominance of Russian firms active in resource-sectors of the economy, Russian cross-border M&As do not seem to be primarily driven by resource-seeking motives. It is possible that investments driven by resource-access motivations are not executed through acquisitions but through greenfields (which of course is not reflected in our data).

The number of patents in the host country is positively associated with the number of Russian cross-border M&As which provides partial support to hypothesis *H3*. Our second variable,

R&D expenditures as percent of host country's GDP was insignificant. It could be that the number of patents is a better indicator of technological knowledge availability and the direct benefit of an acquisition is easier to anticipate and estimate. The results could also show that for Russian firms, the total amount of R&D expenditures in a host country is not necessarily an indicator of the potential technology benefits a specific acquisition in the host country may provide. Furthermore, our results show a lack of significant association between Russian cross-border M&As and host country labor cost which fails to provide support to our hypothesis *H4*. Efficiency-seeking motives seem not to be a critical driver of Russian cross-border M&As.

Hypotheses 5 suggests that institutional distance reduces the effects of market size, resources, strategic assets (knowledge) and labor costs on the number of Russian cross-border M&As in host markets. To test *H5* and check moderating effect of institutional variables we apply negative binomial regression to a number of models. There are three institutional variables capturing institutional differences (distance) between Russia and the host country—corruption perception index, political instability index and national culture. To test moderating effects we followed Penner, Hahn and Shaver (2005) and Deng and Yang (2014). We divided original our sample into two subsamples by the mean of the respective moderating variable (low vs. high), then applied negative binomial regression to each model to test these moderating effects. We examined the marginal effects of the independent variables on the dependent variable for each subsample. Model 2 and Model 3 test the moderating effect of corruption-level distance, Model 4 and Model 5 test the moderating effect of political-stability distance and Model 6 and Model 7 test the moderating effect of cultural distance between Russia and the host country on the association between investment motives and Russian cross-border M&As. The results for all 6 models are presented in Table 3. As shown in Table 3, when corruption and cultural distance is low, the coefficient of Wages becomes significant and positive indicating that efficiency drivers of Russian M&As are present in locations similar to Russia (with respect to level of corruption and culture). The average marginal effect of Wages is higher for the low cultural-distance model ($2.21 > 1.24$) thus efficiency-seeking M&As are stimulated more by the cultural similarities between Russia and the host country than by similarities in corruption levels between Russia and the host country. However, locations characterized by high political-instability distance are not attractive for efficiency-seeking M&A location—the coefficient of Wages is negative and significant indicating that when the level of political instability is very different from the one in Russia, investors are deterred from launching efficiency-seeking M&As.

Furthermore, the coefficients of GDP per capita, Natural resources and R&D expenditures are negative and significant for the models with low corruption distance and low cultural distance revealing that market-seeking, resource-seeking and strategic asset (knowledge) seeking investments through M&As are negatively influenced by little corruption- and cultural distance (that is, these types of M&As are unlikely to be located in a similar institutional environment as observed in Russia). We can conclude that institutional differences moderate the association between macro-economic investment drivers and the number of Russian cross-border M&As, however, different estimates of institutional differences have different effects on the individual investment (location) drivers.

5. Conclusions

In this paper we apply the OLI paradigm to examine the impact of macroeconomic influences on the trends of Russian cross-border M&As over the period 2007-2013. We move beyond the limitations of past research which typically tackled this issue as a dyadic interdependence between host market characteristics and firms' investment propensity. We argued that this

approach is somewhat limited as it fails to account for potential institutional differences that may get in the way of Russian firms' investment motives. Thus, our main goal was to demonstrate theoretically and empirically that not only factors associated with the M&A target (host) country are important determinants of Russian firms' investment-location decisions, but that institutional differences between Russia and the host country play an important, moderating role. We tested our model using current data on number of Russian cross-border M&As for the years 2007-2011.

One of the main drivers of Russian cross-border M&As is the search for new markets and customers. Perhaps not surprisingly, Russian cross-border M&As were negatively associated with natural-resource endowments in the host country. Furthermore, the association between resource-seeking motives and the number of cross-border M&As was negatively influenced by low institutional distance so institutional similarity between Russia and the host country did not positively change (but rather strengthened) the negative association between resource-seeking motive and the number of M&A deals.

Russian M&As are initiated for strategic-asset seeking (technology) reasons. This finding is in line with similar research on other emerging-market firms (Chinese and Indian) showing that strategic asset-seeking motives dominate among emerging-market firms (Deng and Yang, 2014). However, we saw that in the case of Russian cross-border acquisitions, technology-seeking acquisitions (e.g., registered patents) were mostly in institutionally close locations possibly because institutional distance negatively influences the ability of the acquirer to integrate the target firm, absorb the knowledge and benefit from the new knowledge. Efficiency seeking acquisitions are only initiated in institutionally similar locations while high institutional distance particularly in terms of political instability deters Russian firms from engaging in cross-border M&As.

Russian firms prefer launching acquisitions in CIS countries perhaps due to historical links and institutional similarities. CIS countries are destinations where Russian firms can relatively easily establish local presence, exploit ownership advantages, gather foreign market experience and then invest in more developed or more distant geographic markets. On the other hand the main destination of Russian M&As are developed economies, mostly market and technology-seeking.

In sum, with regards to previous studies on Russian FDI we see a change over time from resource-seeking FDI to a growth of asset-seeking and technology seeking investment. So it might be that relatively weak competitive position of most Russian firms in early 2000s lead to an increase in technology-seeking investment motives. Technology-seeking M&As serve as a springboard for an increase in outward investment in the future. Technology-seeking investments often result in the transfer of technology back to the headquarters and in improvement of ownership advantages of Russian multinational firms. Thus, this type of investment supports sustainable competitive position of a company in the long run.

Table 3. Negative binomial regression results for the number of M&As by Russian companies in 2007-2013, moderating effects.

Independent Variables	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
GDP per capita, host country	-1.7452** (-2.82)	1.2265** (2.78)	.1764 (0.46)	1.6773** (3.17)	-2.4682*** (-3.47)	.4549 (1.05)
GDP, host country	.0017 (0.05)	.0579 (0.45)	-.0493 (-1.34)	.1438 (0.97)	.1012** (2.72)	.2606* (2.13)
Export of natural resources (% of total merchandised export)	-.0276** (-3.03)	-.0139 (-1.68)	.0002 (0.03)	-.0263 (-3.12)	-.0353*** (-3.59)	-.0149* (-2.13)
Average annual wage in host country	1.2450** (2.04)	-.3393 (-0.56)	.3744 (0.71)	-1.3861* (-2.22)	2.2118*** (3.52)	-.4029 (-0.76)
Number of patents	.00004*** (4.23)	-.000043 (-0.34)	.00004** (2.85)	0.00002 (0.85)	0.00002 (1.83)	.00002 (0.34)
R&D expenditures (% of GDP)	-1.2046*** (-6.06)	.3333 (0.59)	-.8057*** (-3.45)	.0673 (0.25)	-.7217*** (-4.21)	.2257 (0.49)
Corruption perception distance	.2495 (1.30)	-.5529** (-1.97)	-.0682 (-0.47)	-.0926 (-0.39)	.1897 (1.79)	-.0404 (-0.16)
Cultural distance	-.0038 (-0.43)	-.0429 (-1.89)	-.0149 (-1.36)	-.0125 (-0.70)	-.0364** (-3.10)	-.2856*** (-2.856)
Political stability distance	.1664 (1.18)	.6293** (2.64)	-.2986 (-1.7)	.1517 (0.33)	.1181 (0.97)	1.1395*** (6.65)
GDP per capita, Russia	1.2915 (1.72)	.2127 (0.24)	.1531 (0.22)	.4511 (0.48)	1.0723 (1.48)	.9682 (1.24)
Exchange rate, Russia	-1.0663 (-1.09)	-1.6266 (-1.30)	-.7913 (-0.81)	-.7496 (-0.57)	-1.1357 (-1.18)	-1.1773 (-1.10)
Interest rate, Russia	.1461 (1.43)	.0831 (0.63)	.0461 (0.45)	.1137 (0.80)	.1132 (1.11)	.0681 (0.59)
Host country – CIS member	omitted	.8569** (1.97)	.8922* (1.97)	1.4555** (2.48)	omitted	-.0098 (-0.02)
Host country – Developed country	omitted	-.7590 (-1.20)	.6690 (0.94)	-1.0025 (-1.31)	4.7059*** (3.50)	-.4010 (-0.72)
_cons	-2.9426 (-0.34)	-4.9755 (-0.47)	-1.7151 (-0.22)	-5.9935 (-0.55)	-8.2172 (-1.10)	-8.6307 (-0.97)
Log likelihood	-204.3756	-248.18948	-236.35691	-227.80824	-187.46189	-254.3142
Wald Chi-square	79.34	53.14	67.75	39.05	54.98	83.35
Prob>chi	0.0000	0.0000	0.0000	0.0004	0.0000	0.0000
Sample size	146	176	153	169	147	175

* p<.05, ** p<.01, *** p<.001

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Andrei Panibratov
Professor
Graduate School of Management,
St. Petersburg State University, Russia
panibratov@gsom.pu.ru

Liubov Ermolaeva
Doctoral candidate
Graduate School of Management,
St. Petersburg State University, Russia
l.a.ermolaeva@gsom.pu.ru

The role of institutions in outward investments from China and Russia: comparative analysis

Annotation: The study aims to reveal the role of institutions in outward foreign direct investment (OFDI) from China and Russia. We analyze two periods of investing abroad for both countries: 2003-2008 and 2009-2013 distinguishing by world financial crises. We observe similarities and differences in investing track of Russia and China as well as moderating role of institutional distance in OFDI allocation. By mean of regression analysis we test effect of both home and host countries institutional indicators on volume of OFDI from Russia and China. Our results show that the biggest difference between two countries is the control of corruption indicator in host country. Being weak it is attractive for Chinese OFDI at both periods of time whereas for Russia it is opposite.

Introduction

Over the past two decades, IB research has been showing an increased interest in foreign direct investments (FDI) from emerging economies in general, and in the most prominent developing countries (also known as BRICS) as major players among developing economies, in particular. Discussion on how these countries invest internationally, with the focus on outward FDI (OFDI) from China (Buckley et al., 2007; Deng, 2009; Kotabe, Jiang, & Murray, 2010; Morck, Yeung, & Zhao, 2008) has led to an attempt in understanding the comparative features of OFDI from various emerging markets (Del Sol & Kogan, 2007; Tolentino, 2010). The key questions, however, remain relatively unchanged since initial scholarly attempts to describe and understand the phenomena of FDI within the narrow scope of emerging economies' investment: Can and should the Chinese and Russian outward FDI (OFDI) be treated similarly or separately to those from other economies, and, if there is a difference, what are the major distinguishing characteristics of the OFDI originating from these two countries? We aim to answer this question in this paper.

Outward FDI from China and Russia: institutional perspective

Taking the changing nature of institutions in general, and the highly dynamic institutions in emerging economies (with China as an example), an institutional perspective is extremely important for emerging markets (Meyer et al., 2009). Scholars have recently been actively elaborating the questions of how institutional variables of a host country can influence the location choice of FDI, its correlation with location within the chosen country and its interaction with other strategic decisions such as mode choice (Shapiro, Tang, & Ma, 2007). The specific location of operations is a major concern for multinational firms (Cantwell & Iammarino, 2000) and is of particular importance for large decentralized emerging countries, where institutions, environment and policies may differ significantly across different regions. For example, in Russia FDI is concentrated not only in the traditional financial centers in Moscow and St Petersburg, but also in smaller provincial cities that are actively stimulating trade and capital flows by means of introducing reforms and regulations (Meyer & Pind, 1999). In China, institutional differences within the country influence corporate strategies and foreign investment inflow (Zhou, Li, & Tse, 2002).

Institutions are equally important when it comes to selecting an appropriate mode of entry (Brouthers, 2002). Formal institutions, such as the legal framework, and informal institutions, such as the practices of law enforcement, shape the transaction costs in pertinent markets and, consequently, an investor's preference for internalizing markets (Meyer, 2001). Furthermore, institutions may affect transaction costs, efficiency in resource exploitation and capabilities. For example, networking competences are most developed in those countries where transactions are commonly based on personal relationships and networks. The institutional environment thus shapes the key parameters determining FDI, and they are of particular importance when it comes to studying such emerging economies as Russia and China, where government regulations and specific social environments play crucial roles in various aspects of the economy.

The context of OFDI from China

During the period between 1990 and 2000 China's OFDI was not showing any extraordinary growth, while between 2001 and 2005 Chinese firms started to turn their interest towards the idea of moving their interest and capital abroad. Currently, by 2010, China's FDI outflows increased dramatically. Compared with the beginning of 2000s, FDI outflow was more than tenfold, with US\$6.8bln in 2001 and US\$68.8bln in 2010. At the

critical point of 2005-2006 FDI outflows were more than doubled, with a year-over-year change index of almost 100% in 2006 (US\$21bln) against 2005 (US\$12bln). The second two-fold change in outbound investment happened in 2008 compared to 2007, US\$52bln against US\$22bln respectively. Even the outburst of financial crisis did not affect that much the growth tendency of Chinese investment activity, which slowed down, but continued the ongoing escalation.

There are three major distinctive features driving China's OFDI: proximity (both territorial and cultural), market size and growth, and natural resource endowment (Buckley et al., 2007). All investment activities and the spread of Chinese investment flows are predetermined by one or several of these factors, meanwhile Australia and Central Asia are appealing for natural resource investment, Europe and US are attractive for their market size and opportunities, and Hong Kong and Singapore are close in terms of culture and business management environment.

The context of OFDI from Russia

Russian companies are sharply abandoning simplistic import-export activities and are beginning to use a broad variety of more sophisticated investment tools in the cross-country value exchange (see Annex 3). As one of the examples – OFDI stock has risen dramatically from US\$20bln in 2000 up to more than US\$370bln in 2007 and almost US\$370bln in 2010. The significant drop in outward investment escalation in 2008 was definitely the result of the breakout of the world financial crisis, when the investment climate throughout the world became very unpredictable, but by 2009 OFDI recovered its trail of growth.

Sourcing OFDI from Russia indicates a growing interest by Russian companies to seek newer and better opportunities for their business expansion outside the borders of its home country, a readiness to increase their international competitiveness and to strengthen their international position in the global market by means of gaining access to resources, strategic assets and new markets worldwide. The outstanding growth of OFDI performed by Russian companies shows that in some cases companies find investment opportunities abroad more attractive than domestic ones. This fact derives from drawbacks in the business environment, an underdevelopment of policy regulations and pitfalls with governmental practices (Vahtra & Liuhto, 2006). In other words, companies seek to escape the unfavorable system of the home country environment and safeguard their business from domestic risks by establishing an immediate international presence (Settles, 2008).

Hypothesis development

Our study aims to investigate the institutional development and governance factors determining Russian and Chinese OFDI.

Host-country's institutional environment

It is likely that institutions and governance are important determinants of FDI, especially in case of less-developed countries (Blonigen, 2005). Poor legal protection leads to increasing costs of business operations, decreasing FDI motives, while poor institutions result in underdevelopment of infrastructure, hence, negatively influencing FDI inflows into countries. There is empirical evidence that diverse corruption indices strongly and negatively influence FDI (Wei, 2000).

However, a number of studies on China's OFDI have generated empirically supported conclusions that Chinese companies have competitive advantage in countries with poor institutions. The level of corruption in China is much higher than in developed countries, so Chinese multinational companies are much more experienced in operating in an opaque business environment and bribery (Kolstad & Wiig, 2012). Despite the absence of researches

dedicated to the institutional impact of Russia's OFDI, it is clear that the same, or more or less similar, situation can be observed in the case of the Russian business environment and Russian companies, so one may conclude a general similarity from this perspective.

Besides corruption control we included in the study other governance indicators developed by World Bank such as: rule of law, government effectiveness and political stability. Political stability reflects perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including politically-motivated violence and terrorism. Government effectiveness indicates perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies. And the rule of law indicator shows perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence¹.

Hypothesis 1: Russian and Chinese OFDI engaged in countries with weak institutions and weak control of corruption are higher than in other potential target economies.

Home-country institutional environment

The reasons why Chinese firms enjoy competitive advantage in the environment of weak institutions takes root in the home-country's institutional underdevelopment and overall lack of corruption control by the government (Deng, 2009; Child & Rodrigues, 2005). Since from a general perspective these bribing business practices are abundant in Russia (Puffer & McCarthy, 2007), we can imply an extrapolation of the same assumption for Russian firms and assume an inverse correlation between control of corruption and OFDI. Besides some scholars argue that there are so called push-factors which encourage investing abroad (Buckley et al, 2007). Thus weak institutions at home can push companies to seek more stable and transparent environment. At the same time institutions have been developing over the time, thus it can lead to different

Institutional distance as moderating factor

We also argue that institutional distance affects investment's allocation. Although geographical proximity is attractive factor for OFDI institutional distance can decrease this attractiveness.

Hypothesis 2: Institutional distance between Russia\China and target countries plays moderating role in OFDI allocation: it positively affects outward investments to countries with lower institutional distance and vice versa.

Control variables

Host-country GDP and GDP per-capita.

As a proxy for market-seeking motivation for the internationalization of the companies and, therefore, determinants for market-seeking investments host-country GDP and GDP per-capita are introduced in this research as a measure of absolute the market size and market attractiveness of the host-country (Dunning, 1979; Chakrabarti & Basu, 2002). Host country market size is expected to be a significant determinant and have a positive impact on FDI flow: as the market grows, so do the opportunities for investors for achieving better results in profit generation. Market size is estimated to be one of the major determinants for Russian and Chinese OFDI and explicators of both countries' continuous investments in production facilities and distribution networks in developed regions.

Bilateral investment treaty (BIT)

¹ The worldwide governance indicators, 2014. <http://info.worldbank.org/governance/wgi/index.aspx#home>

As state plays an important role in OFDI allocation as in China as in Russia we control our results by the direction of government investment policy. If there is signed BIT between two countries more probably outward investment flow by this route prepared by the state. Thus existence of BIT positively affects volume of OFDI from China and Russia.

Empirical model

In order to evaluate the Russian and Chinese OFDI this research explores two formulas for different time periods: the first is 2004-2008 and the second is 2009-2013 in order to estimate the overall trends, dynamics of OFDI from Russia and China and detach the specific institutional determinants of the Russian and Chinese OFDI at different time periods.

Dynamics of OFDI from Russia and China and the role of institutions

Based on theory analysis we suggest that OFDI from either Russia or China is a linear function of the above-presented determinants, which, before any specifications looks as such:

$$[FDI]_{it} = \alpha + \beta_1 X_{1it} + \beta_2 X_{2it} + \varepsilon_{it}$$

where dependent variable FDI_{it} represents the total value of FDI in the host country i in year t , α is a constant term of equation showing the value of FDI irrespectively to the value of variables introduced; X_1 and X_2 represent the explanatory factors, referring to the values of the observations according to the variables introduced; β_1 and β_2 are the coefficients associated with X_1 and X_2 variables respectively; and finally ε_{it} is an error term. Using the variables we have distinguished to be relevant for our research we can specify our model to the final equation:

$$FDI_{it} = \alpha + \beta_1 HGDP_{it} + \beta_2 HGDPpc_{it} + \beta_3 DIST_{it} + \beta_4 INST_{it} + \beta_5 HINST_{it} + \beta_5 REG_{it} + \varepsilon_{it}$$

where $HGDP_{it}$ and $HGDPpc_{it}$ are host country's GDP and GDP per capita respectively, $DIST_{it}$ - institutional distance between Russia or China and target country, $INST_{it}$ and $HINST_{it}$ are vectors of home and host institution indicators respectively, REG_{it} - is a vector of regional variables (EU, APEC, CIS) and ε_{it} is an error term.

Discussion of the results

In order to examine differences between Russian and Chinese OFDI in two time periods we ran two regressions for both countries. First regression analysis covers period of 2004-2008 as for Russia as for China. This period of time was chosen by some reasons. Firstly, Russia started actively invest abroad since 2000-2002, that time characterized by expansion of Russian MNCs on foreign markets in particular CIS countries. We assume that this period was also fruitful for Chinese companies in terms of investing abroad. We limit this period by the year of financial crisis has stricken on Russian and Chinese markets – 2008. Unfortunately it was extremely difficult to get data on Russian OFDI at that time, thus the sample for regression analysis was not big. The same problem occurred regarding Chinese foreign investments, where the sample was pretty the same as for Russia.

Second regression was run for the period 2009-2013 – both economies recovered from financial crisis and continued their growth and expansion abroad. More information on this period of time is available. Therefore both samples are big enough in comparison with first period. Nevertheless interesting trends and differences between countries are observed. Results are presented in Table 1.

Russia 2003-2008 (Modell)

As this period of time was poorly presented in the datasets we do not have large sample. It results in irrelevance of adding many variables in the model. Therefore we ran random effect panel regression with certain institutional variables and controls. As for

regional allocation of Russian FDI EU variable shows significant result, however the sign of the coefficient is negative what contradicts previous studies suggesting attractiveness of European market for Russian OFDI. Unexpectedly CIS variable is not significant.

The results show that our hypotheses about weak institution's attractiveness are not fully proven. Higher control of corruption and political stability correlate with higher level of foreign investment from Russia. However rule of law is significant with negative sign what demonstrates that Russian investors prefer to go to countries with weak law system, which can be got over.

The model also shows that among home-country institutional factors political stability turns significant. More stable political situation in Russia causes more investments abroad.

China 2004-2008 (Model 2, 3)

Chinese OFDI of the period 2004-2008 was tested with running pool regression. Like in Russian case EU variable shows significant result with negative sign. Testing the model with moderating effect of institutional distance we observe its significance. Thus institutional distance positively correlates with volume of OFDI. These results are contradicting each other and require further investigation. What is indeed different from Russian OFDI at this stage is positive correlation of institutional distance with OFDI volume. Looking more precisely on institutional indicators we observe that home country rule of law strength also positively correlates with OFDI, none of other home-country indicators doesn't turn significant. As for host-country institutions only one indicator – government effectiveness positively affects Chinese OFDI. Both results contradict our hypothesis about attractiveness of markets with weak institutions for Chinese OFDI. Both results contradict our hypothesis about attractiveness of markets with weak institutions for Chinese OFDI. However in the model 3 we observe significant result for moderating effect of institutional distance on other institutional factors. Thus adding to the model host government effectiveness x institutional distance variable we get significant variable control of corruption with negative coefficient, the variable apec is now significant an negatively correlates with volume of OFDI from China.

Russia 2009-2013 (Model 4, 5, 6)

At after crisis stage EU and CIS variables are both positively significant, what proves that European countries are attractive for Russian foreign investment in terms of their geographical proximity and economic development. At the same time CIS countries are of traditional interest for Russia. In this regards the estimating moderating role of institutional

Table 1. Panel regression results for the Chinese and Russian OFDI by two periods: 2004-2008, 2009-2013.

Independent Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
GDP per capita, host country	-.0120644 (-0.06)	-.2032369 (-0.98)	-.2289335 (-1.13)	.1189412 (1.18)	.1237642 (1.23)	.1163915 (1.15)
GDP, host country	.4772752*** (3.89)	.3069575* (1.96)	.3196377** (2.11)	.0116852 (0.59)	.0134898 (0.69)	.0125204 (0.63)
Bilateral investment treaty (BIT)	-.094903 (-0.18)	.1247844 (0.32)	-.0697319 (-0.18)	.982624*** (4.15)	1.050283*** (4.43)	.9653415*** (4.44)
Corruption control indicator	.0797512** (2.15)	-.0462553 (-1.53)	-.0806002** (-2.51)	.0420917** (2.17)	.0356884* (1.88)	.0407485** (2.15)
Rule of Low indicator	-.0664733** (-1.99)	-.0340241 (-0.91)	-.0177204 (-0.48)	.0294631 (1.65)	.0321634* (1.81)	.0313429* (1.73)
Political stability indicator	.0400916** (2.09)	.011868 (0.69)	-.003208 (-0.18)	-.022004** (-2.54)	-.0243508** (-2.82)	-.0216869** (-2.50)
Government effectiveness	-	.0769943** (2.07)	.0302992 (0.75)	-.0263025* (-1.70)	-.0248004 (-1.61)	-.0239544 (-1.50)
Corruption control Russia	-	-	-	.1130239 (1.39)	.1173142 (1.45)	.1129723 (1.39)

Rule of Law, Russia	-.1627582 (-0.83)	-	-	.0152239 (0.35)	.0141069 (0.33)	.0165577 (0.38)
Political stability, Russia	.0909097** (2.55)	-	-	.0028989 (0.04)	-.0016351 (-0.02)	.0004761 (0.01)
Government effectiveness, Russia	-	-	-	-.004951 (-0.04)	.0017122 (0.01)	-.0087208 (-0.07)
Corruption control, China	-	-.1104368 (-0.91)	-.1053936 (-0.89)	-	-	-
Rule of Law, China	-	.1357571* (1.76)	.1493751** (1.99)	-	-	-
Political stability, China	-	-.1822446 (-1.39)	-.1780548 (-1.40)	-	-	-
Government effectiveness, China	-	.0979126 (0.95)	.112173 (1.12)	-	-	-
Institutional distance	-	.026446** (2.67)	-.0535864* (-1.66)	.0001864 (0.01)	.0068519 (0.53)	-.0021995 (-0.17)
Host country – CIS member	-.8406958 (-0.99)	-	-	2.96398*** (6.89)	3.064143*** (7.15)	2.507339*** (3.04)
Host country – EU member	-1.359852** (-2.09)	-1.81514** (-2.08)	-2.631035** (-2.91)	1.14100*** (4.45)	2.54521*** (3.91)	1.139805*** (4.44)
Host country – APEC member	-	-.7022455 (-1.05)	-1.657103** (-2.22)	-	-	-
Govern. effectiveness x institute. distance	-	-	.0012208** (2.60)	-	-	-
EU x institute. distance	-	-	-	-	-.0149406** (-2.35)	-
CIS x institute. distance	-	-	-	-	-	.0155475 (0.65)
_cons	-5.964588 (-1.22)	-0.17906 (-0.00)	3.275528 (0.39)	-2.753108 (-0.49)	-3.440685 (-0.62)	-2.646108 (0.65)
R-sq: within	0.2767	0.2919	0.3395	0.3784	0.3907	0.3793
Wald Chi-square	132.42	-	-	-	-	-
Prob>chi	0.0000	0.0016	0.0003	0.0000	0.0000	0.0000
Sample size	96	110	110	288	288	288

distance seems rather relevant (model 4). Thus for European Union we got significant result for moderating effect of institutional distance – than less this distance than more attractive EU's country for Russian FDI (model 5). However there are no significant results for the moderating effect of institutional distance on Russia-CIS investment's relationship (model 6), what can be explained common past and awareness of institutional environment of each other. APEC countries still are not of high importance for Russian OFDI as the variable is not significant in our model.

Interesting that none of home-country institutional indicators shows significant result in the model for the period 2009-2013. In contrary in the first model host-country's indicators such as corruption control, government effectiveness and political stability turn significant. Higher level of corruption control associates with higher level of OFDI what again contradicts our hypothesis. However government effectiveness and political stability indicators are significant with negative sign – their lower score correlates with higher investments. Thus at some point weak institutions encourage development of investment's relationship between Russia and other countries.

At the second model testing moderating effect of institutional distance (EUx instdist) we observe slight change in significance of institutional indicators – rule of law turns significant with positive sign, what means that than better rule of law in the country than more volume of investments from Russia. We conclude that if OFDI heads to developed countries with strong institutional environment Russian companies aim to choose countries with institutional environment more similar with home country but at the same time with better rule of law and control of corruption but less politically stable.

Testing third model doesn't provide any significant result for moderating effect of institutional distance on OFDI to CIS countries. But we observe the same change in other institutional indicators – better control of corruption and rule of law correlate with higher level of outward investing from Russia.

China 2009-2013 (Model 6, 7)

Analysis of Chinese OFDI demonstrates the difference between Russia and China. Thus Hypothesis of weak institutional environment attractiveness holds for China. Two indicators out of four show significant negative correlation with volume of OFDI. Than less political stable country and than less control of corruption than more outward investments from China go to those countries. However the rule of law indicator is significant, it positively affects volume of FDI from China, what means that Chinese companies aim to invest in countries with clear and respected legislation system. At the same time only one home-country institutional indicator – political stability turns significant again with negative sign. This fact partly proves results of previous studies stating positive correlation between outward investment and weak home-country institutions for China. Opposite to Russia EU and APEC variables are not significant in the model.

Conclusions

Comparison of Russian and Chinese OFDI reveals several similarities and differences. First of all for about 10 years period we can observe slight change of the role of institutional environment in allocation of OFDI from Russia and China. For host-country's institutions: indicator control of corruption rests unchanged for both countries but while for China less control of corruption seems more attractive for Russia bigger volume of OFDI associates with higher control of corruption. Another difference at earlier stage of investment – positive significant of different institutional indicators such as political stability for Russia and government effectiveness. However both results do not prove fully the hypothesis of weak institutional environment attractiveness for emerging markets. All world government indexes jointly present formal institutions development in the country, nevertheless being attracted by weak control of corruption China prefers to invest in countries with better quality of governance. At the same time Russia invests in countries with higher corruption control but with weaker legislation system. Also at the early stage institutional distance doesn't play significant role for Russia but plays positive role for China.

At the later stage we observe that both countries are not afraid of investing in politically less stable country however for both countries there is the moderating effect of institutional distance. Less institutional distance causes preference to invest in countries with better rule of law although for China weak corruption control is still important and for Russia poor government effectiveness associates with higher level of investments.

There is also difference in home country's institutions effect on OFDI. Thus for Russia only political stability was significant at before crisis stage, but all other factors are not significant at after crisis stage. For China we get significant result as well for political stability indicator at after crisis stage but with negative sign.

To resume this study we argue that institutions apparently matter for emerging markets however it is necessary to distinguish between different forms of institutions considering such indicators as control of corruption or rule of law separately. Furthermore having similar features emerging markets differ from each other in terms of institutional environment and cultural background what results in different choices of preferable allocation of OFDI.

Limitations of the study

The first and the most significant problem in this and other similar studies is the availability and reliability of the data to be collected. The two countries still lack a developed system of reporting and gathering information about macroeconomic activities, therefore there were data discrepancies between figures that were reported by worldwide and local databases. Both Russia and China experience a state of things whereby companies are sometimes not eager to disclose information about their operations and international activities in particular, which makes the analysis of FDI flows an uneasy task. Furthermore, given the shortness of the time series available for analysis – both countries became significant capital investors in the mid-2000s – a short period for observation does not necessarily properly reflect actual trends and patterns of OFDI.

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Y. Panova, Petersburg State Transport University
panovayulia87@gmail.com

O.-P. Hilmola, Lappeenranta University of Technology
olli-pekka.hilmola@lut.fi

E. Kazaku, Petersburg State Transport University
eev_isip@mail.ru

V. Makshin, Petersburg State Transport University
makvn@mail.ru

Risk Management Processes of Dry Ports Development: System Dynamics Simulation Approach

Abstract: In the current economic environment, the investments in dry ports in Russia may carry a potential danger or a great opportunity for the development. The success of warehousing and terminal business is determined by the correct and justified strategy of the companies that includes the likelihood of critical situations. The projects of dry ports imply large-scale capital, risks, and uncertainties related to competitive climate, regulations, political situation, etc. Since risks cannot be fully eliminated, their mitigation and the appropriate treatment are of particular importance for the managers and analysts concerned with budget decisions-making. An examination of methods and models for risk assessment indicated the rationales for the application of system dynamics simulation. This proposal creates preconditions for the accuracy of the feasibility studies on investment risks in dry port projects, owing to which the budget can be capitalized.

Keywords: investments, pricing risks, system dynamics simulation.

1. Introduction

The development of dry ports that are essential nodes between seaports and railways received an international coverage in the recent years (Roso, 2009; Henttu and Hilmola, 2011; Rodrigue and Notteboom, 2012; Monios and Wilmsmeier, 2012; Roso, 2013; Ambrosino and Sciomachen, 2014). The concept became ever expanded when more and more experts expressed their concerns about undeveloped hinterland infrastructure for the international trade among the countries (Abdikerimov et al., 2013; Rezer and Kuzin, 2011; Maksimov, 2013; Hämäläinen and Korovyakovsky, 2007). In order for the facilitation of the trade relations across the borders, the mitigation of deficit in the logistics transportation systems is required (OECD, 2011). Thus, governments in developing countries are advised to increase investments in infrastructure to stimulate international trade and economic growth (Dang and Pheng, 2015). However, in the current circumstances, the financing of capital intensive infrastructure projects, such as dry ports, may carry a potential danger. At the same time, an opportunity for the development exists, if the assets are properly assessed.

This statement is clearly justified, when refer to the word ‘crisis’. In Chinese language, crisis can be translated into 危機 and 危机, with former as Traditional Chinese character(s) and later Simplified Chinese character(s). The first character (危) means danger and the second one (机) defines the opportunities. Therefore, one can ensure that, where the largest danger lives, there are the greatest opportunities for development.

Since the goal of this research is the economic assessment of risk investments in dry ports, the paper shows the full advantage from the opportunities, which crisis can store for the entrepreneurs and the state. More specifically, the article looks into the risk management process that, according to Kirilmaz and Erol (2015), is comprised of four main steps: risk identification, risk evaluation, risk mitigation, and risk monitoring and control phase. However, the attention is paid to the two first stages of the supply-chain risks management (SCRM) process. In this regard, the following main research questions are formulated: (1) *What types of the risks are related to the investments in the capital intensive dry port projects;* (2) *Why system dynamics simulation and both capital-budgeting criteria, i.e. Net Present Value (NPV) and Discounted Payback Period (DPP) have been considered for the national market.*

The outline of the paper is as follows: Section 2 provides explanation of the methodology employed in the article. Section 3 describes literature review about the risks’ assessments methods and models and their combinations, benefiting to the accurate decision-making. Section 4 considers the empirical peculiarities of risks’ presented on the Russian market. Section 5 explains a stochastic model of risks investments appraisals based on system dynamics simulation that employ the capital-budgeting criteria, such as DPP and NPV. Section 6 identifies the quantitative results of risks appraisals’, depending on different types of factors of risks.

2. Methodology

In order for the proposed hypothesis on the reasonable application of the capital-budgeting criteria, i.e. NPV and DPP in combination with system dynamics simulation, the article utilises different methods of the scientific evidence (e.g. empirical and logical analyses) (Silverman, 2011).

The first stage of the research was focused on the analysis and the systematisation of the literature review in English and Russian language, so as to accumulate the relevant knowledge about the national market and its coherent uncertainties. The new scientific facts, ideas, and theories were obtained from the presentations at scientific conferences, seminars, as well as from the scientific articles, reports, and monographs.

The peculiarities of the risks have been additionally surveyed based on the expert estimations from the transportation logistics, preferably railway sphere, providing the sufficient empirical evidence for the research work. This stage of the qualitative methods served as the main prerequisite of the subsequent phases of the research, which were constructed based on the quantitative methods (Flyvbjerg, 2011; Yin, 2009).

Therefore, in the second stage, the qualitative methods of research were counterbalanced by the logical analysis (Amaratunga et al., 2002). On the ground of the allocation of scientific abstractions (pure forms and natural sciences), the evidence for the hypothesis about the applicability of system dynamics simulation in the economic appraisal of the investments risks was obtained. The model was developed in the Vensim computer simulation program, which provided a framework and an easy-to-understand graphical interface for observing the quantitative interaction of variables within a system.

The final stage of the research became the reflection on the conducted theoretical and empirical analysis, which included an adoption of a number of assumptions and idealizations during the process of modelling of the studied phenomena of the risk assessment of the investments in dry ports. Some outcomes or the collected statistics from the experiments with the model, which was designed with the allowance for risks' factors, become the evidence for the suggestions presented in the conclusions.

3. Literature Review

For the mega infrastructure projects, the risks involved are high, but they are treated in a deficient manner in feasibility studies and project appraisals (Bruzelius et al., 2002). Due to this fact, authors conclude that the cost overruns of 50-100% in the fixed prices are common for major infrastructure projects, and overruns of 100% are not uncommon (e.g., Channel Tunnel (Great Britain-France) >100%, Great Belt link (Denmark)>55% overruns three years before the estimated completion of the project, Öresund link (Sweden) =10% for the cost-to-cost link even before the construction of the link was started).

The transport infrastructure projects in Russia are not exception. For example, the sum required for the reconstruction of the main rail lines of Trans-Sib and BAM ballooned to RUB 1 trillion from RUB 562 billion (Aleksandrova, 2014). Authors consider that the rise of the costs is determined by the tight deadlines due to rushed schedules, incorrect traffic forecast, relaxed bidding rules, and potential corruption. Bruzelius et al. (2002) stress that the reasons for the above-mentioned failures should be found in insufficient data and methods.

A remark should be added to the risk analyses, because, in reality, the world of project planning and implementation is a highly stochastic where events happen in the certain probability and rarely turns in deterministic order. The treatment of risks in Channel Tunnel, Oresund and Great Belt projects has been inadequate (Bruzelius et al., 2002). In the current economic environment, especially in Russia, the investments in transport projects (e.g. dry ports) require the consideration of different factors of risks. The proper evaluation of risks can benefit the process of meeting the overall goal of the facilitation of the dry port realization (Bergqvist and Monios, 2014).

For that reason, the development of methods and models for economic evaluation of major dry port projects with the allowance for the associated risks is reasonable. The essential probabilistic nature of the risks is hardly met with a formula-based analysis. That is why the inappropriateness of some methods to evaluate the payoff of the investments in the infrastructure projects has fostered researchers resort to the combination of the deterministic methods with stochastic approaches, e.g. Monte Carlo simulations (Lorenzo et al., 2012; Salling, 2013; Ambrasaitė et al., 2011; Esipova, 2011). The Monte Carlo test is proposed as one of the most suitable quantitative risk assessment techniques (Ambrasaitė et al. 2011; Kazaku and Narkevskaya, 2013). This method includes the sensitivity analysis of the effect of

key assumptions of risks on the project performance. According to Lättilä (2012), the Monte Carlo method is one of the most powerful tools for the analysis of investment risks, which takes into account the maximum possible number of environmental factors, and copes with uncertainties.

The use of simulation techniques (e.g. probabilistic approach) is more common in discounted cash flow (DCF) analysis that has distinct preference compared with other methods, even within the deterministic systems (Schauten et al., 2010). Due to the possibility to recognize the time value of money, the NPV more often is perceived as a technique superior to other decision-making criteria (Keown et.al, 2003; Dymowa, 2011; Vitollo and Cipparone, 2014; Pyles, 2014). That is why Monte Carlo is used for probabilistic analysis of the NPV value (Bannerman, 1993; Amédée-Manesme et al., 2013; Piranfar and Masood, 2012; Booth, 1995; Samis and Davis, 2014; Ambrasaite et al. 2011) rather than discounted payback period, and internal rate of return (Lorenzo et al., 2012; Efficiency.lbl.gov, 2014; Jeffery, 2004; Merkova et al., 2013).

However, according to Bhandari (2009) and Kim et al. (2013), NPV rule ensures profitability, but not liquidity. In other words, the decision making on the acceptance of the project by the positive NPV does not take into account the time period or the project's useful life that exposed to risk due to changes in political, technological, regulatory factors and change in consumer taste. These setbacks can be easily mitigated by the use of discounted payback period (Bhandari, 2009). In this regard, the combination of the Monte Carlo test with the aforementioned capital-budgeting decision criterions amplifies their benefits (Amédée-Manesme et al., 2013; Esipova, 2011; Lorenzo et al., 2012). Having these ideas in mind, the current research is geared towards the justification of viability of the combination of Monte Carlo analysis with DCF techniques on the ground of system dynamics simulation. The explicit decision making tool is tested via the developed model, which takes into account the risks' factors that are empirically analysed in the following section.

4. Empirical analysis of the risks within Russian warehousing businesses

According to Barfod et al. (2011), the most important aspect of considering risk-based decision making within a stochastic framework is the handling of extreme events. The probability of occurrence of different risks can be assessed as one of the following three categories:

- High – Greater than 70% probability of occurrence.
- Medium – Between 30% and 70% probability of occurrence.
- Low – below 30% probability of occurrence.

The categorisation of risks as a rule is based on the assessment of the project managers with the input from the project team.

Due to the reason that the risk is the function of the two variables:

$Risk = function (Likelihood; Consequences),$

additionally, the impact of each risk also can be attributed to the following three categories:

- High – Risk that has the potential to greatly impact the project cost, project schedule or performance.
- Medium – Risk that has the potential to slightly impact project cost, project schedule or performance.
- Low– Risk that has a relatively little impact on cost, project schedule or performance.

In accordance with the assumptions and expert estimations, the risks, which are related to the development of the warehousing and terminal business within the Russian market can be mapped, using red/green/yellow color-coding (Figure 1).

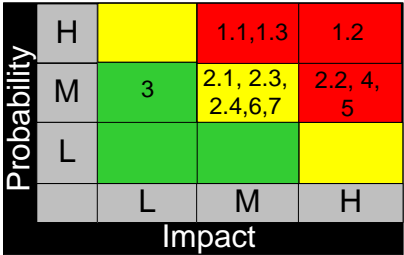


Figure 1. Map of the risk related to the warehousing and terminal business development.

According to expert estimates, there are two main groups of risks that should be taken into account: economic and market risks. The first group of risks, *economic risks*, include the following aspects:

- 1.1. Stagnation of the economy.
- 1.2 The decline in freight traffic.
- 1.3 Long-term structural barriers to industry development.

The second group of risks is related to the *uncertainties on the market*, and is represented by the following factors:

- 2.1 The deceleration in the development of the warehousing business.
- 2.2 Increased competition for consumers.
- 2.3 Changes in the structure of demand for terminal and warehousing services towards integrated services with higher added value.
- 2.4 The expansion of international warehousing operators, consolidation and the emergence of large domestic companies.

The experts note that the level of competition varies greatly among regions of Russia, because of the wide geographical distribution of facilities of JSC ‘Russian Railways’. That is why some unsystematic risk can be determined directly by the project. In this regard, the implementation of the project may have the following risks:

- 3. Production risks.
- 4. Technological risks.
- 5. Investment’s risks.
- 6. Management risks.
- 7. Transformation risks.

5. System dynamics model of economic assessment of investment risks

The model was created to analyse the scenarios of dry port project realisation, depending on the risk investment climate. With the reference to the literature review, the possible impact of the project risks at the stage of the feasibility studies can be accurately indicated by the capital-budgeting criteria, such as DPP and NPV, calculated in combination with the Monte Carlo test.

The model development was performed by system dynamics approach (SD), which is appropriate for solving the problems of decision-making (Systemdynamics.org, 2014). The basis for the system dynamics model became the mental model, in which the attention is paid to the scenarios of dry port realisation, depending on competitive environment, regulations, political situation, etc. The capital-budgeting techniques (e.g. NPV and DPP) were considered as the outcome (Y1 and Y2) of the model. The relationships of the phenomena (Y1 and Y2) were identified in connection to investment climate and the array of the predictors (X₁, X₂, and X_n). In other words, these predictors are the income of the model (X → Y).

The main predictors are represented by different types of deterministic cash flows that were calculated in regard to the following assumptions. It was proposed that the investment period (settlement period) $T=20$ years, the beginning of construction is 2015. Overall, the expected state of a container terminal implies a dead-end type of its scheme with two railway approaches of 25 km each, customs' post, four container yards, warehouses, etc. The dry port area equals to 24 hectares. The increase of the processing capacity of dry port is made in stages, which allows to perform an on-going development of its capacity due to exponential growth of container traffic. In the advanced condition of the technical state of dry port, the annual processing capacity reaches 398 ths. TEU.

The deterministic cash flows that were included in the model are presented below:

1. Investment cash flow is connected with activities that include investments for the construction of the dry port. The investments' cash flows were divided into three parts in time of the settlement period of 20 years. Thus, the allocation of the investment funds was designed in accordance with the increase of the processing capacity of dry port that triggers the change of its technical conditions in stages.

2. Operating cash flow is associated with the exploitation activities that encapsulate, in turn, inflows and outflows.

2.1) Inflows are revenues from the following activities: Transportation, handling, and storing of containers, as well as additional operations (e.g. use of wagons and containers, shunting operations, customs clearance, weighting, etc.). The maximum amount of revenue is expected to be received for a site at the end of the prescribed period $[0; T]$, i.e. by the residual value of the land. The savings in operating costs is summed up with the inflows (e.g. the degree of the reduction of losses that were the case before the construction of the dry port due to the deficit of storage yards).

2.2) Outflows are operating costs connected with the exploitation of the dry port, including rail approaches to the seaport. These cash flows contain prime costs for lifting operations with the containers, costs of shunting services, expenses connected with the presence of wagons and locomotives under the operations at the dry port, the costs of running the trains, locomotives, their maintenance, energy consumption, as well as salary of the trains' crew, wagons inspectors, who check technical conditions of the wagons within the trains, which arrive/departure from the dry port.

Additionally, depreciation costs were considered in the model. The calculation of the annual depreciation implies an annual replacement cost for each piece of equipment and for each capital item. Depreciation is included in the revenue rate of transport of goods. Taking into account the fact that the designed dry port is located at the arrears owned by the Russian Railways, the facilities of the dry port, including the terminal and approaches to the seaport is transferred to JSC 'Russian Railways' after 20-years horizon of investments at the prices of the date, according to the contract.

Apart from the cash flows and other costs, the risks' events, which have a probability of occurring of 90%, were included in the model, forming the moderators (Z). In the given model, the following risks are taken into consideration. One of the largest groups of risks are market risks, which in turn include revenue risks, land acquisition risks, traffic volume risks, and construction risks. Finally, a political group of risks was considered. Based on simplified causal loop diagram of the risk assessment of dry port project development (Figure 2a), more detailed model was designed, with which several experiments was conducted, allowing to collect the reliable statistics (Figure 2b) and its analysis (Table 1).

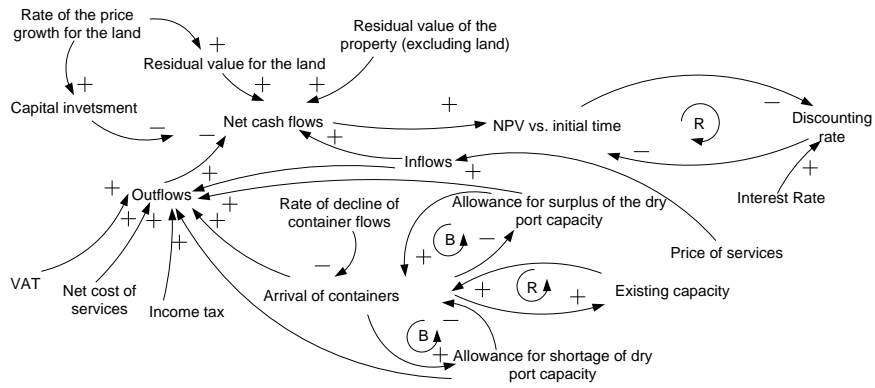


Figure 2. a) The simplified causal loop diagram of dry port project development.

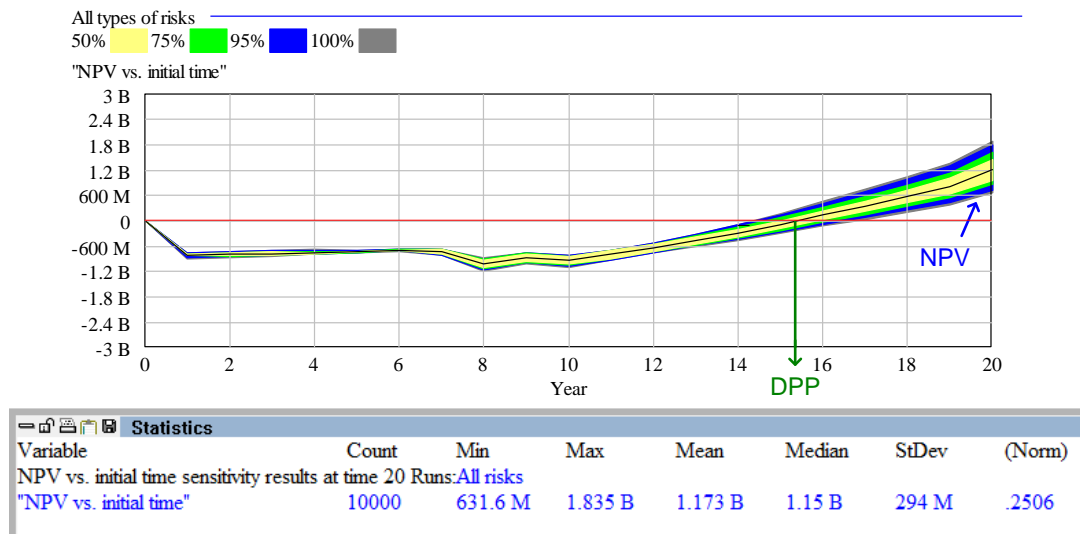


Figure 2. b) The probabilistic distribution of NPV and DPP (all types of risks), Billion RUB.

Table 1. Elasticity of NPV and DPP to the factors of risks.

Factors	NPV with factors of risks	NPV without risks	DPP with factors of risks	DPP without risks	Changes	Base	Rating according to NPV (Absolute impact)	Elasticity of NPV	Rating according to NPV (Relative impact)		
Revenue risk	3.887 B RUB (1.8%*)	3.959 B RUB	9 years 1.8 months (6.6%*)	8 years 7 months	Decrease of sales prices by 20% annually during 'black swan' event (1- 5 years from the beginning of projects realization)	Growth of sales prices +0.5% annually during the investment horizon	5	0.093	5		
Land acquisition risk	3.897 B RUB (1.6%*)		8 years 10 months (2.9%*)		Growth of price for the land at rate of 0% annually	Growth of price for the land at rate of 3.5% annually	4	0.447	4		
Construction risks	3.521 B RUB (11%*)		10 years 11 months (27.1%)		Delay in implementation of Phase 2 equal to 2 years (10% delay within 20 years' time horizon)	Delay in implementation of Phase 2 equal to 0 (0% delay within 20 years' time horizon)	3	1.1	3		
Traffic volume risk	2.161 B RUB (45.4%*)		12 years 10 months (49.5%*)		Decrease of container traffic by 30% from the 6 th until the 8 th year from the beginning of the project construction	Container traffic decrease equal to 0%	1	1.51	2		
Political risk	3.012 B RUB (23.9%*)		9 years 4 months (8.7%*)		Risk-adjusted discounting rate 11.5%	Risk-free discounting rate 8.25%	2	7.36	1		
All risks (calculated by simulation)	1.173 B RUB (70%*)		15 years 5 months (79.6%*)		All changes mentioned above	All base scenarios mentioned above	Note: 1.8%* - decrease of NPV/increase of DPP from the scenario without risks				
All risks (calculated manually as a sum of all risks impacts)	83.7%*		94.8%*		All changes mentioned above	All base scenarios mentioned above					

As can be seen from Figure 2b, due to the impact of different risks, the investments will pay off in 15 years 5 months. The NPV will be 1.173 B RUB with StDev of 294 M RUB that is lower of the cumulative profit, which is in the scenario without risks, by 70% (Table 1). The probability value to receive NPV, which belongs to the interval [834.9; 1,511] M RUB, equals 75.18%. With a probability close to 0, the NPV of dry port project could be below 631.6 M RUB. On the other hand, the best performance that can realistically occur is that the investments will be returned within 14 years and 3.5 months with the cumulative profit of 1.835 B RUB.

6. Conclusions

The proposed model of assessment of the risk investments in dry ports projects relies on the popular capital-budgeting techniques, discounted cash flows, and system dynamics approach. One of the standardized and superior project performance criteria is net present value. Taking into account the fact that NPV is based on the assumptions of certainty of project life, it cannot be an explicit capital-budgeting decision tool alone for the environment that is not free of uncertainties. In other words, the decision-making on the acceptance of the project by the positive NPV does not reflect the time period or the project's useful life that exposed to risk due to changes in political, technological, and regulatory factors. These peculiarities can be easily mitigated by the use of discounted payback period.

Through the developed system dynamics model, which was simulated within the Vensim software, it was found that DPP is not less important the capital-budgeting criterion than NPV for the estimations of the impacts of the project risks. Thus, for the Russian environment, the importance of the DPP criterion can be comparable to NPV, because the variety of political, operational, and financial risks requires from managers to focus on capital investment's appraisals that ensure project profitability and liquidity. The only criterion, which satisfies both, is DPP (Bhandari, 2009).

The results from the simulation suggest that the combination of the Monte Carlo test with classical discounted cash flows approach allows increasing the accuracy and reliability of the obtained results. By doing so, the statistical mean will stand for the expected value of the DPP and NPV, while the standard deviation will be used as a characteristic of uncertainty and risk. Therefore, both criteria should be utilised in the feasibility studies in the probabilistic framework that is based on Monte Carlo test as the decision-making techniques in the risky investment climate.

Based on the proposed assumptions, the analysis of the five types of risks showed that traffic volume risks had the highest absolute impact on the cumulative profit (net present value) and discounted payback period (Table 1), which align the accumulated empirical data with information gained from the most common method of data collection used in the qualitative research: interviews (Figure 1). The aggregated outcome from the experiments also allowed the calculation of relative impact of risks, depending on elasticity of NPV to risks.

According to Table 1, the coefficient of elasticity of less than one means the inelasticity of NPV to the revenue risks and land acquisition risk. As a result, these risk factors received lower ratings (5 and 4, respectively). The elasticity of other risks is greater than one. Therefore, NPV is elastic to the change of construction risks, traffic volume risks, and political risks, since each percentage change of the factor leads to further changes in NPV. That is why these risks (especially, political risks) have higher rating from the point of relative impact on NPV (Table 1).

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Peshkova, Anna; Urkmez, Taylan; Wagner, Ralf

University of Kassel, Faculty of Business and Economics, Dialog Marketing and Competence Center, Chair of International Direct Marketing, Kassel, Germany

Contemporary Consumption of Affordable Luxury in Russia: The Example of the Fashion Industry

Russian consumer behavior patterns of luxury items can be explained by the theory of conspicuous or symbolic consumption. The motivation for buying symbolic goods usually is highly sensitive to social appreciation and the most visible ones include luxury clothing and accessories, automobiles, stereos and furniture goods. The aim of this study is to determine the factors influencing Russian consumers' intentions to purchase luxury fashion goods. We focus the growing high-middle and middle class consumer behavior patterns. This study attempts to contend practitioners' knowledge and folklor in research hypotheses and to evaluate these in a rigorous quantitative proceeding. We investigate the factors influencing Russian consumers' intentions to purchase goods of luxury fashion brands based on two different models.

KEYWORDS: *luxury, symbolic consumption, fashion, consumer behavior, Russia*

1. Introduction

Luxury goods, in particular status goods, have been defined as items for which the use or display of a branded product brings prestige to the owner, apart from any functional utility (Dubois & Czellar, 2002). In this vein, Dubois and Duquesne (1993) highlight that the luxury goods share some common characteristic features which include high price, distinctive quality and design, exclusivity, heritage and reputation. The characteristics of luxury are strong but always in a close relation with relativity issue. The concept of luxury differs from society to society, which is even make it more difficult to agree on one universal definition of luxury goods. The middle class luxury features have recently been rendered more precisely by Urkmez and Wagner (2015). After the democratisation of the society people have started to be interested in products offering more comfort and quality and bringing prestige for the users. Thus, competing vendors started to differentiate their products and came up with intermediate luxury which is more affordable products for middle class professionals. The middle class consumers valued these types of products which are not too expensive to be reached but on the other hand offering good standards of quality, refinement and taste (Ward & Chiari, 2008; Vickers & Renand, 2003). Luxury fashion goods in the scope of a particular research include clothes, shoes and accessories such as bags, belts, scarfs, socks, ties and etc. which might be mostly considered in this category of luxury.

During the last years the global luxury goods market has grown significantly and mainly because of the luxury growth in the emerging countries such as Brazil, Russia, India and China (Som, 2011). Russia meanwhile is one of the biggest emerging economies in the world and according to Bain & Company (2013), due to its fast economic development and openness to the foreign brands, Russia is a country which offers a huge growth potential for the luxury goods companies. Indeed, the capital of the country, city of Moscow is already ranked number fifth after Paris, Milan, London and New York in the ranking of the luxury fashion capitals of the world.

Russian consumers deprived of luxury items more than 70 years because of communism. It impacted their understanding of luxury and their behaviour to reach the luxury items. Russians as a part of Slavonic culture emphasize uniqueness characteristics more than Germanic and Roman/French cultures. They want to distinguish themselves with the unique products from others in the community (Barnier, Rodina, & Valette-Florence, 2006). Consequently, Russian consumer behavior patterns can be explained by the theory of conspicuous, symbolic consumption introduced by the economist and sociologist Veblen (1899). Kaufmann, Vrontis and Manakova (2012) confirm these theoretical backgrounds in the consumption of Russian consumers and claim that Russian consumer behaviour is different from other Western societies' consumers and give very much importance on status consumption, perceived quality, symbolic/status consumption and uniqueness in their understanding of luxury. It is defined, that symbolic goods mostly are products especially sensitive to social influence and the most visible ones; generally they include luxury clothing and accessories, automobiles, stereos and furniture goods. Russian consumers are well known worldwide for their love to expensive luxury goods and unlike any other luxury consumers, the Russian ones are the brightest example of the concept of conspicuous consumption and status-seeking behavior (Andreeva & Bogomolova, 2008). This phenomenon can be explained by several reasons. Firstly, the Russian wealth has been acquired relatively not a long time ago therefore, there is not such a well-established tradition of financial management

among the population. The second important factor is that generation of today's successful 35 to 45 year-old businessmen grew up in the period of communism when the free access to information and goods available in the rest of the world was prohibited by the regime of the Soviet Union and there was limited access to goods. In this consumer group, the exaggerated consumption and desire to show off is a natural psychological response to its current rise in its financial status and its awareness of global fashion trends. However, together with the changes on the macro-economic level of the country, there are significant changes taking place in a behavior level of its consumers (Atwal & Bryson, 2014). Since Russia opened its economic borders, the country has experienced a huge flow of international products into the country. Anyone visiting main cities of Moscow, Saint-Petersburg, and Yekaterinburg today would be impressed with the variety of luxury boutiques and exclusive stores opened there. Russian researches Andreeva and Bogomolova (2008) state that today's Russians consumers are even spoiled by luxury choice as there are many companies available in the current market and the companies try to withdraw attention of the consumers to get chosen over other brands. Through the last 15 years, Russians have turned into sophisticated and well-travelled clients, who are aware enough about the world of brands. In addition, rapid expansion of middle high class society brings to the observation a new tendency of luxury consumption in Russia (Andreeva & Marmi, 2012). Namely, luxury consumers, especially those from the lower classes, purchase luxury products because of the special feeling it gives them, and the perceived power they feel to have in the society (Moore & Birtwistle, 2005). Finally, the changes connected to the global economic crisis become effective especially after the crisis and the luxury consumers in Russia become more value conscious (Mooisenko, 2012). In these circumstances, it becomes increasingly difficult nowadays for the luxury brand companies to attract and retain customers without having a detailed understanding of changing consumer behavior patterns. Specifically, the current research aims to fulfil a gap in the luxury research with a focus on Russia. Because Russian market is not that transparent and mostly previous researches have been conducted by market research companies and were mostly on market shares and volumes of the industry however, to our knowledge only few scholars have contributed in the topic from consumers' perspective. Hence, our research aims to contribute by explaining upper middle class Russians behavior. The divergences and similarities of their behavior in comparison to (the mostly) westernized knowledge of luxury buying is of particular interest for both practitioners and scholars. The former might aim to take directly advantage of a high volume market whereas the latter ones might consider the Russian middle class luxury consumer to be a genotype of non-Western luxury consumer embedded in related cultures e.g. Belarus or Kirghizia.

The remainder of this paper is structured as follows. In the second section, we describe the framing of our study by providing a state-of-the-art overview of Russian luxury markets. Subsequently, we summarize explanations Russian consumer behaviour patterns relevant for luxury items. In the third chapter, we introduce our research methodology and scales used to collect the data. Moreover, we describe the data and the general results of our analysis without details due to page restrictions. Finally, we come up with contribution and further research.

2. Luxury in Russia

2.1 *Overview of Russian luxury market*

Luxury has a wide scope from automotive, electronics, apparel and accessories, jewellery, food and beverage to healthcare, tourism services and financial services. The

Russian luxury market is almost completely dominated by non-food specialist retailers such as apparel and accessories, automotive, jewellery etc. The formats of luxury outlets vary from small independent multi-brand shops to luxury department stores and shopping centers with a strong specialization in prêt-à-porter. Single brand boutiques are situated in the main trade streets and places of concentration of high-net-worth-individuals (HNWI), for example in Moscow, Stoleshnikov lane Kutuzovsky Prospect, Tretyakovsky Proezd, Barvikha Village. By the distribution of companies on different segments, it is obvious that the majority of them are specialized in fashion and accessories segment. Overall, the luxury market in Russia includes fashion, cosmetics, cars and yachts, jewelry and watches, furniture and accessories, and many other products. (Quans, 2011). Euromonitor states that the local luxury market including clothing, accessories, watches and jewellery in Russia worthed 6,8 billion in 2013 and constituted the biggest share as a whole (Avins & Karaian, 2014).

2.2 Consumer behavior patterns toward luxury goods

Unlike any other consumer, the Russian consumer of luxury goods is said to be the brightest example of the concept of conspicuous consumption and status-seeking, concepts formulated by the economist Veblen (Andreeva & Bogomolova, 2008). There are a number of explanations for such behavior. First of all, the Russian wealth has been acquired during the last 15-20 years and therefore is quite “young”, also for this reason there is no tradition for the financial management, as such traditions is usually formed over decades or even centuries. The second important factor influencing people in the average age category is backlog demand. The generation of today's successful 35 to 45 year-old businessmen grew up in the period of total deficiency. In this consumer group the exaggerated consumption and desire to show off is a natural psychological response to its current rise in its financial status and its awareness of global fashion trends.

However, as stated in Euromonitor report (2015) considering the incredibly rapid changes taking place in Russia, both on macro- and micro-economic levels, Slavina (2007) states that the same changes are taking place in the field of consumption. The recent Euromonitor market research (2015) supports the idea that there are times of wild consumption of goods like just after recent devaluation of national currency rouble, including even fake goods purchased on the market by customers with no idea of quality. Today, Russian consumers are ready to spend more money, but they want to receive the whole spectrum of the necessary accompanying services for their money's worth. The Russian client has become more sophisticated and particular and is not ready to pay more without good reason (Slavina, 2007). Truchi (2010) identifies most influential contact points for Russians when it comes to the luxury goods purchase process. These are closely associated with the brand itself (brand store, official brand website, brand catalogues), but also with the consumer (word of mouth, blogs and forums). The main expectations in stores are related to the products themselves (availability and diversity), but also the quality and rapidity of attention to the costumers by sales staff. Safety in the stores is also crucial aspect for Russian costumers.

In general, affluent consumers in Russia have the top-of-mind awareness of foreign luxury brands compared with China and India because the Russian luxury market is more developed and more European in nature (Aginsky, 2007). Preference of Russian consumers is mostly foreign luxury fashion brands.

2.3 Research questions and hypotheses

The main purpose in this research is to understand the Russian middle and upper middle class consumer behaviour for luxury fashion items. Each society has different dimensions of cultural values and these cultural values are important for the consumers in those countries while making their own purchase decisions (House, 2004). Especially, in luxury field the concept of relativity is effective in implementing the perceptions of luxury for the people living in a specific country (Urkmez & Wagner, 2015). Accordingly, we try to find out the perceptions for Russian consumers leading to a purchase decision. Therefore, we raise the following research questions and the hypotheses under each group of research questions:

RQ 1. Which perceptions of consumers affect purchasing decision toward luxury fashion goods in Russia?

Quality and aesthetics are important luxury characteristics (Urkmez & Wagner, 2015). Consumers perceive pricey products as high quality, hence it is always considered that luxury products are manufactured to a high standard and great effort has been put into production, especially if craftsmanship is involved (Heine, 2011, p. 95; Nueno & Quelch, 1998, p.65). Material is the second important aspect of the quality issue (Heine, 2011, p. 65).

Design signifies the taste of upper class consumers and connects to cultural relativity (Kapferer, 2001, p. 322). It is an important differentiation point of luxury product manufacturers from other mass market manufacturers (Dubois, Laurent, & Czellar, 2001, p. 13).

Brand reputation is also important for higher mark-ups for luxury companies. The more brand is reputed the more expensive the items are sold. Additionally, consumers believe that brands with a high reputation do produce more quality products (Nueno & Quelch, 1998; Akdeniz & Calantone, 2013).

RQ.2. Which perception of consumers affects more purchasing decision of luxury fashion goods in Russia?

Luxury products are thought to have high quality standards (Heine, 2011). Quality perception leads many consumers to be satisfied from the products which ensures a level of satisfaction for the category of products. When consumers are satisfied with the products they show a kind of loyalty and accordingly more purchases for similar type of products, in our case for luxury products (Matzler & Hinterhuber, 1998; De Canniere, Pelsmacker, & Geuens, 2010).

RQ.3. What are the motives for Russian consumers to buy luxury fashion goods?

Some consumers who are in need of high status purchase pricey items to be recognized by others and achieve a kind of social acceptance in the society (Han, Nunes, & Dreze, 2010). Moreover, luxury goods are a means of expressing themselves. People somehow feel that they are able to transfer their own expressions, ideas more successfully (Wilcox et al., 2009).

RQ.4. What are the characteristics of consumer behavior toward luxury fashion goods in Russia?

Previous study claims that consumers buy fashion items impulsively in association with environmental and personal influences. When environmental conditions are pleasant consumers spend more time in stores to explore the items and in turn find items to buy (Lee &

Johnson, 2010). Russian market is dominated mostly by Western luxury companies and an earlier study indicates that in Russia low ethnocentric people are easily moderated by Western brand personalities (Supphellen & Gronhoug, 2003).

3. Methodology & Data

3.1 Scales

We adopted two scales in this study. “Attitude toward Luxury Brands” (social-adjustive function) was introduced by Wilcox, Kim and Sen in 2009. This scale is indented to measure a degree at which extend luxuries brands are viewed as facilitating self-expression of the owner and to project a particular image in social settings. “Attitude toward Luxury Brands” (value-expressive function) introduced by the same authors is indented to measure a degree to which luxury brands are viewed as expressing something about one's self (beliefs, attitudes, values). Complementing these, we assess the luxury motivation factors following the proposal of Vigneron and Johnson (1999).

3.2 Data description

The sample frame for the present study was initially built from a database provided by Alumni Association of Graduate School of Management, St. Petersburg State University and Alumni Association of Moscow Higher School of Economics. Moreover, the questionnaire was distributed among the citizens of the cities Perm and Yekaterinburg, who have relatively medium-high incomes and have agreed to participate. Before conducting actual part of the survey, twelve participants were used in the scope of a pretest and the answers varied and the participants indicated no statements about difficulty in understanding the questions. Total 162 respondents participating in the research, 66 were males (approx. 41%) and 96 were females (approx. 59%). Regarding the criteria which affect purchasing decision toward luxury fashion goods respondents were proposed to confirm strength of their agreement or disagreement to perceptions of: (1) quality, (2) design, (3) brand reputation, (4) fashion and (5) brand history. Complementing our understanding of Russian middle-class consumer behavior patterns we have applied Pearson correlation test to see whether there is any other other relation influencing purchasing decision and respondents’ level of income. But the results are normal with a normal distribution.

Table 1: Results of the hypotheses analysis

<i>H1a</i>	Consumers’ perceptions of quality affect purchasing decision toward luxury in Russia.	<i>Supported</i>	<i>H3b</i>	<i>Russian consumers purchase luxury fashion goods in order to express their individuality</i>	<i>Supported</i>
<i>H1b</i>	Consumers’ perceptions of design affect purchasing decision toward luxury in Russia.	<i>Supported</i>	<i>H3c</i>	<i>Russian consumers purchase luxury fashion goods in order to get respect of a particular social group they belong to.</i>	<i>Supported</i>
<i>H1c</i>	Consumers’ perceptions of brand reputation affect purchasing decision toward luxury in Russia.	<i>Supported</i>	<i>H3d</i>	<i>Russian consumers purchase luxury fashion goods in order to receive positive emotions and pleasure.</i>	<i>Supported</i>
<i>H2a</i>	Consumers’ perception of quality affects more purchasing decision toward luxury than consumers’ perception of design.	<i>Supported</i>	<i>H3e</i>	<i>Russian consumers purchase luxury fashion goods in order to reward themselves for achievement.</i>	<i>Rejected</i>
<i>H2b</i>	Consumers’ perception of quality affects more purchasing decision toward luxury than consumers’ perception of brand reputation.	<i>Supported</i>	<i>H4a</i>	Russian consumers purchase luxury fashion goods impulsively	<i>Rejected</i>
<i>H2c</i>	Consumers’ perception of design affects more purchasing decision	<i>Rejected</i>	<i>H4b</i>	Russian consumers prefer to purchase luxury fashion	<i>Supported</i>

	toward luxury than consumers' perception of brand reputation			goods of Western brands.	
<i>H3a</i>	Russian consumers purchase luxury fashion goods in order to demonstrate their status.	<i>Supported</i>	<i>H4c</i>	Russian consumers have low brand loyalty toward luxury fashion goods	<i>Supported</i>

Research findings show that Russian consumer behaviour toward luxury is influenced by social values and personal ones. The results support the idea of symbolic consumption: status demonstration is important for Russians in their intentions to purchase luxury fashion products. With an increase of disposable income Russian consumers even purchase more luxury fashion products to show their status, prosperity and success to the society. The same is happening with the prestige: the higher is the income of consumers; the more they symbolize prestige by purchasing luxury fashion goods. Certainly, consumers make a great emphasis on their personal image and on the effect how they look in the eyes of others while consuming luxury brands. Generally, Russian consumers can be described as perfectionists because they desire the best quality as one of the most salient attributes of luxury products. However, factor of price is highly important for them. The study shows that there is highly significant negative relation between the price influence and frequency of luxury fashion goods purchase in Russia. Namely, the more influence on the consumer has a price factor, the less frequently he/she purchases luxury fashion products. This fact is also related to the income level of consumers. Price has less influence on consumers with the higher level of income. This pattern appears to be valid in similar transition economies like Belarus, Kirghizistan, Kazakhstan (Wagner, 2005).

The detailed results have not been included in the article due to page limitations and will be presented in the conference.

Contribution and further research

According to authors' best knowledge, this is one of the few attempts at understanding Russian consumer behaviour and conceptualizing two scales on Russian consumers. In this study, by focusing on middle and upper middle class consumers in Russia we provide empirical evidence how luxury fashion consumers in Russia think and behave and feel when shopping luxury items. Findings reveal the fact that Russian consumers are typical examples of conspicuous consumption. Their purchases are shaped by social and personal values. The findings contribute to the conspicuous consumption and symbolic consumption theories by revealing the typical shopping attributes of Russian consumers in accordance with the recent previous researches (Kaufmann et al., 2012; Barnier et al., 2006). However, it is important to notice that quality and brand reputation sequentially are the most important characteristics for Russian consumers while choosing their luxury products. Although they like purchasing items to show off, their purchases are not impulsive ones and cost of the product is a consideration while making their decision. With these features Russians are different from Western consumers however, have some similarities with Asian societies (Barnier et al., 2006). They care the uniqueness issue in their purchases. They want to have "tangible utilitarian benefits" in luxury items which are closely related to high quality and aesthetics design besides brand reputation. The same type of study might be applied to other nations BRIC nations like China or India. Because of some similarities between Russian and Chinese consumers, similar findings might be expected in China and other Asian societies. However, we might expect different findings in another BRIC country, India. Another future interesting study might be tracing country of origin and its impact on Russian luxury fashion consumers and their perceptions. Although the consumers buy these luxury items as they are French or Italian luxury brands, this does not change the fact that these products are produced in other third

countries, mostly Far East countries. Future empirical studies dealing with these issues might give a better understanding of the consumers for the practitioners and thus, they might come up with more successful applications.

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O.A.Pogrebova
Senior Lecturer of Marketing Department
Saint-Petersburg State University of Economics
olgapogrebova@gmail.com

O.U.Yuldasheva
Head of Marketing Department
Saint-Petersburg State University of Economics
Uldasheva2006@yandex.ru

Segmentation of Russian Wellness Consumers: Results of the Empirical Study

Abstract: A wellness market is growing in Russia since the 1990s. Because this industry is a new one for Russia, its' segment structure is constantly developing. Despite the great interest of producers to wellness market the serious researches are absent in this area in Russia. This paper empirically examines the effect that factors of external and internal nature have on consumers' attitude and consumption within Russian wellness market. Eight segments of Russian wellness consumers with significantly different socio-demographic and behavioral characteristics were revealed and described during the investigation. Results of the quantitative survey showed a significant relationship between consumers' attitude towards the wellness concept and the level of consumption of wellness goods and services.

Key words: *consumer behavior, influencing factors, wellness, Russian market, segmentation.*

1. Literature Overview and Research Objectives

A model of consumer behavior is a formalized description of a link between consumer action (purchase of good or service), determining incentives, consumer's individual traits, and environmental conditions. Forming a model of consumer behavior implies definition of consumption stages and factors affecting consumer on every stage of the process. The better one can describe this process, the more accurately one can predict consumer actions and control consumer behavior to achieve the company's objectives.

First models of consumer behavior appeared in the 1960s in the works of Blackwell, Howard, Katona, Engel, Kotler, and others. However, the early models only revealed the general laws that are typical for all the consumers showing no difference in the behavior of different types of them.

Some authors pointed out predominant influence of certain factors on consumer purchasing decisions. E.g., Weblen (1899), Duesenberry (1949) and others focused on the influence of social environment. Schor (1998), Solnik and Hemenway (2011), and others claimed that consumers are more affected by fashion trends and reference groups. Brown, Reingen and Kernan (1986) pointed out that a consumer first gathers information about a new, unknown market and then uses it during purchase decision process; additionally they emphasized the role of word-of-mouth effect. Goldstein and Cialdini (2004) defined consumption norms valid for the certain society as a main source of consumer behavior modeling. Hopper and Nielsen (1991) also wrote about the strength of normative influences and impact attitudes, while Ajzen and Fishbein (1980) analyzed the effect of an individual's beliefs and norms on their attitudes, intentions, and consequently behaviors. Yuldasheva (2006) explored consumer behavior and factors influencing it within consumption standards.

Naturally, there is no single model or single classification of factors helping to explain consumer behavior of every good or service. That's why adapting existing models to specific situations of consumption as well as identifying influencing factors specific for a certain market becomes an important practical task.

Wellness is an approach to healthcare that emphasizes preventing illness and prolonging life by using special combinations of goods and services. Analysis of consumer behavior on the wellness market was studied by such authors as Goldman (2011), Pilzer (2002, 2007), Bevan (2009), Sawyer, Kerr and Hobbs (2008), Myers (1992, 2005), Bishop and Yardley (2010) and others. Reviewing the literature, we noticed a lack of studies that investigate relationships between behavior of wellness consumers and factors influencing that behavior. In addition most studies were held in conditions of American, European, and Asian markets and do not define the specifics of Russian consumers.

Accordingly, the primary objective of the present paper is to identify conceptual traits of Russian wellness consumers' behavior and to present a classification of market segments on significant characteristics.

2. The Development of a Conceptual Model and Hypotheses

The research design combined both qualitative and quantitative methodologies and consisted of several stages. First, the desk-based investigation of literary sources and results of a number of relevant studies was undertaken in order to gain an insight into the current trends and qualitative composition of the wellness industry as well as to reveal the key factors that motivate consumers to buy wellness goods and services. A wide range of statistics had to be examined to define the particular features of the Russian wellness market, as compared with the foreign ones. Because of the lack of empirical studies concerning Russian wellness

consumers' behavior, eleven semi-structured in-depth interviews with open-ended questions were conducted with experts working in wellness and specialized medical centers in Russian cities Saint-Petersburg, Moscow, Ekaterinburg, Chelyabinsk.

Insights from this research show the qualitative composition of the Russian wellness industry: Vitamins and dietary supplements; Enriched and natural (eco) products; Diagnostic, rehabilitation, beauty procedures and wellness treatments; Fitness and all forms of physical activity. This classification virtually duplicates the classification of the American and European markets (Pilzer, 2002; Goldman, 2011).

The results of a qualitative study based on in-depth interviews also helped to clarify that attitude and consumption on the Russian wellness market depends on various factors of external and internal environment:

1. Internal factors (consumer characteristics):
 - Socio-Demographic: sex, age, level of income, occupation
 - Geographic: place of living
 - Psychographic: consumer life priorities (family, health, career, or others)
 - Behavioral: consumption rate, master incentives (need for health, disease prevention, body tone, dissatisfaction with the results of the use of traditional medicines, or fashion influence)
2. External factors (environmental influence):
 - Marketing incentives (advertising; possibility of trial use; presence of reviews; information from exercises, courses and workshops; visual demonstration of effects; materials in the media; discounts)
 - Influence of social environment (family, relatives, friends, attending doctors)
 - Characteristics of products and services (composition, properties, country of manufacture, price, innovativeness)

The comparative power of influence of different factors remains the least explored and represents a certain research gap; that makes it possible to formulate the following hypotheses of the current study:

H1: Socio-demographic characteristics of consumers influence the consumption of wellness goods and services on the Russian market.

It is interesting to identify how differences in sex and age of the respondents affect the consumption of wellness goods and services.

H2: Information sources, particularly reference groups, influence the consumption of wellness goods and services on the Russian market.

H3: Product and price factors influence the consumption of wellness goods and services on the Russian market more than cognitive factors.

As the wellness industry is a new market for Russia it is possible to say that it is in the stage of implementation or early growth according to the theory of industry life cycles. That determines higher influence of price, product and information factors compared with the cognitive ones.

H4: The consumption of wellness goods and services on the Russian market grows with the improvement of attitude towards the wellness concept.

Several researches (Fishbein & Ajzen, 1980; Han & Kim, 2010; Anilkumar & Joseph, 2012) stated that influencing attitude change in consumers is fundamental in transforming their behavioral tendencies. We try to prove the significance of the influence that attitudes have on behavioral changes applied to the Russian wellness market.

H5: Russian consumers can be segmented into several clusters according to the level of their consumption of wellness goods and services.

The development stage of the Russian wellness industry indicates the presence of many small segments of consumers on the market different in their socio-demographic and

behavioral characteristics, types of consumed goods and services, terms of consumption, the type of involvement in the process of consumption, factors that have a decisive influence on purchasing decisions, as well as used sources of information.

The hypothesized relationships are illustrated in Figure 1 and were tested during the conduction of the quantitative research.

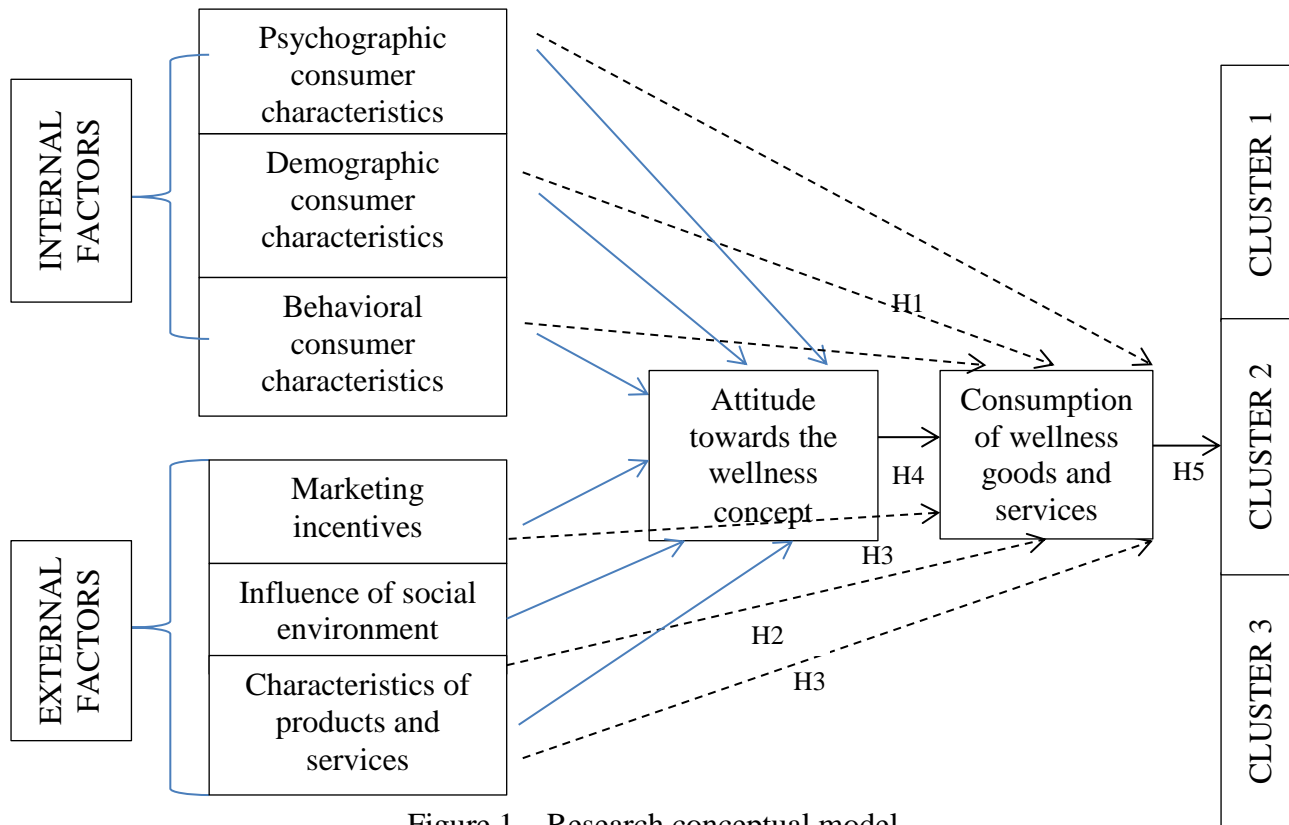


Figure 1 – Research conceptual model

3. Research Methodology and Sample Description

To verify the established hypotheses, a quantitative survey on the sample of 560 respondents has been performed. Research methodology included several consecutive stages:

1. Conduction of the factor analysis to reduce the number of factors and combine them into several groups.
2. Conduction of the regression analysis to identify the factors determinant and statistically significant for the present study.
3. Performing a hierarchical cluster analysis to identify consumer segments on the Russian wellness market.

The empirical analysis was based on the data collected by means of written questionnaire with open and closed questions; data was processed and analyzed using IBM SPSS. We collected the data with the distribution of our questionnaire through different social networks and e-mail from September to December 2014. The given questionnaire consisted of several blocks of questions devoted to the following issues:

1. Frequency and duration of the use of wellness products and services
2. Attitude towards the wellness concept
3. Incentives determining wellness consumers' behavior
4. Sources of information important to the respondents
5. Individuals influencing consumers' purchase decisions

6. Behavioral characteristics of the respondents

Frequency of consumption was measured by asking respondents how often they buy different categories of wellness products and services on 6-point interval scale (1=buy more often than once a month, 6=never buy). Measures 2-6 were examined using five point Likert-type scale (1=totally agree; 5=strongly disagree). Such variables as sex, age, occupation, income level and place of living were also included in the questionnaire.

80% of the respondents named Saint-Petersburg as a place of living, this being one of the limitations of our survey. According to the number of Saint-Petersburg residents 18 years and older (with a 95% confidence level and 5% confidence interval) our research sample consisted of 560 participants and had balanced sex ratio (M = 295; F = 265), with the average age of 37. The demographic characteristics of the sample are presented in Table 1.

Sample characteristics	%
Sex	
Male	52.7
Female	47.3
Age	
Younger than 25 years old	22.5
From 26 to 35 years	18.6
From 36 to 45 years	24.3
From 46 to 55	17.9
Older than 56 years old	16.7
Monthly income, rub.	
Less than 25000	24.2
From 25001 to 40000	29.2
From 40001 to 55000	25.8
More than 55001	20.8

Table 1 - Key sample characteristics, n=560

4. Analysis of Research Results and Discussion

The necessity of the conduction of factor analysis is determined by the presence of correlations between variables and is calculated using the Bartlett's test of Sphericity and the criterion of Kaiser-Meyer-Olkin sampling adequacy.

The null hypothesis that the correlation matrix is an identity is rejected, in accordance with the criterion of Bartlett's test of Sphericity. The approximate value of the statistic is equal to 135.179 with 36 degrees of freedom, it is significant at the 0.05 level. KMO Value statistics (0.733>0.5) also indicate that variables are appropriate for factor analysis.

Factor analysis was conducted through principal component analysis, which is based on determining the minimum number of factors that contribute most to the variance of the data. Method of VARIMAX rotation maximizing the dispersion allowed to present a matrix of factor loadings in an easy to interpret format. As a result of the factor analysis 34 input variables have been combined into 12 factors which explain 80.6% of the variance:

1. Reference groups
2. Brand advertising
3. Purchasing incentives
4. Price factors
5. Cognitive factors
6. Own experience
7. Information in Media

8. Product factors
9. Outdoor advertising
10. Fashion trends
11. Recommendation of doctors
12. Opportunity to test the product/service

The next stage was the analysis of the data using moderated regressions models. Regression analysis was performed by forward step that allowed to include in a regression model only factors with a given level of significance.

The results of the analysis are presented in Figure 2.

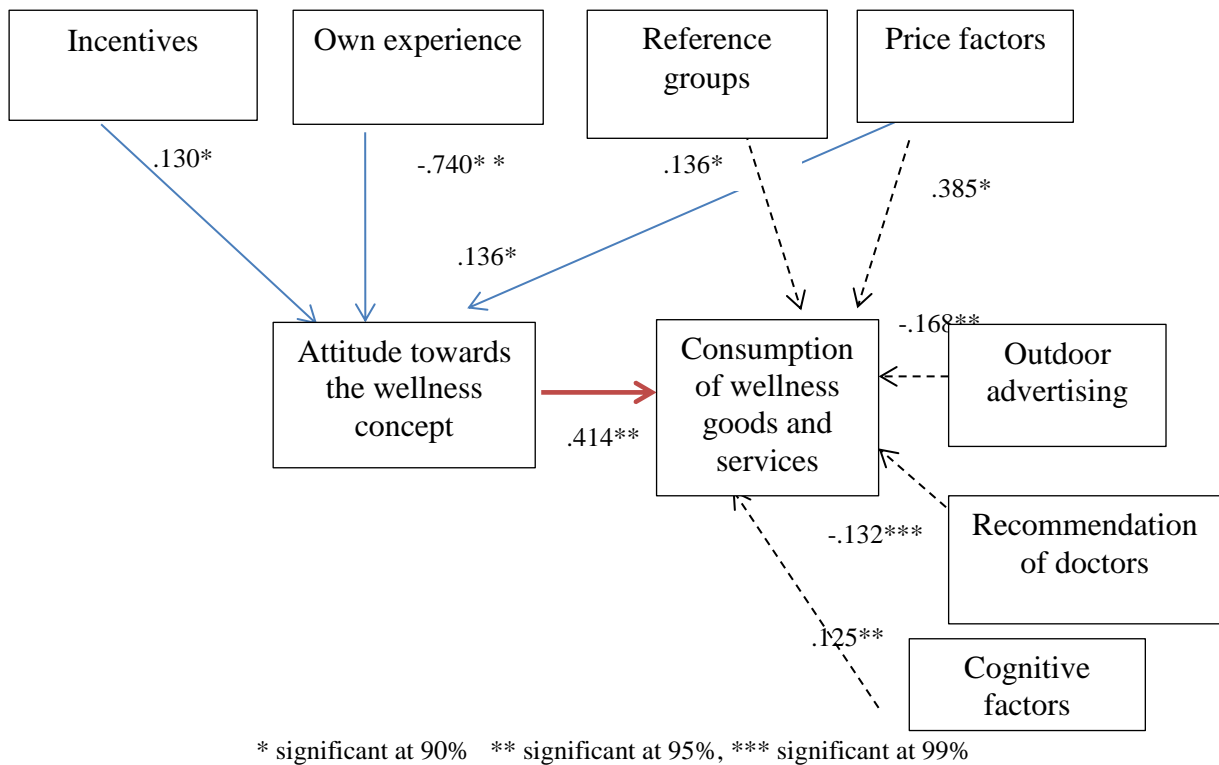


Figure 2 – Estimated conceptual model

The regression equation between the frequency of consumption of wellness goods and services and of the power of influence of different factors will be:

$$Y = 0,176 + 0,196*F1 + 0,385* F4 + 0,125* F5 - 0,168*F9 - 0,132* F11 + 0,414* Fa, \quad (1)$$

Y – frequency of consumption of wellness goods and services (measured by the frequency of purchases per year)

F 1... 12 – influence of factors on the purchase of wellness goods and services (measured by the power of influence)

F1 - Reference groups

F4 - Price factors

F5 – Cognitive factors

F9 – Outdoor advertising

F11 - Recommendation of doctors

Fa - Attitude towards the wellness concept

Out of all internal and external factors only six display sufficiently strong association with consumption of wellness goods and services to be used in the regression function.

The strongest factors are price factors ($\beta = 0.385$, $p < 0.1$) and Attitude towards the wellness concept ($\beta = 0.414$, $p < 0.05$). Quite unexpectedly, the influence of outdoor advertising ($\beta = -0.168$, $p < 0.05$) and recommendations of doctors ($\beta = -0.132$, $p < 0.01$) is in a negative relationship with the resulting variable.

Though this model of consumers' behavior on the Russian wellness market explains the general consumption trends (factors having an effect on consumers when making purchasing decisions), it doesn't reveal the segment structure of the market, which was one of the objectives of the study. Therefore, the next step in the methodology of the study should be the segmentation of Russian wellness market conducted by means of hierarchical cluster analysis in IBM SPSS.

An important first step in conducting cluster analysis is the choice of the clustering variable. The author has selected the frequency of consumption and the duration of consumption as these characteristics show the involvement of consumers in the wellness lifestyle.

The results of the cluster analysis are presented in table 2.

1) Segment 1 consists of aged wellness adherents, whose main incentive for using wellness products/services is prevention of diseases (46% of the representatives of the segment have indicated this incentive). On the one hand, these consumers can be called true followers of the wellness lifestyle as the term of their adherence is 5 years and more. On the other hand, the only significant factor for them is the price. In the absence of a favorable price consumption will not take place (minus sign before the free term in the regression equation).

2) Segment 2 today can be identified as the foundation of the wellness lifestyle in Russia. Most of its' representatives are of working age (82% - from 36 to 45 years) with a maximum income, they are actively interested in the concept of healthy lifestyle and related goods and services (as evidenced by the high value of cognitive factors).

3) Segment 3 consists of young people interested in fitness and exercise. To improve their physical shape they use vitamins, fat burners, eco products. Brand advertising impacts them highly, the main incentive for using wellness products and services is to "support the body in good shape and good physical condition".

4) The fourth segment can be called "fashion victims" because they are mostly affected by brand advertising and information in media, promoting certain goods and services of the wellness sector. The representatives of this segment have a fairly high level of income to spend on the above-mentioned goods and services. The consumption of this segment is not logically structured, since they are buying anything that is fashionable at the given moment. This category of consumers will be most receptive to traditional marketing communications. The regression formula has no free term, so their consumption is "zero" in the absence of external stimuli on the part of manufacturers.

5) The fifth segment is made up of people who are beginning to take an interest in the concept of wellness (it is indicated by the high influence of cognitive factors and reference groups) and to buy the relevant goods and services. This is one of the most promising segments in terms of the future of the industry.

6) The sixth segment consists of consumers whose behavior is almost for 100% determined by the influence of commercial advertising and brand advertising (coefficient of determination $R^2 = 0,84$). Most of them are young people under 25 years old. They are interested in fitness, vitamins, natural products, but they cannot be called sustainable consumers as the representatives of the third segment as they are in the very beginning of their path to wellness lifestyle. The task of producers is to keep them on the way by means of advertising.

Табл. 2. Author's segmentation of the Russian wellness consumers
(according to the results of the empirical study)

		Frequency/ duration of consumption	Share in the aggregate sample	Title of the segment	Socio- demographic characteristics	Consumed goods / services	Influencing factors (Significance level)	Regression equation	R ² (adj)
Cluster 1	Segment 1	Once in 3 months / 5 years and more	26 (5,0%)	Wellness conservatives	33% - M 66% - F 67% > 46 years old	Vitamins, diagnostic procedures	Price factors (F4) (0,037)	$Y = -0,27 + 0,72 * F_4$	0,76
	Segment 2	Once in 3 months / 3-5 years	49 (9,4%)	Wellness ambassadors	31% - M 68% - F 82% - 36-45 years old	Vitamins, diagnostic procedures, enriched products, natural products	Product factors (F8) (0,01) Cognitive factors (F5) (0,06) Reference groups (F1) (0,037)	$Y = 1,75 + 1,53 * F_8 + 0,99 * F_5 + 0,58 * F_1$	0,81
	Segment 3	Once in 3 months / less than 1 year	69 (13,3%)	Fitness enthusiasts	53% - M 47% - F 59% < 25 years old	Vitamins, enriched products, fitness	Purchasing incentives (F3) (0,02) Brand advertising (F2) (0,015)	$Y = 0,26 + 0,52 * F_3 + 0,75 * F_2$	0,88
Cluster 2	Segment 4	Once in 6 months / 5 years and more	47 (9,0%)	Fashion victims	50% - M 50% - F 56% - 26-35 years old Income > 40000 rub./month	natural products, enriched products, beauty procedures	Information in media (F7) (0,05) Fashion trends (F10) (0,09)	$Y = 0,8 * F_7 + 0,49 * F_{10}$	0,67
	Segment 5	Once in 6 months / 2-3 years	50 (9,6%)	Interested newcomers	55% - M 45% - F 88% - 26 - 45 years old	Vitamins, beauty procedures, dietary supplements	Cognitive factors (F5) (0,096) Reference groups (F1) (0,029)	$Y = 0,47 + 1,19 * F_1 + 0,65 * F_5$	0,77
	Segment 6	Once in 6 months / less than 1 year	52 (10,0%)	Advertising victims	55% - M 45% - F 44% < 25 years old	diagnostic procedures, natural products, fitness, vitamins	Brand advertising (F2) (0,04)	$Y = 0,75 * F_2$	0,84
Cluster 3	Segment 7	Once a year and less often / 4 years and more	97 (18,6%)	Non-attracted followers	41% - M 59% - F 57% > 46 years old	Vitamins, wellness treatment, natural products	Reference groups (F1) (0,003) Price factors (F4) (0,06)	$Y = 0,35 - 1,38 * F_1 + 0,69 * F_4$	0,75
	Segment 8	Once a year and less often / less than 2 years	129 (24,6%)	Random customers	50% - M 50% - F 67% < 35 years old	Wellness treatment, diagnostic procedures	-	-	-

7) The seventh segment consists mainly of mature consumers and the elderly. They have been interested in the concept of healthy way of life for a long time but rarely buy appropriate products and services. The objective of manufacturing companies is to find out why and to influence them through price factors. It is interesting that the influence of reference groups on this segment has a negative effect on the frequency of consumption.

8) The eighth segment consists of respondents who buy wellness products / services only occasionally. Their consumption is not systematical which was confirmed by the results of the regression analysis.

Hypothesis 1 is rejected

Sex, age and income level of the respondents do not have a high factor load within a single factor and statistically cannot be included in any one of them. Therefore, it is possible to conclude that such factors as "sex", "income" and "age" are not significant in the study of the Russian market of wellness goods and services.

Hypothesis 2 is partly confirmed.

The factor of reference groups' influence is absent in the regression model but is significant for the three identified segments out of eight (wellness-ambassadors, interested newcomers, non-attracted followers).

Hypothesis 3 is partly confirmed.

Price ($\beta=0.385$; $\text{sig}<0.1$) and cognitive ($\beta=0.125$; $\text{sig}<0.05$) factors do come into the regression model, while product factors are significant only for one segment out of eight (wellness ambassadors). Price factors also have the strongest influence on the resulting variable.

Hypothesis 4 is confirmed.

According to the results of the regression analysis attitude towards the wellness concept has a moderately strong positive direct effect on consumption of wellness goods and services ($\beta=0.414$; $\text{sig}=0.017<0,05$), the explained variance is $R^2=0.56$.

Hypothesis 5 is confirmed.

By means of cluster analysis we compiled profiles of each of the identified segments by cross-tabulating the cluster membership variable and respondents' demographic and behavioral characteristics as well as determinant and statistically significant factors influencing consumer behavior. For all analyzed variables Chi-square and ANOVA tests of independence were performed. In all cases the relations between respondents' features and their membership in a certain segment were significant ($p<0.05$).

5. Conclusions, Limitations and Directions for Future Research

The results of the conducted analysis show conceptual features of Russian wellness consumers. Among all groups of influencing factors identified in the course of qualitative research only a few turned to be statistically significant and determinant for the consumer behavior. The analysis also included the division of Russian wellness consumers into 8 segments with the description of their socio-demographic and behavioral characteristics. This study helps to understand how the various segments make purchase decisions of wellness goods and services. In the process of data analysis, some limitations (as well as directions of future research) should be taken in consideration. The most important of them is that the results of the investigation are limited only by Saint-Petersburg region.

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T. Yu. Repina
St. Petersburg state university
t.repina@spbu.ru

Many faces of the English language in Russian higher education

Abstract: The demand for effective academic and professional English instruction in most university disciplinary domains is named among priority development prospects of higher education in Russia. The article summarizes the results of evaluating English courses, which presence in SPbGU curriculum can meet learners' needs and career market requirements. The shift to functionality and domination of modern English forms a trend to use English as a medium of instruction. The challenges the faculty and learners face while using EMI are highlighted and commented. In the end some practical recommendations based on the teaching methods of EFL and liberal education are given to assist lecturers using EMI.

Key words: *EAP, ESP, EMI, teaching academic subjects in a foreign language, academic writing, active and interactive teaching methods, cooperative learning, teaching adults.*

English has already overgrown the limits of the national language and keeps broadening its lingua franca position as the means of international communication. To assist traveling, cultural and business contacts Global English or EIL (English as an International Language) and its simplified version Basic Global English (750-word vocabulary plus additional 250 words to cover specific needs and interests of the learner) are being actively promoted and developed. Adepts of English adore this language for the rich culture, history, and traditions it represents of Britain and India, North America and Australia... The majority of language teachers traditionally deal with teaching EAP, EFL or ESL for everyday communication and naturalization.

The growing dominance of English in the world is gradually affecting its nature and manifold functions. Since English developed into the main language of international communication, business, politics, science and education, it is often perceived mainly as a tool or a medium; and the global community is taking advantage of its instrumental role adapting English to serve their needs.

Talking about the many faces of English in education, the functionality of English will be the main focus of this overview, resulting from a study of teaching English and in English at Russian higher educational institutions (HEIs). We will start with a brief description of the place assigned to English in St.Petersburg state university (SPbGU) and the types of university English courses which are offered or recommended to be included in a modern curriculum. Then we will touch upon the challenges university instructors and students face when they use English as a medium of instruction (EMI), and conclude with a number of practical recommendations and teaching strategies which can be useful for both EFL instructors and academic subject lectures teaching in English.

Today English has become a symbol of people's aspirations for quality education, securing its accessibility, equal rights, and a fuller participation in national and international life. The leading HEIs in Anglo-phone countries have long been deriving benefits from providing instruction in English. They have been able to attract the most eligible and talented students, educators and researchers of the world who could further develop the scientific thought as well as become the social leaders sharing and spreading the Western standards and principles. As a result the highest-rated HEIs are located in English speaking countries or offer degree programs in English. No wonder that, following the trend of most European countries, English increasingly dominates the language selections of secondary school children in Russia, with over 90 per cent of pupils picking English as their first foreign language. Fluency in English is regarded as a valuable asset of a successful career.

Among the objectives set in the *Program of Development of SPbGU till 2020* there is a requirement to procure that all Bachelor degree holders from SPbGU are independent users of English, which qualify for a B2 level on the competence scale of CEFR. Also in line with the ongoing internationalization of higher education and meeting the standards for the high-ranking universities of the world, St.Petersburg state university is planning to offer 30 English-medium instruction programs out of more than 130 in 2020 and raise the share of academic subjects using EMI in the curriculum to 20%. None of them will be specifically geared towards an international student body, which at the moment comprises 5% of the total student body, and will reach 10% by 2020, and will be developed mainly for native students as a target audience. To implement the set tasks the university executives plan to invite foreign specialists, but the emphasis is put on the SPbGU faculty who are encouraged to participate in creating new or modifying their well-established courses in EMI, to raise their language proficiency as part of their professional training, to start using academic English themselves by publishing 44% of their articles in English. Successful execution of the plan can provide for international enrollment, extensive participation in academic mobility programs, facilitate recognition of academic transcripts and degrees, acknowledgement of study periods in partner

universities, stimulate involvement in international research and distribution of its results, and ensure competitiveness of the graduates on the global market. (Ипорпamma, 2010)

The objectives set in the *Program* clearly show the actuality of revising the concept of teaching English and in English in the university curriculum. There is a consensus that the aim of teaching English at a HEI is to assist learners' studies and research in that language. In this sense any English class is often perceived as an isolated course, detached from professional education. Systematic English instruction usually finishes with the completion of the compulsory general English course and a standardized test, passing which certifies reaching a required B2/C1 level of English and may also be used as a prerequisite for taking courses in English or applying for participation in exchange programs. This situation does not really meet the demands of modern education and professional market. There is an urgent need of finding new forms of integrating English in the curriculum, new methods of teaching the language, making it one of the competencies developed in teaching academic subjects.

Types of English courses in the higher education curriculum

To start with, *English for Academic Purposes* should become an indispensable part of HEI's curriculum. While studying at a secondary school most undergraduates acquire necessary knowledge and skills for everyday communication. Useful as they are, general communicative skills might not be enough to assist students in their university studies. Students who are interested in undergraduate or graduate study in the USA or other English-speaking countries name this course in their priority list when they form their education route.

The EAP course concentrates on providing language instruction for academic study in English in HE. Special attention is given to mastering such *language skills* as academic vocabulary usage, fluency and accuracy development, advanced grammar and syntax, listening comprehension, formal composition forms and development, including research papers, oral intelligibility, rhetoric, to name just a few. It seems only natural that this course also covers the development of a number of *academic study skills*: test taking and note taking skills, critical reading and writing, comprehending academic lectures, research and library skills. Teaching EAP has a well-developed methodology and extensive resources for both students and instructors and can be easily adapted for any university curriculum.

Students who have completed the EAP course and do academic work in their field of concentration including research in the content area of their major and start writing their course papers and the degree thesis are reported to demonstrate critical thinking skills, improved reading comprehension, writing proficiency, academic vocabulary, and research skills. Such outcomes become possible mainly because ESL teachers know how to make the methods of language teaching they have been developing for decades stand students in good stead. Through raising students' awareness of the language and the role it plays in cognitive processes, ways of thinking and expressing ideas, they allow students go beyond the limits of practical English language acquisition.

Academic Writing in English should also be considered as a compulsory element of higher education. The learning objectives of the course may be twofold: to teach students how to do research, choose reliable sources and select rationale, and to be able to write in academic settings (scientific abstracts, white papers, thesis papers, articles for publication) and to provide guidance in professional or technical writing, often referred to as "Writing in the Disciplines" (memos, business letters and plans, reports, other office-related documents). The main objective of the course is to explain in clear and practical ways the conventions of academic writing as opposed to the ones studied in secondary school and gradually help students recognize the generic features of writing in the disciplines they study. The basics of the course include such topics as audience analysis, tone and register, outlining, thesis

statements, text organization, usage of adequate academic and functional vocabulary and syntax, proofreading strategies. All the above can be applied to a wide variety of writing tasks and be used in learners' professional and personal lives.

Writing in the Disciplines can be considered as a separate elective course where instruction ensures that students gain valuable insight and experience in the theory and practice of reading and writing in the disciplines relevant to their areas of study. The discourse of every discipline is unique. Consequently, different habits of reading, writing, and reasoning can be expected in each subject area. This leads to different generic expectations: special methods of analysis and persuasion, different modes of documentation and citation, and so on.

Academic writing for professional purposes requires a pragmatic approach to rhetoric and composition instruction. Instead of a rule-based *prescriptive* approach focused on rules and correctness, *pragmatic* approach to writing instruction allows some freedom in using a lexical or syntactic element if it sounds effective and appropriate in a particular rhetorical situation. Such an emphasis on the effectiveness of a piece of punctuation, a word, a sentence structure, a thesis statement proves to be especially appropriate for creative fields like Arts, Public Relations or Journalism and Literature (in the latter two the course of *Creative Writing* can be the next step). In Health Sciences or Management students may benefit from practicing a selection of model texts with commonly used clichés and rules of text organization typical for written communication in these fields.

Studying Academic Writing in English gives students another valuable chance to develop effective reading, writing, and critical thinking skills in academic as well as professional contexts which are fundamental for becoming a truly educated people.

Business English teaching is one of the best developed kinds of English courses with a well-established teaching methodology. The number of textbooks and other supportive materials created specifically for this broad field of business communication is tremendous. A closer look shows that most of them actually teach some kind of universal business language, which can eventually improve learners' business language skills, practice the functional language of typical business-related situations and social interactions, namely meetings, telephone conversations and presentations, job interviews, transactions and negotiations, teach the main formats of business writing, and prepare students for taking international business English tests like BEC. Still it makes an impression of just another facet of English for general purposes, but only on a different lexical foundation, and should be evaluated respectively.

As the world market becomes global and accessible for the international specialists, it is an imperative that the instructor should equip their students to work in a foreign or international joint venture company. Keeping that in mind, Business English teachers of a specific disciplinary domain may find it hard to determine what points to focus on when asked to navigate students for that leap into the real world. Unfortunately, most of them have not had the opportunity to acquire prior first-hand professional work experience. So they may be unable to provide effective advice or guidance based on their own actual experience. The most they can do is instruct learners about cultural differences and general business style rules. Nevertheless, there are much more business cultural differences to be studied including communications, consumer behavior, product perception, promotion, pricing, and distribution, in addition to routine office correspondence, business letter writing, presentations, and reading comprehension of various data, graphs, etc.

In fact, Business Language teachers are in for a major learning and teaching endeavor here. They are nominated not only to develop students' business language skills, but also foster a multi-cultural, international perspective for the constantly changing, interdependent business world. At this point, professional advice of the subject matter teacher would come

handy. Moreover, instructors can also decide to distribute the topics and areas of developing professional competence to better satisfy learners' needs. Later, in reference to EMI, I would discuss the imperative of collaboration between language and content teachers in greater detail. Here it is worth mentioning that mutual interest and efforts can become a solution to the above problem. Developing ESP or EOP courses to cover ad hoc areas of business language can be considered as one more option.

English for Specific Purposes (ESP) or *English for Occupational Purposes* (EOP) has recently been gaining popularity particularly in areas and countries where English is used for instrumental purposes. Such courses are being included in HEI curriculum and are becoming part of the training on the job. The demand for ESP is explained by the fact that general English courses (EGP) frequently do not meet learners' or employers' specific needs. ESP teaching presumes teaching English regarding a specific profession, subject or purpose. The teaching methods and approaches remain similar to the ones applied in general English courses.

ESP courses also focus on situational language. The range of situations and the functional language required to communicate in them is usually determined based on the interpretation of the results from needs analysis questionnaires in target workplace settings followed by careful choosing of authentic language formulas used in real life situations to meet those needs.

Teaching an ESP course an English instructor can use some published course books which are now being created by the leading British and American publishers specializing in educational literature. In practice, the best course materials can be created as a result of cooperation between EFL specialists, subject teachers and potential employers who know exactly what can fit the needs of the learners.

Teaching ESP in HE has an immediate impact on the effectiveness of students' learning results. After studying ESP students have less problems understanding authentic content materials in English offered as part of teaching academic disciplines or required for individual research and self-study. The same is true when students enroll in courses using English as a medium of instruction.

Using English to teach academic content. English as a medium of instruction.

In fact, there are two ways of using English to teach content. One of them is known as CLIL (*Content and Language Integrated Learning*) which is practiced more in primary and secondary schools to teach all or some of their subjects in a foreign language. CLIL is grounded in the plurilingual competence context of the EU, where education in a foreign (L2) language is explicable. Furthering both language and content, CLIL is content driven. The integration of content and language is aimed at providing learners the language they will need in order to understand and produce the new subject content. CLIL methodology can easily be applied to the ESP university course. The instructors in CLIL can be language teachers or subject teachers who have at least minimal training of EFL. So they usually know how to incorporate teaching language in their syllabus and plan ahead how to teach scientific terms, functional language, grammar, etc. The objectives of CLIL can be formulated as "the planned integration of contextualized content, cognition, communication and culture into teaching and learning practice" (Coyle et al., 2010)

Using English to teach academic subjects in HE called EMI is another approach. The phenomenon was studied by EMI Oxford, a center based at the Department of Education, University of Oxford, with support of the British Council. An open-ended questionnaire was sent to informed respondents in 55 countries of the world to collect data on the forms of EMI, reasons and areas, driving forces and methods of its implementation, possible outcomes and

effects of teaching content in English. The report with findings was published in 2014. (Dearden, 2014)

Unlike CLIL, the objective of EMI is to teach academic content with no special pedagogical or organizational provisions to teach and learn EMI itself. The introduction of EMI in university curriculum is a top-down policy of education managers and policy makers who hope to meet the challenges of internationalization of higher education and academic research, receive financial gains from international students' tuitions, improve the ranking of HEI. Choosing English as a medium of instruction entails concerns about the sociocultural and geopolitical implications of this introduction, including presumed Anglo-Saxon culture dominance in education and the expansion of Western ideology. The EMI center report also states that there is a notable shortage of linguistically qualified teachers among instructors using EMI as well as there are no clear expectations of their English language proficiency.

Anyway SPbGU is moving towards increasing the share of EMI in its curriculum. The distinction of EMI implementation in SPbGU is that such courses are offered mostly by teachers who share the same L1 with the students. The percentage of team lecturing with a native speaker or given by English professors is under 20% for twinning programs. For some faculties there is no such a practice at all. However, Russian teachers can be very proficient in English after receiving their PhD in an English-speaking program of a foreign university or due to vast personal professional experience in an English-speaking country. Nevertheless, they are not always competent when there appears a need to help students with their English.

Since both EFL and EMI are to be widely used in HE curriculum, it is essential to establish correlations between these two facets of the English language and analyze their role in the educational system. So far EMI teachers have been unwilling to take responsibility for their students' English accuracy or developing their skills in enhancing subject-related vocabulary and essential language skills, while EFL teachers are suffering from biased construction and experience often unfair competition and administrative pressure because of the increase of EMI related subjects in the curriculum. To overcome this annoying confrontation a careful research should be done to find the underlying reasons for it and start looking for the ways to collaborate, and probably establish a progressive succession of courses raising English language competence of the undergraduate and graduate students and using English as a medium of learning and a valuable asset.

It is worth noting that EFL courses play an essential and very specific role in the curriculum. The role of the language in cognitive processes, in developing the mind and personality, as a mean of spreading ideas and influencing people cannot be underestimated. Therefore, studying languages should find a worthy place in higher education.

Moreover, English teachers at non-linguistic programs can modify the syllabi and course materials of their English courses to develop necessary language and study skills to meet the requirements of the concentration program and the needs of the job market. English teachers can include into their course reading a range of primary sources texts of academic disciplines or recent scientific articles and research reports selected/recommended by subject teachers to study them in detail, so that students become better prepared for lectures and seminars and have less language problems hurdling their understanding of the content.

EMI lecturers can also benefit using EFL pedagogy in preparation, delivering and improving the interactive component of their lectures conducted in English.

Linguistic challenges in the context of teaching and learning in English

First of all, teaching in English presumes that lecturers become fully aware of the language of instruction. Although there are no stated requirements to teacher's EMI competence or qualification tests to check it, and educational infrastructure does not make

compulsory provisions to support teacher language training, it would appear reasonable to expect University professors lecturing in English to be willing to maintain their *English language competence* at a proficiency level and in line with the current state of conventional professional jargon.

The speech of the lecturer should be clear and well-paced, be free from errors in pronunciation, grammar or lexical accuracy leading to misunderstanding or listening comprehension difficulties. Among the pitfalls, where the lecturer may need some English teacher's help, are wrong pronunciation or word and sentence stress, a level tone of voice with no rises or falls, perceived as uninterested or even rude. Obviously, no one expects the lecturer to have a perfect speech, but the quality of oral presentation should not become an impediment for listening comprehension. Ideally a lecturer serves a speech model for the correct usage of English for professional purposes.

There is a difference between communicating with a colleague at a conference and standing up to give a lecture on a regular basis. The worse the lecturer can do is read large sections of the lecture from the notes without looking up to see for the signs of boredom or confusion, especially when the lecture is in a foreign language. Since no one can boast to be born with an extraordinary flair for lecturing, *eloquence and rhetoric skills* are mandatory skills to be developed to attract and hold the audience's attention. Using EMI the lecturer is also expected to follow the specificity of public speaking in English, including discourse markers, icebreakers, particular intonation patterns, pauses, etc.

In addition, EMI teachers need to plan more language support so the learners can communicate ideas that involve higher-order thinking. The knowledge of some EFL methodology and the use a variety of strategies to assist students in learning English within the context of the subject is not formally required, but will improve the learning outcomes. The reason for that is obvious: the subject knowledge and understanding cannot improve unless English competency is adequate and is developing within the context of the subject.

Among the lecturers teaching in EMI there is quite a high proportion of visiting professors, usually English native speakers. They claim that the subject matter is too difficult for the students to understand in the foreign language. The rationale for such complaints might lie in the fact that native speakers use sophisticated academic language, which can be above the average students' language competence and include collocations and idioms unfamiliar to them. Their lists of required literature include primary sources not written for educational purposes, and they seldom simplify or adapt the required reading materials. In some cases they are actually asked to do the above because the aim of the HE program is to better prepare students to study abroad or work in the international environment. Most experienced lecturers know how to register the reaction of the audience and can provide explanations of the problematic points or use paraphrase, but they are not able to do it all the time, since such a practice can slow down the course pace or divert them from the topic.

In contrast, non-English speaking lecturers often insist on adapting the course materials for their Russian students like discussing only selected parts of texts or including texts which have been translated into Russian. Despite the benefit of better understanding of particular excerpts, the drawbacks might overweight it. Firstly, in case of fragments there is a real chance to miss the author's logic of reasoning, pervert the idea or neglect the wider context. Using translated texts undermines the very idea of EMI, and can be recommended in exceptional cases to help slowly progressing students to be able to catch up or for comparison reasons. Moreover, students are expected to read extensively and do independent research in English, which makes the above approaches questionable. Russian lectures often yield to students' requests to provide translations or even briefly shift to L1 during the class when they believe it will save time and effort. This temptation, though quite natural, should be

resisted. As an alternative measure, students can be asked to study the basic texts before class, to learn ESP vocabulary listed in carefully compiled word lists, etc.

Actually, this can induce education managers to consider a large offering of EAP and ESP courses to freshmen and sophomores, so they can get a chance to study authentic texts in detail, to master the necessary language and study skills, and to better equip themselves for EMI courses. Taking such courses, students can concentrate on developing their language skills in the specific field without constant threat of missing important content matter or receiving a lower grade on the grounds of their language deficiency.

Moreover, assessment requirements may be revised to add students' language progress evaluation, otherwise they won't be motivated enough to develop their language competence. Including language assessment into the final grade is probably surplus, but the instructor can regard regular oral and written feedback from students as a competent formative assessment, as an indicator of how well the content of the lecture is understood and if it can be reported in proper English. Nevertheless, it leaves the question of the effects EMI and student's language competence have on the final grade and the possibility to objectively assess students' academic progress in mastering the discipline. The only argument that comes to mind is that studying abroad language aptitude would be specified as a prerequisite for enrollment.

A novelty of interactive teaching requirements to some teachers is a compulsory condition to provide *individualized feedback* on a regular basis, which should include comments on both content and language progress ("*Your report on... was well-reasoned and written in excellent English*") and recommendations how to improve student's learning and course work, how to correct the errors. ("*You identified the tendencies shown in the graph correctly. Next time use numbers from the graph to justify your statements.*") Feedback is an effective instrument to comment on students' progress: praising the things they do well and offering help with individual problems. In case the problem is common, time should be allocated during the class to deal with it. Later adjustments can be done in the syllabus.

Finally, there are different *students' needs* in an EMI class to cope with. The language competence of the students is usually far from being uniform. Due to lower language fluency or longer period of adaptation to the L2 environment many students are concerned that they may appear foolish or irresponsible to their instructors and classmates, because they tend to avoid joining into a discussion or are late handing in their written assignment. In some cases weaker students are intimidated by more fluent ones.

Another linguistic challenge for students is being unable to express themselves and report the content material in English in an adequate way. Students who do not feel confident about the quality of their productive skills like writing and speaking are often tempted to plagiarize, which is heavily penalized and can be used as a cause for expel. It is also the teachers concern to help students avoid that and gradually build up their confidence.

Teaching strategies

Teaching academic subjects in English focuses exclusively on the content. Nevertheless, Russian students remain learners of English. They should receive support in developing their English. *Scaffolding* is a general teaching method which proves to be useful with the diverse learners in the classroom. Language support would enable students to carry out a task which they could otherwise not complete successfully. Like real scaffolding it must be withdrawn when it is no longer needed to make sure the students learn to stand up on their own. Teachers may experiment with various scaffolding strategies.

For example, to introduce new scientific *vocabulary* the instructor might compile a glossary of terms with a translation into L1 or use a target-language dictionary, refer the learners to a textbook or encyclopedia before the class, consider giving short definitions or

explanations during the lecture and check understanding by asking students and getting an immediate feedback. Some functional language like comparison-contrast, clichés for interruption, expressing agreement or disagreement can be introduced and practiced as part of regular interactive activities. Here the instructor himself becomes the language model. He may also supply the learners with a slide or handouts to be referred to and used as guidance.

Repetition is an essential part of the learning process. In addition to coming back to the studied topic later in the course and revising the content from a different angle or through the added knowledge, instructors can plan to use different ways of presenting the same content. Learners will benefit if after/instead of listening to the lecture they can watch a video film, receive a list of articles for further reading, get links to reliable websites with relevant content, do some project work. It gives learners more time and possibilities to familiarize with the subject content and its language, to apply all language skills.

Allowing students *ample time* to process information and prepare for a class discussion or an assignment. It is the only way to ensure productive and adequate participation in L2.

Teachers should be ready to *modify* some *assignments* and make accommodations to differentiate and engage struggling and advanced students (for example, assign an alternative project, choose a more accessible/challenging text, designate suitable roles in group tasks).

Ask *questions* which are specific, guiding and open-ended without ready answers. While answering strategic questions students demonstrate not the knowledge of facts and data, but true comprehension, the ability to analyze, think critically, apply the information they received.

Using *case study or role play* can bridge the gap between theory and practice, develop fluency and confidence, motivate and engage students.

Graphic organizers help students structure and systematize their thinking. With clear graphic support it is easier to discuss content, to visualize and organize information, to grasp logical relations like cause and effect, to report and write, to memorize for exams. It also leads students to see structures in the knowledge.

Collaboration and *active and interactive methods* of teaching and learning is the foundation of modern education. EMI lectures are to be designed for maximum participation using a variety of active and interactive learning methods. Cooperative learning tends to be the hardest student-centered method to be accepted immediately and enthusiastically, especially by high academic achievers and strong introverts. The rationale to prove the feasibility of this method is the importance of teamwork skills to most employers, and the fact well-known to teaching practitioners - the best way to learn is start teaching.

Collaborative group work requires careful planning on the part of the instructor (clear step-by-step instructions, assigning roles, monitoring the process) and the maturity and responsibility of the students. But the benefits can be substantial, including increased students' participation in all components of the course and better understanding. Consequently, EMI teachers should acquire and practice such an approach even in the lecture.

Teachers used to traditional methods often complain that using collaborative learning methods they lose the opportunity to observe their students, cannot work with individuals or be engaged in all of the activities going on in class. Nevertheless, active leaning allows the lecturer to stop being the focus of everyone's attention, but rather try new roles and take on new responsibilities in a learner-centered environment.

Direct teaching and lecturing may thrive from use of teaching methods of liberal education which keep students actively engaged intellectually and develop their critical thinking skills It includes active learning approach and entails having focused discussions before and after the lecture and planning brief interspersing 'turn-to-your-partner' discussions throughout the lecture. Free and focused writing, preview reading tasks in preparation for the lecture, and such forms of classwork as brainstorming, buzz pair/group work, recurrent

quizzes, giving sets of questions right after the lecture can keep students engaged during the lecture, help them focus their attention on the key notions and examples or simply wake them up when they switch off or start dozing.

Liberal education and its methods is a large step forward to high-quality, competitive HE. It creates opportunities for the faculty to teach students the arts of inquiry and analysis and encourages students to apply those arts to open-ended questions and problems. University graduates should be taught to be future leaders who will be finding original solutions to problems of the present and won't be discouraged if the right answers are not yet found, which will hold lasting consequence for our shared future, and students should be well-equipped for the mission by developing independence and free thought, critical thinking skills, multidisciplinary approach and mastering the global language of communication.

Liberal education teaching methods have long been used at the faculty of liberal arts and sciences of SPbGU and proved their effectiveness in preparing university students for the existing and probable challenges of the real world fueled by innovation and ongoing turbulent change. It is a great challenge. The drawback is that time commitment required for liberal arts teaching is really enormous. Creating a course syllabus for a traditional lecture is a one-time endeavor. In liberal education the instructor is preparing for each class and does a lot of after class studies to deal with the various questions set by students. On the positive side, the professor learns together with the student, and often from the student. To keep up with the students and to be a little bit ahead of them becomes the best stimulus for professional and academic growth. In liberal education student-faculty interactions and interactions between students are equally important. Dissent is welcome as much as agreement because this helps to open the mind and get rid of biased opinions and ready-made solutions. A liberally educated student quickly realizes that learning is a communal endeavor: students learn from each other in and out of the classroom. An educator's job is to foster this multidisciplinary environment where students with different experiences, ideas, and backgrounds are able to interact respectfully with each other.

In conclusion, I would like to restate the urgent need for research-driven approach to comprehend and evaluate the changes in higher education policies and curriculum connected with the many faces of the English language and the effects it makes on learning of academic subjects, on English proficiency acquisition for academic and professional purposes, on the development of academic mobility and dissemination of scientific thought and research results. To find effective solutions, specialists in linguistics along with other academic disciplinary areas professionals should work together defining the needs and offering their expertise and help to reach mutual goals to provide quality higher education opportunities.

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**Louisa Selivanovskikh, Research assistant, Graduate School of Management,
Saint Petersburg State University, St. Petersburg, Russia**

**Marina Latukha, Associate Professor, Graduate School of Management,
Saint Petersburg State University, St. Petersburg, Russia**

Comparative analysis of talent management practices in IT companies from emerging markets

Abstract: In this paper we examine the peculiarities and differences of talent management (TM) practices in multinational IT companies from developing countries, the factors that impact them, and organizations' performing results. Using data from contemporary business and academic articles, financial information from companies' annual reports, the paper reviews relevant research on the main TM issues in context of different emerging markets (EM). Particularly, analyzing the influence of the industry on TM practices, we posit that sustainable competitive advantage and good performing results can be obtained when TM practices peculiar to a certain industry are effectively adjusted within the EM context.

Keywords: *Talent management, emerging markets, information technologies*

1. Introduction

Wide attention to TM has been drawn after McKinsey specialists declared “the war for talent” in 1997 (Scullion & Collings, 2010; Michaels, Handfield-Jones, and Axelrod, 2001), which has encouraged other researchers to further study TM and its contribution to sustainable competitive advantage (Beechler & Woodward, 2009). Unfortunately, the studies on TM have shown that the area of TM is where organizations are least proficient (Scullion & Collings, 2010) since the HR departments are not able to solely handle the main challenges modern businesses face in the current economic environment.

Companies are in search of advantages which could become sustainable, bring better financial results, keep a company competitive in a market, and provide ways for their effective usage. Thus, TM is being intensively studied by researchers, but from the EM perspective research sufficiently lacks the necessary knowledge. There are only a few studies of TM practices in Russia (e.g. Latukha, 2015; Holden & Vaiman, 2013), India (e.g. CAHRS Working Group, 2013) and China (e.g. Hartmann, Feisel, and Schober, 2010; Cooke, Saini, and Wang, 2014). At the same time, no cross-industrial analysis has been conducted.

Therefore, the remainder of this study is organized as follows. The second section reviews the literature on the main TM concepts and frameworks. It then discusses TM implementation in three chosen developing countries (Russia, China and India) and the TM situation in the IT industry (chosen due to being one of the fastest developing industries) with the further identification of the research gap. The subsequent two sections present the research setting, research method, and final results. The last section concludes the paper with limitations, implications, and directions for future research.

2. Literature review and research questions

2.1. *The concept of TM*

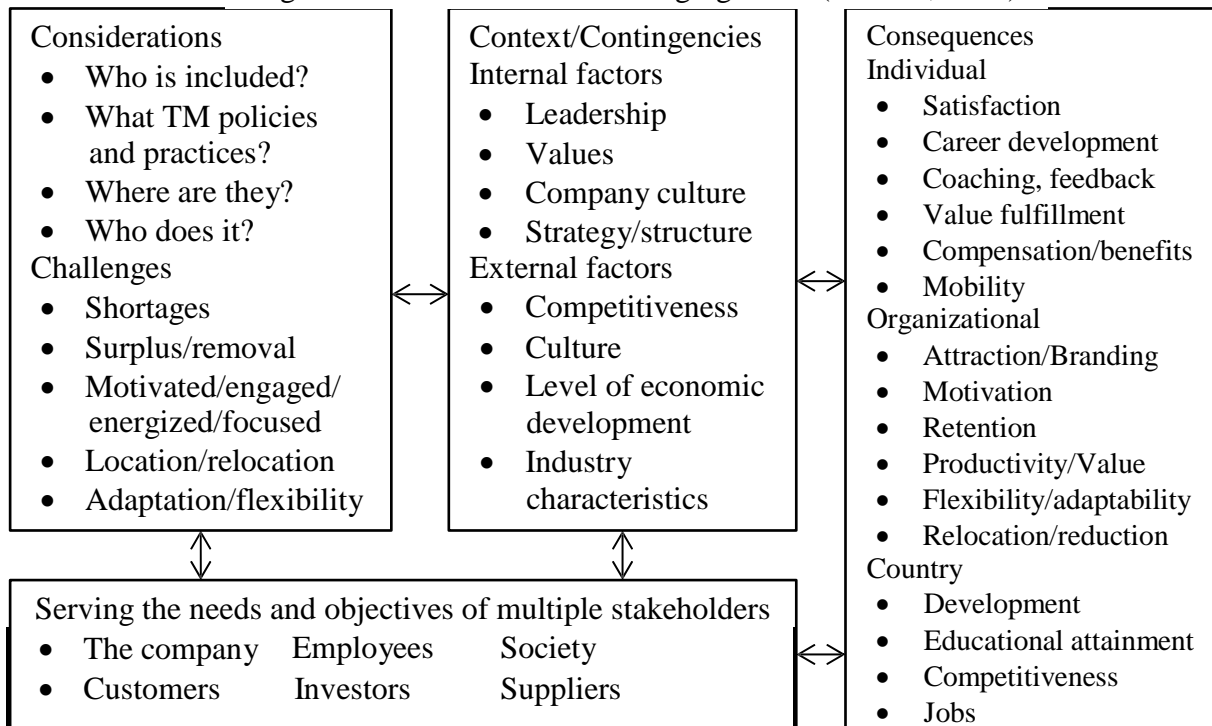
In order to provide some clarity to the definition of TM, a clear boundary must be set between TM and human resource management (HRM). The origins of TM are rooted in the concept of HRM, but TM has a more specified focus (Latukha, 2015). In comparison, HRM encompasses more HR policies and practices, such as planning, staffing, compensating, training and developing, appraising, labor relations and safety and health (Briscoe, Schuler, and Claus, 2008), addressing broader concerns and criteria. HRM includes more stakeholders, such as customers, investors, suppliers, employees, society and the organization itself, while TM has an immediate and significant impact only on the employees and the organization (Tarique & Schuler, 2010). But TM includes additional management processes and opportunities, such as the identification of pivotal talent positions (Hartmann, Feisel, and Schober, 2010), talent review and talent pool inclusion (Mäkelä, Björkman, and Ehrnrooth, 2010). Some authors say TM is more strategic and future-oriented than HRM making it strategy oriented; it is always in line with the overall business goals (Lewis & Heckman, 2006). The aim of TM is to have the right number of people at the right place at the right time with the right skill sets (Latukha, 2015) whereas the overall goal of HRM is to ensure that all employees perform their duties to promote the goals of the company. Nevertheless, TM can and should be viewed in the context of HRM (Tarique & Schuler, 2010).

Having the definition of ‘talent’ is also necessary (Michaels, Handfield-Jones, and Axelrod, 2001; Barlow, 2006; Pepe, 2007) for an organization to provide a clear TM strategy and identify several research streams concerning talent definition. Michaels et al. (2001), Beechler and Woodward (2009) identify talent as a person’s ability to learn and grow. A talented employee is seen as a ‘future-oriented’ (Barron, 2007) potential leader (either at present or some point in future). Other researchers emphasize the uniqueness and naturalness of talent. For instance, Naqvi (2009) states talent is a natural aptitude innate outstanding

capability, natural endowment, genius and gift; it is enduring and unique, given from birth and almost impossible to teach (Buckingham & Vosburgh, 2009). Either way, talent is a strategic balance between performance and potential (Hartmann et al., 2010) It is certain knowledge and high value-added skills (Lewis & Hackman, 2006), that are required by a company.

With the identification and development of TM, various frameworks have been introduced by different researchers. One the latest, introduced by Schuler (2015), takes into account the environment and peculiarities of the company, industry and country. It introduces the five major Cs (choices, considerations, challenges, contingencies and consequences) that summarize the main activities connected with managing talent (Fig. 1).

Figure 1 The 5-C model of managing talent (Schuler, 2015)



2.2. TM in EMs

TM in EMs is a quite new concept. Although EMs offer immense possibilities they cannot avoid the risks and challenges that await them (Cooke et al., 2014). Veliyath and Brouthers (2010) have identified unique characteristics of EMs that could indirectly influence TM in EM countries. They are the underdeveloped infrastructure, inefficient distribution facilities and logistics, tough operating conditions for equipment and products, lack of media penetration, illiteracy of consumers, low levels of income and purchasing power of consumers, limited access to capital and credit, unmet potential demand and high consumer aspirations, need for new solutions to issues, regulated/quasi-sheltered/untapped markets, purchase habits differences (certain cultural factors, history, family size, etc.), and limited home storage space (for purchased products in bulk). In addition, Contractor (2013) has emphasized characteristics that are unique for firms operating in these EMs: state support, culturally-rooted negotiating skills, greater incidence of private equity ownership or family control, own pool of specialists and engineers, cheap labor (compared to the West) and ethnic ties and identity.

The key factors that are susceptible to impact TM practices are population, GDP, demographic trends, labor turnover rate, unemployment, etc. The Global Competitiveness Index (GCI) may help to understand the integration of emerging economies in a global scale.

The indicator is updated annually for 144 countries, on a scale of 1 (lowest possible score) and 7 (highest possible score). In 2014-2015 Russia, India and China were ranked 53rd with a GCI of 4.371, 71st with 4.211 and 28th with 4.89 respectively. In the case of Russia, the country is taking advantage of a well-educated population and a rather efficient labor market, but “Russia’s weak and inefficient institutional framework remains its Achilles heel” (World Economic Forum 2015). Additionally, inadequately educated workforce, poor work ethic in national labor force and restrictive labor regulations are the issues for both, Russia and India, while China, being the best ranked of the four BRIC countries, has weaknesses in technological readiness and higher education system. Another index, the Global Talent Competitive Index (GTCI), has been presented in 2013, attempting to summarize complex and versatile concepts related to human capital and talent competitiveness at the national scale (INSEAD, 2014). The GTCI comprises of various enablers (e.g. attraction, growth, global knowledge, etc.). For instance, out of 93 countries, the ranking results for Russia, India and China are 55, 78, and 41 accordingly. These numbers show the relative position of these countries to others in terms of the overall condition of TM, which is quite low. The general overview of the TM situation for each country is presented in Table 1.

Table 1 Comparison of TM in Russia, China and India (Developed for this paper)

	Russia	China	India
Maturity of TM	Immature, “dysfunctional” (Holden & Vaiman, 2013)	Medium level of maturity; (Hartmann, Feisel, and Schober, 2010)	Medium level of maturity; (Cooke, Saini and Wang, 2014, CAHRS Working Group, 2013)
Overall attitude towards TM	Firms show awareness of TM; Low level of interest in TM (Latukha, 2015)	High level of interest in people issues and TM; External labor market; Governmental support; Skeptical towards Western TM practices (Hartmann, Feisel, and Schober, 2010; Warner & Goodall, 2010; Vorhauser-Smith, 2012)	Enthusiastic about TM; High level of interest; Employees are able to elaborate on what their organizations did in terms of TM; Governmental support; Open towards Western TM practices (Cooke, Saini and Wang, 2014)

2.3. TM in IT industry

Literature review has shown that currently the available TM studies have a cross-industrial limitation (e.g. Latukha (2015)). However, research on TM in IT companies still exists, but only in the form of case studies for specific IT companies. Nevertheless, in order to understand the current situation of TM in IT companies, an analysis of the IT industry in general must be conducted. An overall picture can be seen while observing, for instance, data collected by the World Economic Forum (Global Competitiveness Index rating, or GCI rating) for specific markets. Criteria such as capacity for innovation, company spending on R&D, availability of scientists and engineers, quality of math and science education, percentage of internet users, etc. can serve as the main IT industry indicators.

In the context of the IT industry TM practices have their own characteristics (Chapke, 2011; Patil, Patil, and Waje, 2011). The main challenges are connected with the recruitment planning, training and development, compensation and performance management processes, and HRM as a whole (Patil, Patil, and Waje, 2011). Attracting people with a certain set of skills is a very important component in IT; since the market is highly competitive, only the best must be attracting, leading to better compensation systems and turning the industry into one of the high paying ones (Patil, Patil, and Waje, 2011). The determined HR and TM

practices in the IT industry are (Chapke, 2011) safe and healthy workplace, performance linked bonuses, 360-degree performance feedback system, fair evaluation system for employees, knowledge sharing, rewards ceremonies, open house discussions and feedback mechanisms. In the war for talent high potential tech employees are needed more than ever, so creating an innovative, exciting, safe environment (that facilitates knowledge sharing) and frequently evaluating personnel to identify and reward the best performers are necessary elements of the TM system in IT companies.

2.4. Research gap

Having an efficient TM strategy can become the key competitive advantage of an organization and help overcome the main challenges connected with attraction, development and retention of talented employees. Unfortunately, the understanding of TM concepts, methods and factors under specific economic and sociocultural conditions is at a low level. There is a strong need to examine in more detail various managerial practices from EMs (Latukha, 2015) to understand how to gain competitive advantage in that concrete environment.

From the EM perspective, research on modern TM practices has been conducted, for instance, by Latukha (2015) and Holden and Vaiman (2013) for the Russian case, by Cooke et al. (2014) for Chinese and Indian cases., but currently no comparative analysis of the peculiarities and differences of these markets has been conducted. Also, literature analysis on TM has also shown that there are large gaps in the IT industry context. The available studies on TM have a cross-industrial limitation and Latukha (2015) proposes studying TM separately for industries. Together with the EM limitation, the research gap is quite large and further research is required.

3. Research methods

The literature review has shown that efficient and effective TM is the main source of competitive advantage (Tarique & Schuler, 2010; Lewis & Hackman, 2006; Mäkelä, Björkman, and Ehrnrooth, 2010; Schuler, 2015). In order for the companies from EMs to stay competitive, quickly react to the changing environment (in this case, influenced by the IT industry context) and achieve high performance, a good TM strategy must be adopted (Tarique and Schuler, 2010). Due to the existing research gap, the main goal of empirical research is to identify the peculiarities and differences in TM practices in different EMs. On this basis the following research questions are identified: (1) what are the main factors influencing TM practices in EM IT firms? (2) what are the peculiarities of TM practices in IT companies from EMs? (3) what are the main differences in TM practices in IT firms in China, India and Russia?

In this paper, a qualitative research method is chosen, since it can provide the necessary complex description of how IT firms gain performing results from implemented TM practices. This choice of research method can also be justified by the following reasons: (1) type and nature of stated research questions (“what” and “how” questions); (2) limited studies available on TM practices in EM IT firms; (3) the need of collecting specific information about values and behaviors in particular contexts (Mack et al., 2005).

For data collection, the multiple case study approach is used for the comparative analysis of different TM practices in IT companies in the EM context (Russia, China and India), since it allows yielding more robustness to the overall conclusions compared to other methods (Yin, 2009). The cases are chosen very carefully in order to draw the comparisons, similarities and peculiarities within and between the cases. In the context of multiple case study research, content analysis is used as the main method of data analysis.

According to the stated goal and objectives, Russian-, Chinese-, and Indian-based companies have been chosen for the analysis, with their headquarters situated in these countries respectively. The main criteria for including a company in the research were (1) industry (must be operating in the IT industry), the adoption of which is in response to Latukha's (2015) call for a cross-industrial analysis; (2) size (largest by market capitalization in the country and number of employees), and (3) inclusion into globally-recognized rankings (Schuler, 2015).

4. Empirical results and conclusions

4.1. Main factors influencing TM practices in EM IT firms

The first step in deriving the influencing factors is the thorough analysis of the main challenges, risks, threats and opportunities of these companies. Common factors of all three countries are identified and categorized into the following groups: political, economic, social, technological, legal, and environmental (Collins, 2010). In turn, these factors are split into two groups according to the level of influence on TM (direct/indirect):

- *Indirect factors* (political, economic and environmental, such as environmental issues, geopolitical instability, bureaucracy, currency fluctuations, etc.) influence the company's ability to quickly adapt to the changing environment. One of the reasons why EM companies come across retention problems is that the overall instability in the market and the environment can make the employee leave the country towards new opportunities and better life conditions.

- *Social factors* (workplace diversity, skill gaps, religious beliefs, business ethics, population growth, etc.) strongly influence the TM attraction and retention processes. Cultural peculiarities have to be taken into account when implementing various TM programs. For instance, knowing about the role of Confucian values in the Chinese culture would help adjust retention programs in a way that would make Chinese employees feel comfortable in the corporate environment.

- *Technological factors* (research funding, maturity of technology, level of innovation, IP protection, IT infrastructure, etc.) have a direct influence on the development processes of a company. A poorly developed IT infrastructure as well as the obsolescence of technology can slow down technological development and limit the possibilities for the company and its employees.

- *Legal factors* (employment and competition regulations, standards, law peculiarities, etc.) basically determine the rules and limitations for TM practices implemented by the company. The war for talent in making organizations apply such practices that would attract the right people faster than the competition, and create such an environment in which the employees would be motivated to help the company achieve its objectives. For Indian employees inequality is a very serious issue, so having regulations that would make the recruitment more transparent increases the desire of the potential employees to work in the organization.

4.2. Peculiarities of TM practices in IT companies

The analysis of the Russian IT companies has shown that all feel the impact of the IT talent lack in the ongoing War for talent and recognize the importance of TM practices. Moreover, all of these organizations more or less are familiar with the term "talent management", though TM is not fully integrated as high-grade performing system. It is used interchangeably with HRM. Additionally, the companies set a special stress on development practices. We can observe strong support of various trainings, competitions, challenges, career development, as well as collaborations with IT departments and universities in Russia.

The supportive environment and technology-driven culture, as well as the flexibility and empowerment, can be considered as peculiar to the IT industry in general, not just EMs. Thus, the TM development processes reside the Russian IT industry and are used to attract and retain high-potential employees as well.

The analysis of TM practices in Chinese companies has shown that the general TM strategy of attracting, developing and retaining talent is not clearly stated and included in the HR strategy, though companies identify the serious “brain drain” issue and understand the importance of having TM. There is a clear overbalance towards retention practices (generous compensation package, harmonious workforce, health programs, etc.). The offered development programs (e.g. adult education program) serve more as a retention tool, since Chinese employees seek continuous development opportunities, not finding which can force them to leave the company for better opportunities in other organizations (Hartmann, Feisel, and Schober, 2010). Also, the management philosophy based on harmony, respect, and trust (Confucian values) is promoted in every company to ensure the potential employees would be aware of the comfortable and friendly corporate environment offered by the organization (not to mention various initiatives for families, safety programs, social protection, etc.). This approach proves Confucianism to be one of the main factors influencing TM practices in China (Vorhauser-Smith, 2012).

The analysis of the Indian IT firms shows that the TM system is quite developed and addresses the main HR issues by working in the direction of all three TM processes (attraction, development and retention). Moreover, Indian companies are more open towards western HR and TM practices (Warner & Goodall, 2010). Each company has either a separate TM function within the organization, or a special TM direction in the HR department, while all include the TM strategy in the company’s HR strategy. Indian companies use different communication channels to attract potential talent (e.g. social networks and forums) and create talent pools out of them. They also offer generous compensation programs, health and safety programs and promote an innovative empowering environment, in which creativity, trust, equality and respect prevail. New words and trends are created, such “becoming a Wiproite” (at Wipro) and “ideapreneurship” (at HCL).

Table 2 Main TM practices in IT firms from EMs (Developed for this paper)

Attraction	Development	Retention
Early recruitment	Professional development, learning and training	Specific environment, culture and values
External communication (Web portals, electronic magazines) IT forums, olympiads, contests and championships	Any-time-any-where learning (e-learning, distant learning)	Involvement and empowerment
Collaboration with academia and business	Own university and development centers	-

In comparison to TM practices in IT firms identified by Chapke (2011) there are some differences connected with the EM context (Table 2): first, in attraction and retention processes (almost all of the IT companies state their overall goal is to get the attention of the potential employee as early as possible by targeting first-year college students, or even pupils from the last years of high school); second, in training and development practices, aimed at developing specific skills and competences; third, in culture (an empowering environment and motivating culture, with no strict regulations, that would support idea creation are the key TM practices in IT companies); fourth, in internal and external communications (computerized TM practices and other technological platforms increase the overall employees’ perception of working in the organization); fifth, in collaboration with academia (all of the analyzed IT

firms have special connections with IT departments of technical universities, which they use as communication channels to attract potential talented employees).

4.3. Main differences in TM practices in IT firms in China, India and Russia

Different preferences in TM activities and practices have been the result of various cultural, organizational, institutional, industrial and individual drivers (Cooke, Saini, and Wang, 2014; Schuler, 2015). Even though, practically all of the companies have showed support towards TM, the local demands and needs are forcing companies to adjust TM practices to the continually changing environment. The identified differences are in (1) priority of TM practices (2) diversity management, (3) retention practices, which are connected with the average life conditions in these countries, (4) attraction and development processes, (5) TM system and its role in the organization. Though the attraction, development and retention processes are equally important in a company, in practice we observed that IT firms from different countries show preference for specific TM processes. For instance, Chinese companies spend a lot of resources on educational and compensation programs, since giving potential employees the chance to get higher education abroad does not guarantee they would return and continue working in the company (Cooke, Saini, and Wang, 2014; Hartmann, Feisel, and Schober, 2010). Russian managers state a serious problem of students lacking practical knowledge. In comparison, Indian IT companies have a rather “balanced” TM system.

The multiple case analysis has shown that the term “talent management” is recognized by every company and practically all of the firms have aligned the TM strategic goal with the HR and/or corporate objectives. However, TM in Russian and Chinese firms is considered to be either a part of HRM, or even used interchangeably with HRM. In this sense, Indian IT companies have a distributed system, with the TM processes separated into an independent function that is responsible for the initiatives and practices targeted at high potential employees. Also, Indian IT firms have a global TM system that takes into account the local needs and factors of the countries in which they perform. The global educational center and business leadership model can serve as examples of such practices. In Russian and Chinese companies, in comparison, TM practices mostly target employees from the local market.

Meanwhile, China and India are the most populous countries in the world, and many people are below the breadline. That is why companies from these countries, in comparison to Russia, offer various benefits in order to attract and retain talent within the organization. These benefits include special compensation programs, financial support (marriage, mortgage, etc.), medical examinations, health awareness sessions, etc. Additionally, Russian IT organizations devote little attention to workplace diversity, while Chinese companies emphasize the importance of gender diversity (women employees involved in the working process) and Indian firms consider diversity management as important as TM and include it into their corporate strategy.

While TM aims at developing a certain set of competences and skills, Chinese IT firms also have programs that are aimed at developing the basic skills since higher education is not available for everyone - highly-educated people are considered as the elite (Cooke, Saini, and Wang, 2014). For Russian IT organizations, events like competitions, Olympiads and forums are considered to be the key differentiators between talent and non-talent. The companies financially support such events or even initiate some of their own. The winners of these championships are then included into the talent pool of these companies. As for engineering schools, the education programs are highly promoted, and young talents get the chance to gain more practical knowledge with a possible job offer at the end of the program.

5. Results and conclusions

The overall results have shown that all of the observed companies strongly depend on economic and political factors, since they cannot be influenced and controlled by the company. Different geopolitical and economic instabilities can result in a severe decrease in investments, that would lead to additional expenditures and costs for the company. Employees start searching for new opportunities in other companies and/or countries that would provide them with the appropriate benefits and compensation packages.

Certain TM practices become more important than others when considering the industry and companies from different countries set a stress on specific practices. In terms of the attraction processes, there is a tendency of starting recruitment at an earlier stage due to severe competition in the market. The case analysis has shown companies strongly invest and support various IT events (e.g. IT forums and conferences), which organizations often use as their main external talent pool. Additionally, IT companies constantly strive to improve their technological infrastructure to be more effective and efficient. Different educational platforms are launched for the employees to have any-time-any-where access to learning opportunities. Finally, the creation of a highly 'ideapreneurial' environment supports the employees in idea creation and innovation.

Our research contributes to the business literature by, firstly, enlarging empirical evidence, and secondly, suggesting further research directions on the topic of TM in EM IT companies. The goal of this research was to identify peculiarities of TM practices in IT firms in Russia, China and India, while the determined objectives were to identify the main factors that influence TM practices in IT firms from Russia, China and India, determine the peculiarities of TM practices in the IT industry context, differences in these practices in EM and industry context and the influence of TM practices on the companies' results. This analysis also contributes to existing studies, by, firstly, comparing the existing empirical studies, by contrasting EM firms with each other (Cooke, Saini and Wang, 2014; Holden & Vaiman, 2013), and, secondly, being one of the first to approach TM in respect to industry and addressing the cross-industrial limitation (Latukha, 2015) .

This study has some limitations which open up opportunities for future research. First, the IT industry is quite large and its smaller segments might be peculiar in their own way, which demands an additional interindustrial comparative study. Moreover, since effective TM is the main source of a company's competitive advantage (Tarique & Schuler, 2010; Scullion & Collings, 2010) and different indicators, like awards and recognitions, can be seen as metrics in estimating the effect of TM on companies performance (Schuler, 2015), we have also investigated the connection between the companies' performance and the undertaken TM initiatives. Unfortunately, there are many other factors, besides those connected to TM that can positively (or negatively) impact the organization's operating results, so further research in this direction is necessary. Second, the overall perception of TM practices in the company may not be the same on different levels and groups of employees. In this paper the analyzed content and data was gathered on the company level and did not take into account individual, divisional or functional differences.

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Elena Serova
International School of Economics and Politics
St. Petersburg State University of Economics
serovah@gmail.com

Contemporary Methods and Systems Modeling for Business Analysis

Abstract: Modern business is a complex multicomponent system, the primary elements of which are information and knowledge. The focus on supporting knowledge intensive processes is significant and on the first place there is a need to support the process of reasonable and right decision making. This paper is devoted to the issues of choice, creating, and implementation of intelligent models and systems for business analysis in the context of spatial economics paradigm. The main purpose of this research is characterization of qualitative parameters that impact on equilibrium of operation and development of spatial management systems and formation of conditions for maximizing its effectiveness. The paper contains theoretical foundations and comparative analysis of different modeling methods and systems and quantitative results obtained through the experimental model.

Keywords: knowledge economy, spatial management system, marketing space, fuzzy logic model

1. Introduction

Modern modeling tools should facilitate mutual understanding at different organizational levels when making strategic management decisions thus bridging the gaps between a strategic vision and its implementation (Pidd, 2004). Leaders of Russian companies are increasingly turning to the experience of the use of modern methods and systems modeling that help to analyze the situation, integrate people, information and business processes with the purpose of effective management at all areas of business and management. Modeling is now considered as an obligatory stage in making management decisions in companies actively used modern information communications technologies (ICT) in their activities. ICT are continuously developing, they are complex, require further research and evolution. Moreover, the numbers of problems, which always proves the necessity to use ICT, is almost limitless. The ICT market growing quickly, ICT use is expanding in businesses, public administration, and social developments. All of this is forming a knowledge-driven economy. According to most experts, it is more competitive and stable. Owing to implementation contemporary information technologies, management processes are changing tremendously. Society is also changing. Interests and values of different social groups are evolving and modifying. Some of the reasons are that ICT are quickly spreading into the social network of society, they are extremely wide-reaching and wide-accessible.

Contemporary methods and modeling systems allow of describing, analyzing, and forecasting of complex nonlinear interactions in business, for example, to simulate the behavior of economic actors in crisis period or assess the impact of the implementation of various scenarios for the investment policy of the company for long-term planning and choose the service activities in the current planning. The solution of such kind of problems is associated with the need of taking into account uncertainties, complex relationships between the variables of investigated system, as well as dynamic mutual conditionality of current solutions and future events. The essence of the use of modeling methods and systems for business analysis is to obtain quantitative and qualitative results through the experiment on computer model. Qualitative results can help to detect previously unknown properties of complex management system: its structure, dynamics of development, stability, integrity and others. Quantitative findings are mostly data of forecasting concerning future or explanation of past values of the variables that characterize the investigated real system.

This paper deals with the issues of Russian and international researches in the field of intelligent information systems applications and how it can be properly supported by contemporary information communication technologies. It is empirical and theoretical research in equal measure. The study is based on literature review, analysis of large volumes of information, and findings of investigations in this field. The main goal of this paper is consideration of the issues of soft computing and agent based modeling implementation for business analysis, and the main domains or areas of applying in context of spatial economics. The objective of this research is characterization of qualitative parameters that impact on equilibrium of operation and development of spatial management systems (including marketing system) and formation of conditions for maximizing its effectiveness. It entails consideration of four main groups of factors: market, macroeconomic, industrial, and social and technological. The decision of such multicriterion tasks involves the use of problem-oriented interactive systems that combine the advantages of simulation, optimization and expert systems. The research problem is focused on the modeling applying for analysis of spatial management systems. In other words, the problem the author works with here is: How organizations can successfully use technologies and systems of modeling for business analysis under consideration of spatial approach. The

original contribution of the work is describing the hybrid intelligent model, which contains all three elements - optimization, simulation and fuzzy inference system. Research methodology is methods and procedures of modeling. The paper contains theoretical foundations and comparative analysis of different modeling methods and systems (including soft computing and agent based approach) and quantitative results obtained through the experimental model. The rest of this paper is structured as follows: Theoretical background; brief literature review, and methodology; Systemic researches of marketing space; Model for evaluation impact of market factor, Conclusion, and References.

2. Theoretical Background, brief Literature Review, and Methodology

Modeling allows us to consider processes taking place in complex management system at any level of detailing. At the same time with the use of modeling any algorithm of management activities or management system behavior can be implemented and analyzed virtually. In addition, various modeling approaches may be successfully combined. Modeling is now becoming one of the most effective methods for studying and perfection of complex management systems and economics. With the development of information and communication technologies and improvement of computer systems architecture, the level of complexity of models, with which you can make correct predictions about the character and properties of investigated processes, significantly increases. As a result, nowadays a computer models are widely used for solving real business problems. These models have the ability to create "the illusion of reality". Most of the researchers the term "computer modeling" or "computer simulation" usually associate, in the first place, with the research area of Cybernetics - System Analysis, which appeared in the middle of last century in studies of complex systems in macroeconomics, while creating the automated systems of management.

The major methods in simulation modeling are: System Dynamics (SD), Dynamic Systems (DS), Discrete Event (DE), and Agent Based (AB). While System Dynamics and Discrete Event modeling are traditional methods, Agent Based approach is relatively new. As Borshchev and Filipov (2004) reported Dynamic Systems, as a rule, are used to model and design "physical" systems. If one considers the levels of abstraction of these methods, Dynamic Systems or "physical" modeling is situated at the low level. System Dynamics dealing with aggregates is located at the highest level, and Discrete Event modeling is employed at an intermediate level of abstraction. But Agent Based modeling, is used across all levels of abstraction (Borshchev, Filipov, 2004; Serova, 2013b). The technologies that have been used to successfully develop agents and multi-agent systems include:

- Knowledge-based systems;
- Neuron networks;
- Clustering algorithms;
- Fuzzy logic;
- Decision trees;
- Bayes' theorem;
- Genetic algorithms;
- Natural language processing.

According to Serova (2013b), significant advantage of the Multi-agent modeling approach relates to the economic mechanisms of self-organization and evolution which become powerful efficiency drivers for the development and success of an enterprise. The multi-agent approach allows the creation of a new intellectual data analysis. Multi-agent systems can be open, flexible, and adaptive, and deeply integrated with other systems. Multi-agent systems - as systems

of distributed artificial intelligence - herald an era of networked organizations that are supported by the interaction of intellectual robots (Serova, 2013b).

Soft computing (SC) is a set of computational methodologies that collectively provide a basis for understanding, designing, and development of intelligent systems for using in various fields of science, including management. In contrast to traditional modeling methods, the essence of soft computing is that it has aimed at adapting to the inaccuracies of the real world. The scientific traditions, as a rule, give preference to the quantitative, formal, and precise theories and concepts. However, nowadays, this tradition has been changed by appearance of new problems for which finding of exact solutions was impossible, but the approximate solution methods of SC were quite acceptable. The main components of soft computing concept are fuzzy logic (FL), neural networks (NN), evolutionary computation (EC), and probabilistic inference (PE). Each of the above four methodologies has its strengths and weaknesses. Although they have some common characteristics, however, they can be considered as complimenting each other, because part of the required attributes missing from one technology, but can appear in the other (Krichevsky, 2015). Table 1 shows the comparative analysis of possibilities of intelligent technologies on certain criteria for major components of Soft Computing. Graduations of fuzzy logic are used as estimates of criteria. (Krichevsky, 2015).

Table1: Comparison of intelligent systems (source: Krichevsky, 2015, pp 15)

Evaluation Criteria	Neural Networks	Fuzzy Logic	Evolutionary Computation
Mathematical model	Slightly good	Bad	Bad
Learning ability	Bad	Good	Slightly good
Knowledge representation	Good	Bad	Slightly good
Expert knowledge	Good	Bad	Bad
Nonlinearity	Good	Good	Good
Capability of optimization	Bad	Slightly good	Good
Tolerance of uncertainty	Good		Good
Operating time	Good	Slightly good	Slightly bad

. It is noteworthy that Fuzzy Logic is now considered as essential feature of decision making in companies that actively employ modern information technologies. Applying the information and communication technologies, which are used in soft computing, allows achieving the quantitative results, which is very important for manager to make a decision. Fuzzy set was introduced by Lotfi A. Zadeh (Zadeh, 1994) as a means of representing data that was neither precise nor complete. There are two main characteristics of fuzzy systems that give better performance for specific applications: the first is that fuzzy systems are suitable for uncertain or approximate reasoning and the second is that fuzzy logic allows problem solving and decision making on the basis of incomplete or uncertain information. Fuzzy technologies as technologies

of artificial intelligence are now having a significant influence on information systems design and analysis (Kecman, 2001; Krichevsky, 2005; McNelis, 2005).

3. Systemic Researches of Marketing Space

The main advantage of the scientific research area, which is based on the spatial approach, is its interdisciplinarity and ability to take advantages of systemic approach and synergy effect in the study of issues related to the spatial organization of economy and management systems, including marketing systems. Problems of economic space have attracted the attention of ancient philosophers (Aristotle, Plato), founders of social utopias (T. Moore, T. Campanella, C. Fourier, R. Owen). These problems were reflected in the structure of created economic theories in XVII - XVIII centuries. Theories of regional product specialization and inter-regional trade for the first time were proposed by international affairs experts, not by experts in the field of regions development. First of all, it is necessary to mention the famous classics of English political economy - A. Smith and D. Ricardo, then the Swedish economists - E. Heckscher and B. Ohlin. Fundamentals of spatial economy were founded within the German scientific school (J. Thunen, A. Weber, A. Losch, W. Christaller, W. Launhardt) and American scientific school (W. Isard). Representatives of these scientific communities had created the theoretical basis of modeling of spatial-temporal organization of the economy. They grounded the regularities of differentiation of spaces and transforming its individual components in a competitive economy. But the definition and conceptual framework of the spatial sciences are still in the stage of discussion and debate.

Systemic researches of marketing space suggest that the main result of the study of the marketing system is not only the conditions of its formation, but the effectiveness of the optimal functioning and development. Particular attention in the systemic marketing research should be given to the study of causal relationships of the marketing system behavior and to identifying structure and its properties, which will ensure the effective implementation of marketing activities. According to Bagiev and Serova, (2015) systemic marketing research structurally will consist in study of three main areas:

- Theoretical foundations;
- Improvement of the management system of marketing;
- Marketing policy.

The basis of the spatiotemporal concept to marketing is the principle of systemic approach and consideration of marketing system as a large complex system consisting of elements of different types and having heterogeneous relationships between them. Spatial system of marketing is treated as a complex system, a set of subsystems and their relations in many dimensions: social, industrial, territorial, etc. (Bagiev, Serova, 2015).

As the most important properties of a large marketing system should be consider the next:

- Sustainable functioning and development;
- Adaptability;
- Reliability;
- Integrity and autonomy of its subsystems;
- Multicriterion choice of decisions;
- Synergy;
- Replication.

Definition of qualitative parameters that impact on equilibrium of operation and development of spatial marketing system and formation of conditions for maximizing its effectiveness entails consideration of four main groups of factors: market, macroeconomic, industrial, and social and technological (Table 1). The decision of such multicriterion tasks involves the use of problem-oriented interactive systems that combine the advantages of simulation, optimization and expert systems. All of these types of systems are not mutually exclusive. Moreover, there are hybrid systems that contain all three elements - optimization, simulation and fuzzy inference system.

Table 2: The main groups of factors and indicators (source: Bagiev, Serova, 2015)

Factors	Indicators
Market	Market segments
	Needs and demands
	Market issues (forces)
	Switching cost
	Revenue attractiveness
Macroeconomic	Economic infrastructure
	Commodities and other resources
	Capital market
	Global market condition
Industry	Competitors
	New entrants
	Stakeholders
	Suppliers
	Substitute products and services
Society and technologies	Societal and cultural trends
	Socioeconomic trends
	Technology trends
	Regulatory trends

4. Model for evaluation impact of market factor

Market factor is one of the main forces influencing on equilibrium and sustainability of operation and development of spatial marketing system and formation of conditions for maximizing its effectiveness. The figure 1 shows the fuzzy inference system (FIS) for four input variables and one output parameter. This FIS is destined for the assessment of the IS sustainability. The input parameters are market segments (X1); market needs (X2), market issues or forces (X3), and revenue attractiveness and switching costs (X4). Four selected attributes are included as input data to FIS. The output parameter determines the IS sustainability (Y).The control objective is to find the output value for a particular set of input variables.

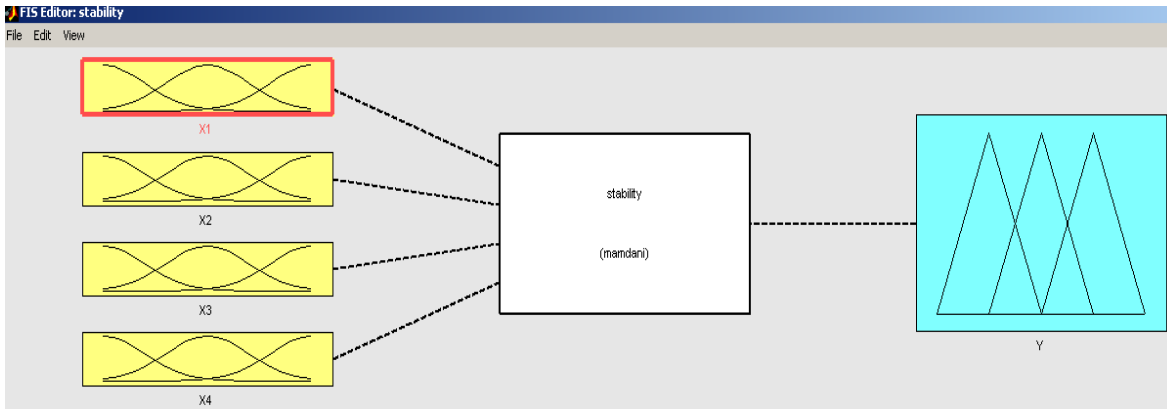


Figure 1: Fuzzy Inference System (model for evaluation impact of market factor)

The Figure 2 shows the information about the membership functions for the first input and output variables. All calculations were performed in MATLAB v. 7.01.

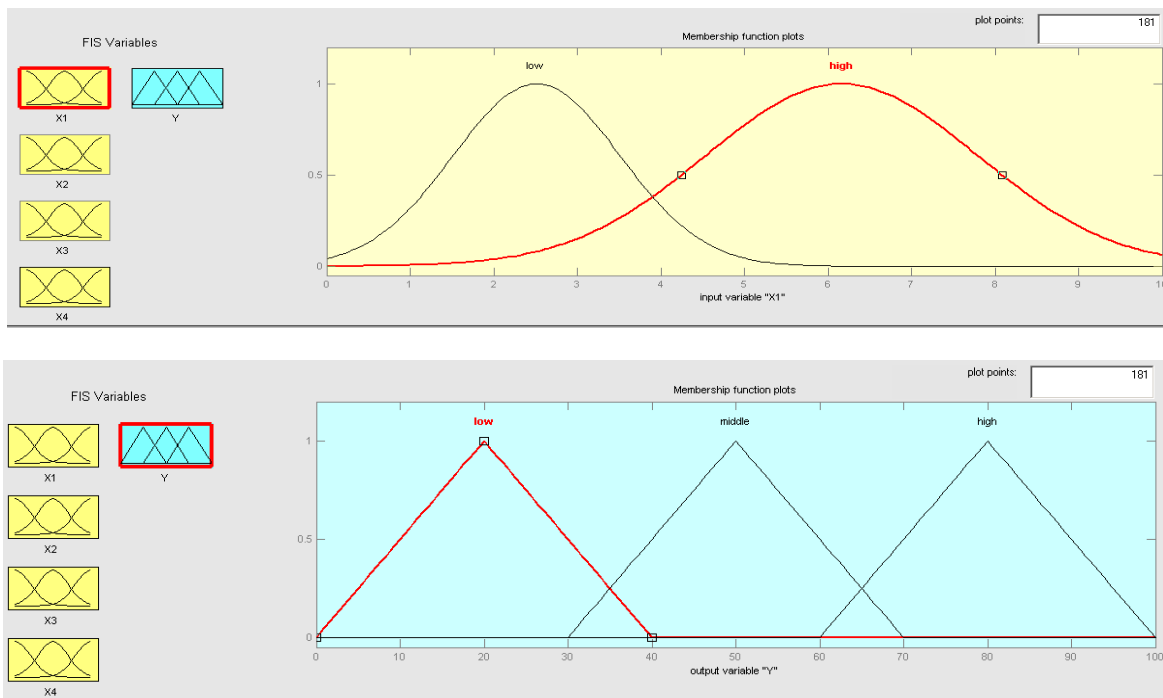


Figure 2: Membership functions for the input and output variables (model for evaluation impact of market factor)

The number of the rules is the product of the number of terms in each input linguistic variable: $2 \times 3 \times 2 \times 3 = 36$. The Figure 3 displays the forming the base of rules.

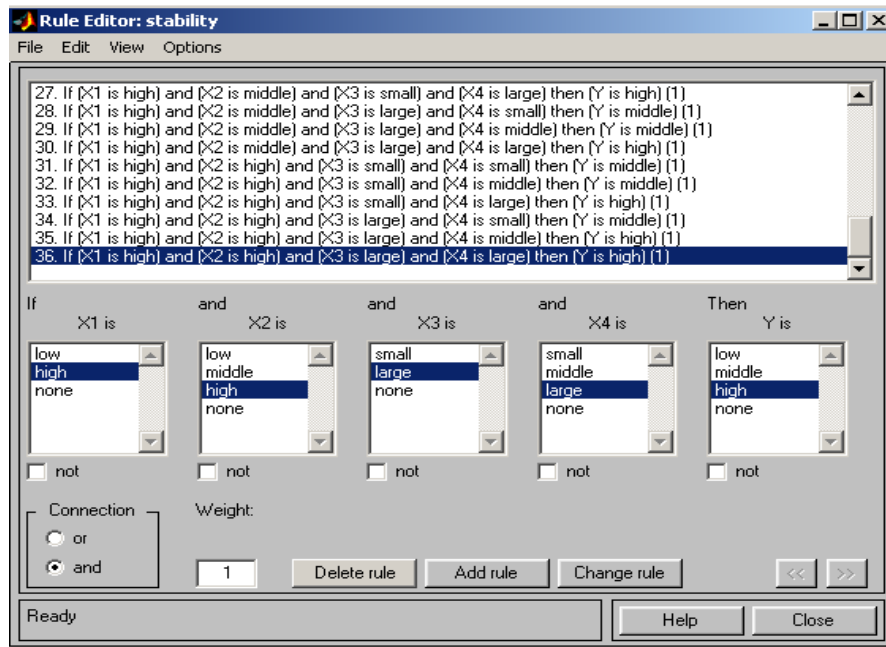


Figure 3: The process of forming the base of rules

After the forming the base of rules the system of FL control gives the value of sustainability as conditional units. The results of experiment: the value of quality equal 80 points for given set of input variables: $X1 = 9,1$; $X2 = 8,8$; $X3 = 9,4$; $X4 = 9,2$.

5. Conclusion

Using spatial-systemic paradigm in the conditions of market relations development necessitates systemic studies and use modern modeling methods and systems for spatial analysis. System researches of marketing space, the use of spatial approach and multidimensional representation of spatially localized complex management systems may be based on the analysis of four main groups of factors: market; macroeconomic; industrial; social and technological. The decision of such multicriterion problems involves the use of problem-oriented interactive systems that combine the advantages of simulation, optimization and expert systems. Determination of the parameters that impact on the sustained development and operation of the spatial marketing system and creation of conditions for maximizing of its effectiveness is possible by using hybrid intelligent models and systems.

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G.V. Shirokova
Professor
St. Petersburg University, Graduate School of Management
3 Volkhovsky pereulok. St. Petersburg, 199004, Russia
shirokova@gsom.pu.ru

E.V. Skaletckii
Doctoral student
Far Eastern Federal University, School of Business and Public Administrations
8 Sukhanova. Vladivostok, 690091, Russia
skaletskiy@yandex.ru

K.A. Bogatyreva
Doctoral student
St. Petersburg University, Graduate School of Management
3 Volkhovsky pereulok. St. Petersburg, 199004, Russia
bogatyreva.phd2015@ledu.gsom.pu.ru

Influence of access to resources in university environment on the growth of new student ventures in different cultural contexts

Annotation: This study examines the role of university capital in new venture's growth in different cultural contexts. Using Global University Entrepreneurial Spirit Students' Survey 2011 database we analyzed student entrepreneurs (n=923) after screening a sample from the general population (n=93265). Findings of the current study demonstrate that access to capital has no significant direct influence on the growth of new ventures. However we identified a number of moderating cultural effects. These findings illustrate the highly important role of cultural features in new ventures growth.

Keywords: *new ventures growth, resource-based view, student entrepreneurship, national culture.*

Introduction

The topic of new ventures is perceived in contemporary literature as a crucial aspect of sustainable development by fostering competition and creating race of innovations. However, the majority of new ventures are not innovative, they don't achieve high growth and generate a lack of added value and new workplaces (Shane, 2009). According to (Birch, 1987) 5, 10, 15% of new ventures generate 83, 93, 98% of new workplaces respectively. Why are some new ventures so successful, while others are not? The most significant impact on the economic development is made by new ventures oriented to high growth. For our research we adopt the following definition of new venture: an organizations on the early stages of lifecycle up to 8 years old (Arregle et al., 2013).

Why do some new ventures achieve growth, while others stay on the marginal survival stage? A long tradition of studies is devoted to this topic (McKelvie & Wiklund, 2010; Arregle et al., 2013; Loof & Nabavi, 2015). The results of the Global Entrepreneurship Monitor 2013 (GEM, 2013) identify that in spite of the level of economy's development the most entrepreneurially active share of a world population is between 25 and 34 years. The age group between 18 and 24 expresses the highest intentions to start business. Based on it we can suppose that developing of attitude to entrepreneurship and first attempts to start business proceeds during the college years. We adopt the definition of student entrepreneur as an individual combines attendance of the courses in a university with entrepreneurial activity (Marchand & Sood, 2014). Students often become the target group for research of entrepreneurial intentions (Shinnar et al., 2014), but the student entrepreneurship and the role of university in it remains under-researched.

This study attempts to answer following research questions:

How is an access to various resources related to the growth of new student's ventures? How do different cultural characteristics of society moderate this relationship?

The purpose of this study is to assess the impact of the availability of various types of resources on the growth of new student's ventures in a university environment. First part reveals the theoretical basis of the study and presents the hypothesis. Second section describes the methods of empirical research. Third section contains the main results of the analysis. Fourth section presents a discussion of the results and offers recommendations for future researches.

1. Theoretical Background and Hypothesis

1.1 Role of access to resources in growth of new student's venture

New venture is a result of creation process, organized by an entrepreneur who is able to perceive and evaluate opportunities and motivated to implement preferences and goals (Shaver & Scott, 1991). New ventures growth is determined by the owner's ability to search the free space and the venture's capacity for internal reallocation of capital to meet the needs of the market.

In this paper we adopt the resource-based view, the one of the most widespread theoretical approaches in strategic management, according to which firms are considered as cluster resources that are unevenly distributed in the general population. A wide range of studies has shown that access to resources is crucial to new ventures growth (Adizes, 1989; Cooper et al., 1994; Hormiga, et. al., 2010). In the long-term period better access to resources ensures a competitive advantage. Achievement high growth depends on access to all types of capital and know-how (Cooper et al., 1994). One of the core distinctions between an entrepreneur and a hired manager is the use of resources. While a manager concerns about obtaining the most profit from the available capital, entrepreneurial approach to resources also includes the ability to attract and use external resources (Shirokova, 2011). Better access to resources provides more opportunities for the development of the venture. Resources are financial, human and organizational assets that can be used to implement a strategy to create value (Helfat & Peteraf, 2003).

For ventures on the early stages of the lifecycle the role of intangible assets is particularly

important. Intangible resources include human and social capital. The appearance of majority of the innovative ideas, which are necessary for achieving rapid growth, is a result of the exchange of information inside an environment with the harmonious development of human capital of participants and established communication networks (Del Giudice et al., 2014).

1.1.1 The availability of human capital and the growth of new student ventures

Human capital includes a body of knowledge possessed by the individual, allowing him to increase the level of cognitive abilities, which lead to an increase in the efficiency of his potential (Davidsson, & Honig, 2003). It is recognized by scientists as significant resource for the venture's growth (Hormiga, et al., 2010). Research (Hormiga et al., 2010) identifies that human capital, along with relationships within the team plays a key role in the development of the company. The growing interest to the development of student entrepreneurship is reflected on the development of entrepreneurial education programs that are based on the fact that entrepreneurial skills can be elaborated during the training.

On this basis, we formulate the first hypothesis:

H1: The availability of human capital is positively linked to the growth of new student's ventures

1.1.2 The availability of social capital and the growth of new student ventures

Social capital is a combination of the actual or potential resources associated with the possession of durable networks of more or less institutionalized relationships of mutual acquaintance and recognition that gives its members support in the form of a collectively-owned capital (Bourdieu, 1986). Recent studies have confirmed the strategic use of different types of social networks by entrepreneurs in order to achieve goal (Lechner, et al. 2006). For a new company with no prior history of relations between its members access to resources and new technologies depends on the ability of team members to receive these resources. Thus, social capital that participants bring to the team make a significant contribution to the venture's success (Helfat, & Peteraf, 2003).

The presence of communication platforms is extremely important for new student ventures as they help to find partners or investors to implement the project and with university's support. In addition, the student environment is more favorable for the dissemination of information and its institutionalization enables to realize potential for finding the necessary connections.

The following hypothesis:

H2: The availability of social capital is positively linked to the growth of new student's ventures

1.1.3 The availability of financial capital and the growth of new student ventures

Access of financial capital distinctly affects the decision to start a business. Moreover, availability of financial resources provides entrepreneurs with flexibility to implement a wide range of alternatives, including ambitious projects, which can able to achieve a high growth (Cooper et al., 1994). However, student entrepreneurs are limited in attraction of financial resources from formal sources as they face high levels of information gap, driven by a deficiency of operating and financial histories and a lack of collateral (Cassar, 2004). One of the possible ways for students to attract investments is to use university offerings. In addition many universities worked out specials programs for providing the student's ventures with greatest potential with financial support to foster the venture's growth (Zellweger et al., 2011).

On this basis, we formulate the third hypothesis:

H3: The availability of finance capital is positively linked to the growth of new student's ventures

1.2 The role of national culture in the relationship between available resources and the growth of new student's venture

Cultural values inherent to a particular country significantly influences entrepreneurial activity, with certain cultures promoting and generating entrepreneurial behavior among the members more than others. National culture determines the extent to which the traits of entrepreneurs,

such as the willingness to take risks and innovation approved by society (Hayton et al., 2002). Culture shapes behavior models and the way of using information by individuals. It is widely recognized that “the collective programming of the mind which distinguishes the member of one human group from another” (Hofstede, 1980).

Many studies have analyzed the relationship between cultural dimensions and entrepreneurial behavior (Busenitz, et al., 2000; Gartner & Liao, 2011). In this context, the understanding of question “why do cultural issues produce students who are more inclined to be entrepreneurs” requires further exploration (Busenitz & Lau 1996). Our knowledge and skills are acquired through social learning, including teaching. Moreover, it affects students’ entrepreneurial behavior, so it leads to students from different countries have different ways of thinking.

Decision about amount of time devoted to business comparing to alternatives is also made under the influence of beliefs and values inherent for the society. Maximization of profit is not always the main purpose of conducting business. Business can be directed to the implementation of other interests of the owner, are contrary to profit maximization, such as personal independence and free time (Wiklund & Sheperd, 2003). As a result, culture through public institutions shapes entrepreneurial attitude and motivation for the growth of new ventures (Baumol, 1990)

In order to express cultural differences we have chosen following indexes from GLOBE (Global Leadership and Organizational Behavior Effectiveness) project (House et al., 2004) as power distance, uncertainty avoidance, assertiveness, future orientation and performance orientation as most relevant to new venture’s growth.

1.2.1 Future orientation.

Focusing on the future reflects the degree to which members of the organization or venture involved in the activities oriented to achieving results in the future, such as planning, investing and strategic planning (Stankov, 2015). Also it is often associated with the acceptability of innovation in the venture. Majority of empirical studies confirmed the link between innovation and venture’s growth (Song et al., 2008). In addition, orientation towards the future determines which part of the profits will be reinvested. Innovation and increase of the venture’s budget by reinvesting provide delayed effect, which appears in the medium- and long-term period.

Based on this, we formulate the following hypothesis:

H4: The higher level of future orientation in society positively moderates the link between access to human(a), social(b) and financial(c) capital and the growth of new student’s ventures

1.2.2 Assertiveness

Assertiveness reflects the degree in which members of the venture or society are ready confrontation and aggression in social relationships (Stankov, 2015). Low assertiveness is typical for well-coordinated and integrated ventures. High rate of assertiveness has a positive effect on the efficiency of the venture, however, at the same time it could be a cause the degradation of relations within the team. However, for new venture assertiveness will be rather favorable for the interaction with external parties.

Based on this, we formulate the following hypothesis:

H5: The higher the level of assertiveness in society positively moderates the relationship between access to human(a), social(b) and financial(c) capital and the growth of new student’s ventures

1.2.3 Power distance

The next element of the national culture is power distance. It reflects the degree in which members of the society perceives power distribution (House et al., 2004). Members of societies with high power distance normally accept the uneven dispersion of power in society, while the representatives of the cultures with low power distance believe that power is evenly distributed between members of society. Low power distance facilitates communication and increases the opening of the company. Managers of ventures with low power distance are more prone to the decentralization of power, which has a positive effect on the productivity (Naor et al., 2010).

The following hypothesis:

H6: The higher level of power distance society negatively moderates the link between access to access to human(a), social(b) and financial(c) capital and the growth of new student`s ventures

1.2.4 Uncertainty avoidance

Uncertainty avoidance reflects how individuals seek to avoid nontrivial situations, relying on the established rules and procedures (House et al., 2004). Representatives of cultures with low uncertainty avoidance are tolerate to risk (Hofstede, 1980) and more adapted to changes. In contrast, representatives of cultures with high uncertainty avoidance have fear of failure, which makes them less willing to take risks and adapt to external changes. As a result, a high level of uncertainty avoidance makes entrepreneurs to avoid risks in the venture development, which leads to a more cautious business and, consequently, to lower growth (Gartner & Liao, 2011).

Based on this, we present the following hypothesis:

H7: The higher level of uncertainty avoidance in society negatively moderates the link between access to access to human(a), social(b) and financial(c) capital and the growth of new student`s ventures

1.2.5 Performance orientation

Ventures with a high focus on the future encourage employees and their contribution to the development of the venture, while the ventures with a low performance orientation inefficiently use staff incentive system (Naor et al., 2010). Ventures that focus on achieving the goals and demonstrate high targets, achieve better results.

Based on this, we formulate the following hypothesis:

H8: The higher level of focus on results in society positively moderates the relationship between access to access to human(a), social(b) and financial(c) capital and the growth of new student`s ventures

2. Methodology

2.1 Data

To validate the model and the hypotheses of the study, we used data collected for the Global University Entrepreneurial Spirit Students' Survey (GUESSS) in 2011. This project was firstly initiated by the University of St. Gallen in 2003. A priority field of study of the project is the entrepreneurial activity and entrepreneurial intentions of students at the global level. In 2011, the survey involved 489 universities from 26 countries. The sample includes 93,265 students, which can be divided into three groups depending on their involvement in the business: students with no intention to found their own business, intentional founders and active founders. For the purposes of this study, we focus on a group of active founders to focus on cultural influence on the relationship between access to capital and new venture`s growth.

The goal of this work is an exploration of the impact of the access to resources on the new venture`s growth in university environment in different cultural backgrounds. We define a student-entrepreneur as a person aged up 18 to 34 years (age range, used for the determination of the youth in the Global Entrepreneurship Monitor (GEM) (Singer et al., 2014)), who is currently studying at the university and having at least one venture (Marchand & Sood, 2014). Eventually final sample of the study includes 923 respondents (postdocs and exchange students were also excluded, as well as missing values). Also we excluded students whose answers about growth of businesses were negative. The final sample consisted of students aged from 18 to 34 years, enrolled in undergraduate, graduate, postgraduate programs and MBA.

2.2 Variables

2.2.1 Dependent variable

Venture`s growth. To measure the growth of new venture three were used three answers on questions from the database GUESSS. To evaluate the growth of the company respondents were asked to assess the level of development of the venture comparing to its competitors in terms

of "development of sales", "development market share", "development of profit" on a seven-point Likert scale (GUESSS, 2011).

2.2.2 Independent variables

Access to human capital. To estimate of access to human capital in university environment, students were suggested to mark the fact of attention lectures and seminars on topics which forms a holistic understanding of the business, including following: 1) entrepreneurship in general, 2) family firms, 3) financing entrepreneurial ventures, 4) technology entrepreneurship, 5) social entrepreneurship, 6) entrepreneurial marketing, 7) innovation and idea generation, 8) business planning. The final result includes the sum of attended courses.

Access to social capital. Access to social capital was measured as absolute number of attended activities outside the formal coursework, which are directed to increase ability to create business communications, such as: 1) workshops/networking with experienced entrepreneurs; 2) contact platforms with potential investors; 3) business plan contests / workshops; 4) mentoring and coaching programs for entrepreneurs; 5) a contact point for entrepreneurial issues.

Access to financial capital. Availability of financial capital was codified as a dummy variable with a value of 1 if a student participated in university programs offering financial resources for student venture creation (in the form of seed funding or other financial support).

2.2.3 Moderators

For the providing information of national cultural features we used data of the GLOBE project, aimed at studying the cultural characteristics of society, leadership and organizational models, which involved 62 countries. (House et al., 2004). The main advantage of GLOBE is link to the modern academic literature (Bortolotti et al., 2015). In order to measure cultural differences we used five of nine cultural dimensions: power distance, uncertainty avoidance, performance orientation, assertiveness, and future orientation. Each item was coded in the range from 0 to 1. Each cultural score was multiplied by each type of university offerings.

2.2.4 Controls

Control variables used in this study are divided into related to owner and related to venture.

The first control variable related to the owner is a gender of the business owner since there is a relationship between the owner`s gender and the new venture`s growth. Ability to grow for ventures run by women on average lower than in ones controlled by men (Cooper et al., 1994). The positive impact of having parents-entrepreneurs on the growth of the venture has empirical evidence that it enables us to use it as a second control variable. They offer advices on doing business to their children and support them emotionally. Moreover, parents provide access to capital, which has a positive effect on the growth of new firms (Arregle et al., 2015).

Next control variable is a field of study. As a rule, high-tech new ventures grow faster than other firms due to the lack of specific features that would prevent entry into a new market and would require a cultural adaptation (Laurell et al., 2013). Based on it, the sample was divided into students who study technology (computer and engineering sciences) specialty and others. Intention to start own business most clearly appears in youth and decreased with age (GEM, 2013). Several studies (Wiklund & Sheperd, 2003; Grunhagen, Holger Berg, 2011) examines the entrepreneurial aspirations for growth of the venture as an extension of entrepreneurial intentions to start a business since they have common nature. Based on this fact we can conclude that entrepreneurial age affects the venture`s growth rate and we adapt it as control variable.

Venture`s age was selected as an one more control variable. New ventures in the early stages of the lifecycle achieve higher growth rates due to the internal dynamism and the absence of bureaucracy (Adizes, 1989). In addition, new ventures emerge in markets with free space and their growth rates are above average due to the capture of market share (Jensen et al., 2001).

Another variable related directly to the company is an industry of activity. Ventures from the service sector tend to grow faster than industrial or agricultural one, as innovations are less expensive and often does not require the replacement of the main productive assets. Based on

this, firms were divided into related to service sector (1) and other (0).

3. Results

This part represents the results of regression analysis (Table 1).

We reported the results for three models. Model I includes only controls. Model II includes the three forms of capital in addition to controls. Model III includes the effect of moderating variables with cultural indexes.

As for the Model I, our results identified that having parents-entrepreneurs has positive influence on new venture's growth (Model I, 0.196, $p < 0.05$). We also found that service ventures grow more rapidly than productive ones (Model I, 0.408, $p < 0.01$). Moreover, venture's age is positively associated with growth (Model I, 0.131, $p < 0.001$).

The results of Model II reveal no statistically significant direct relationship between access to the human (Model II, -0.011, $p > 0.1$), social (Model II, 0.017, $p > 0.1$) and financial (Model II, -0.078, $p > 0.1$) capital, and the growth of the venture. Thus, hypotheses 1-3 were not confirmed. However, it was identified a number of moderation effects (Model III), which suggests that the effect of university resources depends on the presence of "entrepreneurial spirit" in the culture. Hypotheses H4a, H4b, H4c proposed that in countries with high future orientation the positive relationship between the access to the capital in university environment and growth of new ventures, owned by students will be stronger than in ones with low future orientation (Model III). The results supported only hypothesis H4a for human capital (Model III, 0.388, $p < 0.1$), while there are no significant results with regard to social (Model III, -0.626, $p > 0.1$) and financial (Model III, -0.026, $p > 0.1$) capital. As a result, hypothesis H4b, H4c were not empirically confirmed.

Hypotheses H5a, H5b, H5c proposed that in countries with high assertiveness there will be stronger relationship between the access to the capital in university environment and the number of their start-up activities compared to communities with low assertiveness (Model III). The results of regression analysis supported only hypothesis H5c, regarding to financial capital (Model III, 0.756, $p < 0.1$). For hypothesis H5a (Model III, -0.118, $p > 0.1$), H5b (Model III, 0.091, $p > 0.1$) there were not found significant support.

Hypotheses H6a, H6b, H6c proposed that the higher level of power distance in society would weaken the relationship between the access to the capital in university environment and new venture's growth (Model III). These effect was the opposite for human capital (Model III 0.791, $p < 0.05$). At the same time, there is no significant effect of power distance on the relationship between the access to the social (Model III, -0.719, $p > 0.1$) and financial (Model III, 0.677, $p > 0.1$) capital in university environment and new venture's growth. Summing up, hypothesis H6a, H6b, H6c were not confirmed.

Hypotheses H7a, H7b, H7c proposed that the higher uncertainty avoidance in society would negatively moderate the relationship between the access to the capital in university environment and new venture's growth (Model III). The results supported only hypothesis H7a for human capital (Model III, -0.142, $p < 0.1$), while there were found no significant results for social (Model III, 0.195, $p > 0.1$) and financial (Model III, -0.093, $p > 0.1$) capital: hypothesis H7b, H7c were not supported.

Hypotheses H8a, H8b, H8c proposed that the higher performance orientation in the country would strengthen the positive relationship between the access to the capital in university environment and new venture's growth (Model III). The results supported only hypothesis H8a for human capital (Model III, 0.658, $p < 0.01$), while for social capital (H8b) we identified opposite effect (Model III, -0.769, $p < 0.05$). For hypothesis H8c there were found no significant results for financial (Model III, -0.745, $p > 0.1$) capital.

Table 1

Correlation between availability of the capital in different cultural contexts on the new venture`s growth

Variables	Model I	Model II	Model III
Controls			
Gender	0.072	0.072	0.015
Field of study	0.061	0.064	-0.032
Family	0.196*	0.198*	0.118
Industry	0.408**	0.407**	0.310*
Venture`s age	0.131***	0.131***	0.122***
Student`s age	-0.021	-0.021	-0.034*
Direct effects			
Human capital		-0.011	-0.013
Social capital		0.017	0.045
Financial capital		-0.078	-0.107
Future orientation			0.287
Assertiveness			-0.016
Power distance			-0.821
Uncertainty avoidance			0.153
Performance orientation			0.331*
Moderators			
Human capital x Future orientation			0.388†
Social capital x Future orientation			-0.626
Financial capital x Future orientation			-0.026
Human capital x Assertiveness			-0.118
Social capital x Assertiveness			0.091
Financial capital x Assertiveness			0.756†
Human capital x Power distance			0.791*
Social capital x Power distance			-0.719
Financial capital x Power distance			0.677
Human capital x Uncertainty avoidance			-0.142†
Social capital x Uncertainty avoidance			0.195
Financial capital x Uncertainty avoidance			-0.093
Human capital x Performance orientation			0.658**
Social capital x Performance orientation			-0.769*
Financial capital x Performance orientation			-0.745

Note. N=923.

*** p<0.001; ** p<0.01, * p<0.05, † p<0.1 .

All the significance levels - bilateral. In model III variables future orientation, assertiveness, power distance, uncertainty avoidance, performance orientation - centered.

4. Discussion and conclusions

In this study we investigated the relationship between access to capital in university environment and the growth of new student ventures in different cultural contexts. Our results confirm that culture could be used as moderator for this link. Moreover, the main findings of our study are that access to human, social and financial capital has no significant direct impact on the new ventures growth without considering cultural moderation.

First, we found that for society with high future orientation the role of access to human capital is quite higher for new venture`s growth than in societies with low future orientation. The absence of strengthening the link between access to social and financial capital and venture`s

growth by future orientation can be described by venture's strategic orientation with underestimating fleeting opportunities in the current markets (Johnson et al., 2012). On this basis, we suggest that such societies consider human capital among as a strategic investment. Second, we identified that for countries with high assertiveness the relationship between access to financial capital and new venture's growth is stronger than in countries with low assertiveness, while there is no empirical support for the same link for human and social capital. Assertiveness is associated with dominance under the people (Dorfman et al., 2012) what doesn't contribute to gain the social capital. Moreover, aggression exhibits strong influence on venture's market orientation that is oriented to ability successfully compete and maximize profits in short-term periods (Johnson et al., 2012). This leads to distinguish finance capital is a core factor for success. Human capital, in turn is more important for strategic orientation. Third, against to our expectations we found in high power distance countries the relationship between access to human capital is quite higher for new venture's growth than in societies with low power distance. It could be described by perception of possession of education as a social

elevator, enabling to receive power and relevant communication. At the same time, we haven't receive significant results for social and financial capital, that calls for future research.

Fourth, we identified negative moderation of relationship between access to human capital and new venture's growth by uncertainty avoidance. Investment in human capital will give not regulated effect in the future, while in communities with high uncertainty avoidance most people desires to have stable income with few unexpected events (Dorfman et al., 2012). However, we haven't received significant support for social and financial capital.

Finally, we identified contradictory results for moderation of relationship between access to capital and new venture's growth by performance orientation: it positively moderates for human capital and negatively for social one. It could described by perception of these kinds of capital. Representatives of societies with high performance orientation aim to achieving goals and increasing performance (Naor et al., 2010; Dorfman et al., 2012). Human capital is more objective, because it is proved by formal documents and its holder is sure that he own it, while social ties are not regulated. Students of countries with high performance orientation can doubt about the possible benefits from socializing and devote more time for investment in themselves.

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O.I. Shirshova
Senior Lecturer
Faculty of Management, Marketing Department
Saint-Petersburg State University of Economics (SPB SEU)
olga.i.shirshova@gmail.com

O.U. Yuldasheva
Professor of Marketing
Faculty of Management, Marketing Department
Saint-Petersburg State University of Economics (SPB SEU)
uldasheva2006@yandex.ru

The Interconnection between Market Orientation and External Environment: Russian Companies' Study

Abstract: Russia is the world's biggest country and it has an emerging market. The economy situation on emerging markets strongly differs from the situation on developed markets. Thus, standard marketing tools are not suitable for this market and, therefore, market orientation of Russian companies should be estimated using a specially developed scale. This paper provides the typology of the general concepts of market orientation and proposes the specific concept of market orientation applicable for Russian market. The paper identifies three components of external environment and determines the interconnection between market orientation and external environment; market orientation and company's financial results; external environment and company's financial results.

Keywords: *market orientation, marketing competences, emerging markets, Russia, Saint-Petersburg's market.*

1. Introduction

The Russian Federation is the world's largest country in terms of its territory and it has an emerging market. The Russian market is very specific due to its political, social and economic history. However, Russian companies tend to use marketing tools originally designed for developed markets. The Russian market's fairly extensive and complex history strongly contributed to the formation of its features and made it different from other markets. Standard marketing tools are not suitable for this market and, therefore, market orientation of Russian companies should be estimated using a specially developed scale.

The large area occupied by Russia has a strong influence on the dissemination of marketing skills in companies of Russian regions. Marketing is most widely used in large cities due to the high degree of differentiation in income in Russian regions, which influences the development of market orientation of respective companies. This research is limited to St. Petersburg and the Leningrad region.

2. Market Orientation: Construct

The concept of market-oriented companies was created in the 90s. The following authors have contributed to the development of this concept: Shapiro (1988), Kohli and Jaworski (1990), Narver and Slater (1990), Ruekert (1992), Fritz (1992), Deshpande et al. (1993), Kohli, Jaworski and Kumar (1993), Day (1994), Narver, Slater and Tietje (1998), Homburg & Pflesser (2000), Webster, Malter and Ganesan (2005), Kirca, Bearden and Hult (2011).

An attempt was made herein to classify all the existing theoretical approaches to market orientation (MO) from nine perspectives: decision-making process perspective (Shapiro, 1988), behavioral perspective (Kohli & Jaworski, 1990), cultural perspective (Narver & Slater), strategic perspective (Rukert, 1992), managerial perspective (Fritz, 1992), customer-oriented perspective (Deshpande, 1993) and combined perspective (Homburg and Pflesser, 2000). A reference should also be made to Day (1994), Webster, Malter & Ganesan (2005) and Solovieva (2009), describing the marketing competence perspective and the perspective of MO on emerging markets (Farley & Deshpande, 2005; Sheth, 2011) (see Table 1).

Table1. Classification of Approaches to the Market Orientation Concept.

№	Approaches	Authors, year	Definition
1	Decision-Making Process Perspective	Shapiro, 1988	It's far more than the cliché getting close to the customer ... the term market oriented represents a set of processes touching all aspects of the company (Shapiro, 1988, p. 120).
2	Behavioral Perspective	Kohli and Jaworski, 1990	Market orientation is the organization-wide generation of market intelligence pertaining to current and future customer needs, dissemination of the intelligence across departments, and organization-wide responsiveness to it (Kohli and Jaworski, 1990, p. 6).
3	Cultural Perspective	Narver and Slater, 1990	Market orientation is the organizational culture that most effectively and efficiently creates the necessary behaviors for the creation of superior value for buyers and, thus, continues superior performance for the business (Narver and Slater, 1990, p. 21).
4	Strategic Perspective	Rukert, 1992	The level of market orientation in a business unit is the degree to which the business unit obtains and uses information from customers, develops a strategy which will meet customer needs, and implements that strategy by being responsive to customer needs and wants (Ruekert, 1992, p. 228).

5	Managerial Perspective	Fritz, 1992	Market orientation can be considered as a dimension of the overall corporate management, which is related to other basic management dimensions. (Fritz, 1992, p. 60) The market orientation of company is defined as comprehensive and organized set of customer and competitor-oriented basic values and attitudes, and basic strategies like market segmentation, quality leadership, differentiation and customer-oriented product innovation. (Fritz, 1992, p. 62)
6	Customer-Oriented Perspective	Deshpande, 1993	Customer orientation is the set of beliefs that puts the customer's interest first, while not excluding those of all other stakeholders such as owners, managers, and employees, in order to develop a long-term profitable enterprise (Deshpande et al., 1993, p. 27).
7	Combined Perspective	Homburg and Pflesser, 2000; Lambin and Chumpitaz, 2000	As a market-oriented organizational culture, included organization-wide norms for market orientation, perceptible artifacts of market orientation, and the market-oriented behaviors (Homburg, Pflesser, 2000, p.450). The concept of MO on one hand, referring to four players: customers, distributors, competitors, prescribers, on the other hand to three activities: analysis, action and culture. (Lambin, Chumpitaz, 2000, p. 25)
8	Marketing Competence Perspective	Day, 1994; Webster, Malter, Ganesan 2005; Solovyova, 2009	Market orientation as a diaspora of skills and capabilities spread across and even outside the organization (Webster, Malter and Ganesan, 2005). Marketing competence of a company is "knowledge which ensures its long-term competitiveness by finding the correspondence between its opportunities to create supply and consumer demand. It includes individual and collective knowledge used by the company to solve marketing problems, as well as information on which the intellect and intuition staff built this knowledge" (Solovyova, 2009, p. 39-40).
9	Market Orientation in Emerging Markets	Farley, Deshpande, 2005; Sheth, 2011;	MO as a business culture. Necessary characteristics for the transition to the MO: (1) A clear understanding of the company's management that the reorientation of the organizational culture is a long and time-consuming process; (2) Availability of management education at the management for the most accurate measurement of creating and marketing orientation; (3) The presence of a wide dissemination of information to make the best decisions; (4) The use of indicators and encourage domestic market indicators to improve the organizational climate, marketing orientation, as well as to enhance the company's competitiveness (Farley, Deshpande, 2005). Instead, the MO strategy – the market development strategy. Characteristics of emerging markets: (1) The heterogeneity of the market; (2) Socio-political governance; (3) Non-branded competition; (4) The chronic shortage of resources; (5) Inadequate infrastructure (Sheth, 2011)

Over the past 20 years, the concept of MO has been studied from different angles, but at the same time there is still no unique theoretical and operational approach to the term of MO.

Most researchers identify various sets of MO components, depending on the approaches used. Shapiro (1988) specifies three decision-making characteristics that make a company market driven: information on all important buying influences permeates every corporate function, strategic and tactical decisions are made interfunctionally and interdivisionally, divisions and functions make well-coordinated decisions and execute them with a sense of commitment. Kohli and Jaworski (1990) define MO as a set of three cultural components: intelligence generation, intelligence dissemination and responsiveness. Narver and Slater (1990) believe that MO consists of three behavioral elements: customer orientation, competitor orientation and interfunctional coordination. Homburg and Pflesser (2000) and Lambin and Chumpitaz (2000) combine components from different approaches and try to find MO either at different levels of company's hierarchy or in orientation on all types of business partners, respectively.

The majority of the above-proposed MO concepts were designed for developed countries and may not be entirely used for the Russian emerging market.

Day (1994), Webster, Malter and Ganesan (2005) and Solovieva (2009) consider MO in terms of a company's marketing competence. The marketing competence theory can be applied to both developed and emerging markets.

Farley and Deshpande (2005) consider "market orientation" to be a promising development area for the Russian emerging market. The authors attempted to create a plan for the transition from the "production orientation" characteristics of Soviet Russian companies to the up-to-date market orientation. While researching the Russian economy of the 1990s, Farley and Deshpande concluded that future Russian companies would be able to use the model of market orientation designed primarily for developed markets.

At the same time, when analyzing the prospects of emerging markets, Sheth (2011) questions the rationality of creation and use of market orientation in emerging markets and stresses the need for prior establishment and development of these emerging markets.

Market orientation in an emerging market, particularly in Russia, is explored rather poorly. Such Russian researchers as Rozhkov, Rebyazina and Smirnova (2014) and we (2014) are interested in developing this topic. Rozhkov, Rebyazina and Smirnova (2014) defined MO as customer orientation and tried to estimate it using MKTOR. Yuldasheva and Shirshova suggested Yuldasheva and Shirshova suggested that MO was an important element of strategic management and tried to estimate the level of MO using a newly developed scale.

3. Conceptual Model of Research

In 2014 in our previous study, we have established the market orientation concept that is specific for St. Petersburg companies. The following MO definition was developed, with account of the proposed classification of MO approaches.

Market orientation is:

- a part of the organizational culture of a company that determines the dominant type of its marketing concept or marketing culture (**cultural perspective**);
- a part of the corporate management system of a company that determines the dominant strategic objectives of a company (**managerial perspective**);
- the attitude and ability to strategic planning (**strategic perspective**).

Another important component of MO implies development of the marketing competence of employees (**marketing competence perspective**).

We have identified four groups of market-oriented companies: 1) adherents of traditional marketing; 2) competitor-oriented companies; 3) technology and product development

oriented companies, and 4) marketing relationship oriented companies. These groups were described by their main forming factors including set of marketing competences.

4. Research Methodology

In this study, we tried to extend the influence of MO on other factors. We attempted to widen the conceptual model of research and calculate the relationship between MO and the external environment, as well as between MO and company's financial results. We tried to determine which factor has a more powerful impact on financial results of a company, choosing between the external environment (favorability of macroeconomic conditions, degree of market competition and current industry attractiveness) and market orientation (type of strategic objectives, attitude to strategic planning and dominant type of marketing concept) (see Figure 1).

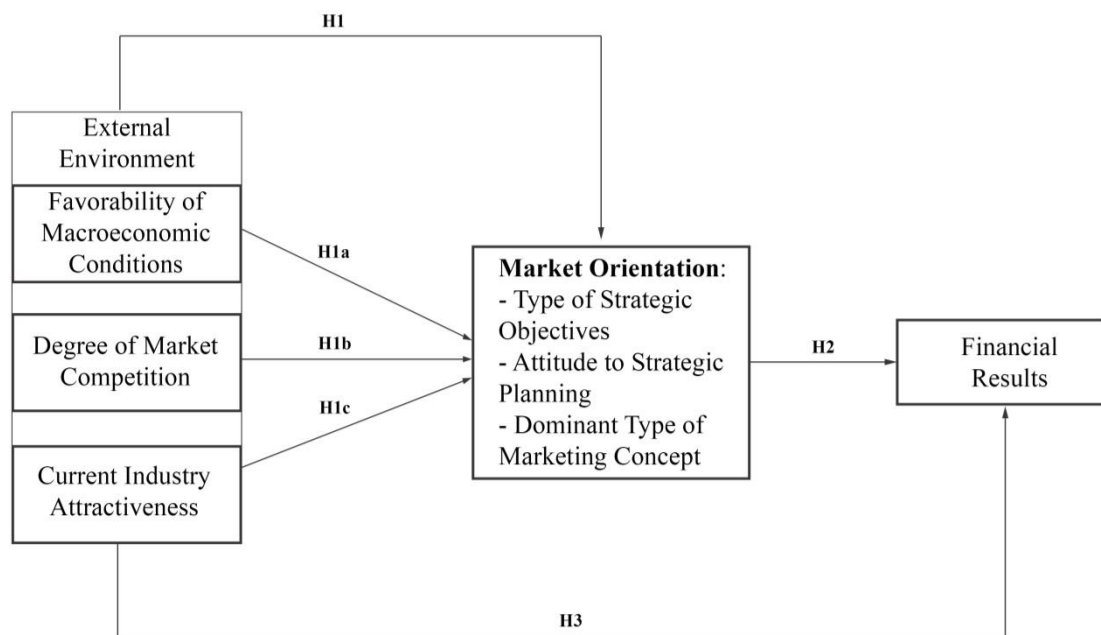


Figure 1. Conceptual Model of Market Orientation

The external environment, specified by the favorability of macroeconomic conditions, degree of market competition and current industry attractiveness, tends to change depending on the time period and respective macroeconomic and industrial situation. We tried to evaluate the interconnection between the components of the external environment and MO of a company.

H1: The external environment has a positive impact on market orientation.

H1a: Favorability of macroeconomic conditions has a positive impact on market orientation.

H1b: The degree of market competition has a positive impact on market orientation.

H1c: The current industry attractiveness has a positive impact on market orientation.

We suggest that the market environment strongly influences the formation of MO.

The practical use of MO requires justification of its operational benefits for the company. Previous studies in this area have shown a direct relationship between the level of MO and the company's financial situation for developed markets. We tried to determine the correlation between MO and financial results for the Russian emerging market.

H2: Market orientation has a positive impact on the financial situation of a company. The higher the level of MO, the better are the financial results of the company.

We suggest that the level of MO directly influences financial results of a company.

Russian companies are heavily dependent on the external environment. Most Russian companies quickly respond to changes in the external environment due to the low level of development of their MO (internal environment).

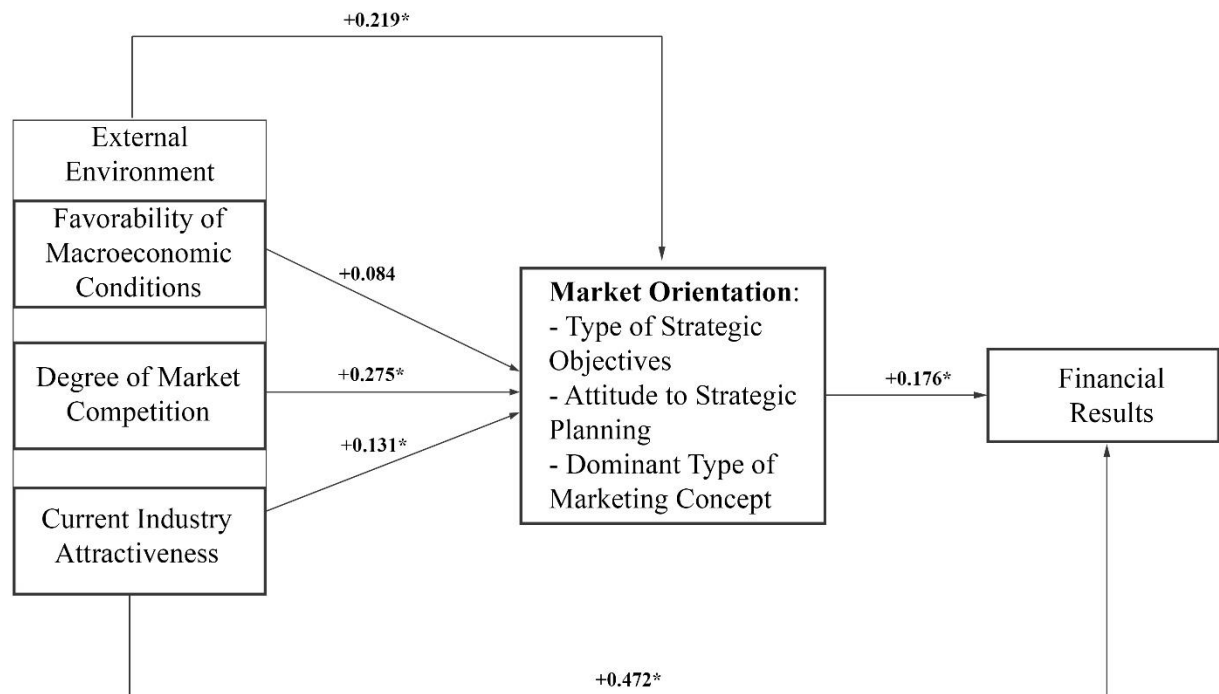
H3: The external environment has a positive impact on financial results.

We suggest that the external environment strongly influences financial results of a company.

5. Research and Results

The sample was increased to 372 respondent companies of St. Petersburg. SME and large companies were examined. The survey was conducted using a 34-question questionnaire. The questionnaires were filled in by the companies' CEOs, Commercial Directors/Sales Directors, Heads of Marketing Departments, and Marketing Directors.

The conceptual model was evaluated in IBM SPSS. The relationship between factors was calculated using Factor Analysis and Regression Analysis in IBM SPSS (Figure 2). Hypotheses H1 to H5 were evaluated during the analysis stage of the study.



* $p < 0.05$

** $p < 0.1$

Figure 2. Estimated Conceptual Model of Market Orientation

The hypotheses were tested using a structural equation model (SEM). Figure 2 shows that most hypotheses are acceptable.

H1 was partly confirmed: Adjusted $R^2 = 0,072$. The external environment has a positive impact on MO. These results are not moderately significant.

$$MO = 0.275 * mark_comp + 0.131 * dyn_demand - 1,261$$

$$H2: (\beta = +0.219, p = 0.000). R^2 = 0.056.$$

$$H2a: (\beta = +0.084, p = 0.139). R^2 = 0.083$$

$$H2b: (\beta = +0.275, p = 0.000). R^2 = 0.077$$

$$H2c: (\beta = +0.131, p = 0.001). R^2 = 0.077$$

H2 was partly confirmed. Adjusted $R^2 = 0.045$. Market orientation (attitude to strategic planning) has little positive impact on the financial situation of a company. These results are not moderately significant.

$$\text{Fin}=0,233*\text{Plan}+3,435$$

H3: ($\beta=+0.176$, $p=0.002$). $R^2=0.025$.

1) Aim ($\beta=-0.082$, $p=0.149$). $R^2=0.050$.

2) Base ($\beta=+0.080$, $p=0.166$). $R^2=0.055$.

3) Plan ($\beta=+0.233$, $p=0.000$). $R^2=0.045$.

H3 was partly confirmed: The external environment (degree of market competition and current industry attractiveness) has positive impact on financial results. Adjusted $R^2=0.241$. These results are statistically significant.

$$\text{Fin}=0,242*\text{mark_comp}+0,432*\text{dyn_demand}+1,537$$

H4: ($\beta=+0.472$, $p=0.000$) $R^2=0.181$

1) ec_sit ($\beta=+0.051$, $p=0.405$). $R^2=0.247$.

2) mark_comp ($\beta=+0.242$, $p=0.001$). $R^2=0.246$.

3) dyn_demand ($\beta=+0.432$, $p=0.000$). $R^2=0.246$.

When analyzing emerging markets, Sheth (2011) identified five dimensions in which emerging markets are distinctly different from mature markets: 1) market heterogeneity; 2) sociopolitical governance; 3) unbranded competition; 4) chronic shortage of resources; 5) inadequate infrastructure.

Sheth claims that the concept of Market Orientation is not suitable for emerging markets. The results of our research confirm the Sheth's theory of emerging markets. We conclude that, in Russia, MO is determined by the external environment only partially, while remaining mainly governed by the internal environment. The external environment has a more powerful impact on financial results of a company as compared to that of MO. Therefore, it may be concluded that, in terms of Russian companies, MO is not required for successful business activities in the current economic situation.

6. Conclusions, Implications, Limitations and Future Research

The key objective of the study was to determine the interconnection between market orientation and the external environment, market orientation and company's financial results, as well as between the external environment and company's financial results.

External environment of the company has little impact on the level of MO (7.2%). Excluding the factor "favorability of macroeconomic conditions" suggests that in the Russian market, the economic situation does not affect on the level of MO. External environment factors significantly influence on the formation MO of the company. A constant value (-1.261) corresponds to the value $p = 0.000$, in the future we must pay attention to other features of the external environment, including government regulation and buying pressure. (Sheth, 2011 [6]).

Secondly, financial results are more influenced by the characteristics of the external environment (17.8%), than by MO (2.3%). These findings are typical for emerging markets (Sheth, 2011 [6]). Thus, we can conclude that for the Russian companies MO is not the most important tool for successful business in the current economic situation.

The external environment more significantly influences financial results of a company than market orientation. The external environment only partially determines market orientation in the St. Petersburg market. These findings correspond to the current situation in the Russian emerging market. Therefore, the use of the market orientation concept requires prior development of the Russian market.

This study covered only Saint-Petersburg's companies and the results couldn't be distributed on all Russian companies. Although this study focused on three external factors

namely favorability of macroeconomic conditions, degree of market competition and current industry attractiveness, future studies should look at other characteristics, including government regulation, customer's pressure among others.

In further research, we intend to expand the sample and compare the influence of the internal and external environments on market orientation.

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Hrvoje Šimović
Faculty of Economics & Business, University of Zagreb
J.F.Kennedy sq. 6, 10000 Zagreb, Croatia
hsimovic@efzg.hr

Milan Deskar-Škrbić
Erste&Steiermarkische bank d.d.
Ivana Lučića 2, 10000 Zagreb, Croatia
mdskrbic@erstebank.com

Fiscal multipliers in selected Western Balkan countries: a bucket approach

Abstract: When estimating the size of the fiscal multipliers, one has to consider various structural characteristics of the economies which, directly or indirectly, affect the transmission from the government stimuli to the economic activity. Thus, in this paper we use a ‘bucket approach’ to determination of the size of fiscal multipliers, which enables us to make presumptions on the size of fiscal multipliers, given the structural characteristics of selected Western Balkan economies – Croatia, Slovenia and Serbia. Our results confirmed the hypotheses on the relative size of the multipliers between these three peer countries, with Croatia having the highest spending multiplier and Slovenia the lowest one.

Key words: *fiscal multipliers, Western Balkans, SVAR, bucket approach*

1. Introduction

Fiscal policy remained the main policy channel in most of the transition countries in Western Balkans. This can be understood as a result of several factors, such as the relatively big size and the role of government, different political-economical factors, but also as a result of some structural characteristics that limit the possibilities of monetary policy to play an important role in steering the economy during the boom-bust cycles.

Experience of Western Balkan countries during the recent crisis once again showed the reliance on the fiscal policy and its stabilization role. Almost all countries have intervened in their fiscal systems on both, the expenditure and the revenue, sides. However, the economic development in these countries varied significantly. Some of the countries are still experiencing recession and others have been recording stable growth for a few years period. Even though these differences cannot be attributed alone to the fiscal policy, many policy discussions argue that fiscal measures have played an important role in (de)stimulating economic recovery from 2009 onwards.

The paper analyses the effectiveness of fiscal policy (measured by the size of fiscal multipliers) in three countries: Croatia, Slovenia and Serbia. These countries were primarily selected because of the fact that data availability for other Western Balkan countries is very limited. Also, it is interesting to notice that these countries have many structural similarities, but different monetary policy and exchange rate regimes. Slovenia is the member of Eurozone, Croatia has an exchange rate as a main policy anchor and high eurisation, and Serbia has inflation targeting and also high degree of eurisation. Such characteristics can affect the effectiveness of the fiscal policy.

In our analysis we use a “bucket approach” to analyze important determinants of the fiscal multipliers and to develop hypotheses on the relative size of the multipliers in selected countries. After a literature review presented in Section 2, in Section 3 we introduce and explain “bucket approach” to fiscal multipliers and form our hypothesis. Final part is the conclusion.

2. Research approach and literature review

Regarding a common history and similar structure of the economies in Western Balkan countries, the Keynesian concept of stimulating economic activity is often advocated. Fiscal multipliers are the basis for the assessment of the effectiveness of discretionary fiscal policy measures. The fiscal multipliers measure the impact of discretionary fiscal policy i.e. variation of taxes and public spending on output (GDP).

Estimation of fiscal multipliers is complex and tricky. It is difficult to isolate the direct effects of exogenous shocks of taxes and/or public spending i.e. discretionary fiscal measures on GDP. The main problem is the two-way relationships between these variables. Because of that there is no consensus on methodology for identification of such shocks or extraction of the exogenous component from observed fiscal outcomes. Broadly speaking, the literature

relies on two main methods when deriving fiscal multipliers: model-based approaches and empirical estimations.¹

Model based estimations are mainly advanced models which simulate fiscal shocks, like DSGE models. DSGE literature is growing as are different DSGE models like real business cycle (RBC) models and New Keynesian (NK) models (Leeper et al., 2012). On another hand, empirical estimations are based on vector autoregressive (VAR) models.²

For empirical research, the main obstacle in the research identification was the lack of data i.e. quarterly data are not available through the sufficient period to include more explanatory and control variables. Because data availability limits the scope of the empirical research in this paper we use a narrative “bucket approach” developed by Batini et al. (2014).

Further, generally little is known about size of the fiscal multipliers in developing and low-income economies. Similar conclusion can be driven for CEE economics³, and even less in some Western Balkan countries where empirical literature is significantly scarce. Regarding SVAR based methodology and Blanchard and Perotti (2002) identification method there are several papers, mostly for Croatia and Slovenia, that investigate the effects of the fiscal policy on the economic activity and some of them even estimate the size of the fiscal multipliers.

Majority of papers deals with Croatia in closed economy model (Ravnik & Žilić, 2011; Šimović & Deskar-Škrbić, 2013; Grdović Gnip, 2013 and 2014). Only one study uses an open economy framework and suggests that the multipliers are lower in an open economy model (Deskar-Škrbić et al., 2014). Ravnik & Žilić (2011) and Grdović Gnip (2013) use a multivariate Blanchard-Perotti SVAR methodology to analyze disaggregated short-term effects of fiscal policy on economic activity, inflation, and short-term interest rates in Croatia. Šimović & Deskar-Škrbić (2013) analyze the dynamic effects of fiscal policy and estimate the size of fiscal multipliers at different levels of government, using a closed economy model. Further, Grdović Gnip (2014) developed smooth transition VAR (STVAR) to isolate the fiscal policy impact for periods of expansion and recession. Regarding methodological and data issues⁴ Croatia has rather good empirical literature that in most cases supports Keynesian assumptions.

¹ For pros and cons of empirical versus model-based estimates see Batini et al. (2014).

² For the literature review on the estimation of the size of fiscal multipliers, based on different methods and made for different countries see Spilimbergo et al. (2009), Ramey (2011), while the detailed methodology using SVAR is possible to review in Ilzetzki et al. (2013) and Caldara & Kamps (2012). For existing estimations of the fiscal multipliers estimations in emerging market and low-income economies see Batini et al. (2014).

³ Beside before mentioned Mirdala (2009) paper that studies effects of fiscal policy in six CEE countries (Czech republic, Hungary, Poland, the Slovak Republic, Bulgaria and Romania), Crespo Cuaresma et al. (2011) studies five CEE countries (Hungary, Slovakia, Czech Republic, Poland and Slovenia). For SVAR estimates also see Baxa (2010) for Czech Republic, Mancelarri (2011) for Albania, Muir & Weber (2013) for Bulgaria and Stoian (2012) for Romania. For PVAR estimates that include CEE countries see Ilzetzki et al. (2013) and Hory (2014).

⁴ Ravnik & Žilić (2011) use monthly data and proxy variable for output, and along with Grdović Gnip (2013, 2014) they use central government data for fiscal variables.

For Slovenia only Jemec et al. (2013) paper is found that uses “small” SVAR with three variables in closed economy framework. Slovenia is included in Crespo Cuaresma et al. (2011) along with four other CEE countries (Hungary, Slovakia, Czech Republic, and Poland). Crespo Cuaresma et al. (2011) use different open economy framework, exploring the cross-border spillovers and the transmission of a foreign fiscal policy shock (assumed to be generated in Germany) to key macroeconomic variables. Both Croatia and Slovenia are included in PVAR estimations of fiscal multipliers in Ilzetzki et al. (2013) and Hory (2014). In other observed countries the literature is significantly scarce. Only research results for Serbia were found in Hinić et al. (2013).

As mentioned before, empirical SVAR analysis includes: (a) dynamic responses to different fiscal shocks and/or (b) calculation of fiscal multipliers and (c) interpretation of historical facts. Regarding fiscal multipliers, cumulative multipliers are considered to be the most appropriate measure, usually larger than peak and impact multipliers, but they are rarely reported.⁵ According to the existing literature (Table 1), Western Balkan countries have rather high short-term (cumulative) multipliers. Compared to other developing countries they can be classified into high multiplier category (0.7-1.0) in normal times (Batini et al., 2014). We expect that an open economy framework will somewhat mitigate the size of the fiscal multipliers and provide more real estimates for all observed countries.

3. Determinants of fiscal multipliers and “bucket” approach

The size of fiscal multipliers is determined by various structural and conjectural characteristics of economies. Basic, theoretical, multiplier is determined by the marginal propensity to consume, marginal propensity to import and the tax burden. However, these three factors are not sufficient to explain differences in the effectiveness of fiscal policy in empirical analysis.

Empirical studies show that there are a lot more factors that can affect the size (and sign) of fiscal multipliers and thus determine effectiveness of fiscal policy. These determinants are a basis for a “bucket approach” for measuring the size of fiscal multipliers proposed in Batini et al. (2014) which we will use to set our hypothesis about the size of fiscal multipliers in selected Western Balkan countries which will be tested in the following section of the paper.

The bucket approach bunches countries into three groups that are likely to have similar impact multiplier values based on their structural and conjectural characteristics. Following Batini et al. (2014) determinants that will be analyzed in this paper are presented in Table 1.

Table 1 Determinants of the size of fiscal multipliers*

Structural	Effect on the size
Trade openness	High degree of economic openness reduces the size of fiscal multiplier through the “outflow effects” of the imports
Labor market rigidities	Rigid labor markets are less responsive to economic

⁵ For different types and measurements of fiscal multipliers see Spilimbergo et al. (2009: 2).

	movements and as such they are reducing the effectiveness of fiscal policy (smaller fiscal multipliers)
Automatic stabilizers	Stronger automatic stabilizers reduce the size of fiscal multipliers, because automatic response of public revenues and expenditures on economic cycles offsets part of the fiscal stimulus
Exchange rate regime	Countries that have flexible exchange rate regime have lower fiscal multipliers because effects of fiscal policy on domestic economy are limited by the effects on international flows (finance and trade)
Level of public debt	Countries with high levels of public debt have lower fiscal multipliers because additional fiscal expansion can lead to increase in risk premium and decrease private sector confidence, thus de-stimulating consumption and investment
Conjectural	
Business cycle phase	Fiscal policy is more effective in conjectures than in expansionary phase of business cycle**
Monetary policy stance	If monetary policy is constrained (by structural characteristics of transmission mechanism or ZLB) effectiveness of fiscal policy (fiscal multiplier) is higher

* We exclude public sector effectiveness from the analysis because most of Western Balkan countries don't have such measures; **For sources and explanation see Batini et al. (2014), pp. 10

Source: Authors, following Batini et al. (2014)

As for the critical values and measures of some of the above determinants we assume:

1. The country is relatively closed if the ratio of imports to domestic demand is below 30 percent on average over the past five years, as in Batini et al. (2014).
2. Labor market is relatively rigid if the Labor market efficiency indicator is equal or below 4 on the scale 1-7, measured by the World Competitiveness Report.
3. Automatic stabilizers measured by the ratio of total public spending to nominal GDP are small if the ratio is below 0.40, as in Batini et al. (2014).
4. Public debt is "stable" or "acceptable" if the level of public debt is below 60% of GDP⁶

In Table 2 we present data on these structural characteristics in Croatia, Slovenia and Serbia.

Table 2 Determinants of the size of fiscal multipliers in Croatia, Slovenia and Serbia

Structural	Croatia	Slovenia	Serbia	Effect on the size
Trade openness 2007-2013*	0.43	0.69	0.46	Although all three countries can be considered as "open", share of imports in domestic demand in Slovenia is substantially higher compared to peers so we expect that its fiscal policy is mostly constrained by the openness indicator
Labor market rigidities	4.1	4.2	4.0	All countries have relatively rigid labor markets ⁷ , but the effects of

⁶ We use Maastricht criteria as a threshold, unlike Batini et al. (2014) which use thresholds for EME's of 40% and advanced economies of 100% of GDP

2007-2013				fiscal policy could be most effective in Serbia
Automatic stabilizers 2007-2013	0.46	0.48	0.47	All countries can be considered to have relatively strong automatic stabilizers and the effects of this determinant on fiscal multipliers are relatively equal
Exchange rate regime	Fixed	Fixed	Flexible	Given the fixed exchange rate framework, effects of fiscal policy should be more effective in Croatia and Slovenia
Level of public debt 2007-2013	0.53 (ESA 2010)	0.41 (ESA 2010)	0.42 (national methodology)	Public debt in all countries is below 60% of GDP threshold, although Croatia has the highest ratio so this observation should be taken into account
Conjectural				
Business cycle phase (recessionary years in the whole analyzed period, %)	38%	25%	18%	Croatia experienced the longest recessionary phase during the analyzed period so, given the above explained assumptions, we could expect that fiscal policy should be more effective in Croatia, compared to peers
Monetary policy stance	Constrained (transmission mechanism and high eurization) no key policy rate	Constrained EA member	Constrained** (transmission mechanism and high eurization) key policy rate	Monetary policy is constrained in all analyzed countries which should positively affect the size of fiscal multiplier

*We use this period to capture pre-recession and recession phase of the business cycle

** Serbia had real exchange rate anchor since 2003, and informal inflation targeting through “inflation objectives” since September 2006 (Barisitz 2004, 2007), but monetary policy is largely constrained by the high euroization of the domestic economy (Hinić et al, 2013)

Source: Authors

Following the “bucket approach” we assign a value of 1 to the determinants which imply that fiscal multipliers should be high in some country and value of 0 if the determinant constrains the size of the multiplier. Following Batini et al. (2014), countries with total scores of 0 to 3 may be assumed to have “low” multipliers; countries with total scores of 3 or 4 have “medium” multipliers; and countries with total scores of 4 to 6 end up in the “large” multiplier category.

Table 3 “Bucket approach” in Croatia, Slovenia and Serbia

	Croatia	Slovenia	Serbia
Trade openness	0	0	0
Labor market rigidities	0	0	1

⁷ Transition process from planned to market economy is the slowest in labor market issues, an ironically weighed with immigration issues. Experience from other CEE countries show that labor market conditions will slowly improve with EU accession process (Schreiner, 2008).

Automatic stabilizers	0	0	0
Exchange rate regime	1	1	0
Level of public debt	1	1	1
TOTAL:	2	2	2

Source: Authors

From Table 3 we can conclude that all countries should belong to the countries with low fiscal multipliers. According to Batini et al. (2014) these countries should have the size of the impact multiplier between 0.1 and 0.3, but these bounds should also be adjusted for the phase of business cycle and a monetary policy stance, such that:

- If the economy is at the lowest point of the cycle, lower and upper bound of the multipliers range should be scaled-up by 60 percent. If on the other hand, the economy is at a peak, both bounds should be decreased by 40 percent and when the output gap is zero, no adjustment should be made. In other cases the boundaries should be interpolated
- If monetary policy is at the effective lower bound and is fully constrained, both bounds of the multiplier range should be increased by 30 percent. If the monetary policy is constrained by other considerations, it should be interpolated between 0 and 30 percent

Based on data on the phase of the business cycle, presented in Table 3, we assume that the bounds for Croatia should be scaled-up by approximately 30%, in Slovenia by 15% and in Serbia by 12%⁸. As for the monetary policy stance, we assume that we could scale-up the boundaries by 15% in all countries⁹. So, based on the bucket approach, the size of fiscal multipliers should be between: 0.15-0.45 in Croatia and 0.13-0.40 in Slovenia and Serbia.

However, although informative and innovative, bucket approach is relatively rigid. Firstly, all determinants have the same weight in the calculation process. Second, the binary division on 0 and 1 limits the maneuvering space so, for example, although Slovenia is much more open in terms of foreign trade than Croatia and Serbia, all three countries have the share of imports in domestic demand above thresholds and thus take a value of 0 in calculation.

So in this paper we will take these limitations into the consideration and we use “narratives” presented in Table 3 to make our assumptions on the size of fiscal multipliers in a way that we assume that Croatia will have the largest multiplier, followed by Serbia and Slovenia. Given that all countries are relatively similar in the context of labor market flexibility, automatic stabilizers, public debt and monetary policy stance, we expect that the business cycle phase, with longest recession in Croatia, and trade openness, with Slovenia with the biggest share of imports in domestic demand, will play the key role.

⁸ 60% bound multiplied by the % of analyzed period in which country experienced recession

⁹ Monetary policy in these countries is not on the effective zero bound, as there is some maneuvering space for monetary authorities through standard instruments like reserve and capital requirements etc.

4. Conclusion

In the period from the beginning of 2000s to 2014, Croatia, Slovenia and Serbia can be described as small, open economies, with relatively rigid labor markets, strong automatic stabilizers, acceptable level of public debt and constrained monetary policy, which experienced a boom and bust cycle. Such structural characteristics are very important determinants of the effectiveness of fiscal policy in those countries and should be taken into the consideration in various policy discussions.

In this paper we used “bucket approach” to determination of the size of fiscal multipliers to include all of these characteristics. Based on the results of that approach, we concluded that the fiscal multipliers in these countries should be relatively small. However, although structurally similar, Croatia, Slovenia and Serbia have some specificities that allowed us to make assumptions on the differences of the size of fiscal multipliers between them. Thus our main hypotheses was that Croatia has the highest spending multiplier, followed by Serbia and Slovenia.

Even though this research has several methodological limitations explained above, these results can be used as a benchmark for discussions about the differences in the effectiveness of fiscal policy in these countries. Also, one of its contributions is that this is the first paper that uses “bucket approach” to fiscal multipliers, after it was initially introduced in Batini et al. (2014).

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A. Smirnov, N. Shilov
SPIIRAS, 39, 14 Line, St.Petersburg, Russia
{smir, nick}@iias.spb.su

Intelligent Self-Configuration of Flexible Logistic Networks: Approach and Major Technologies

Globalization and digitalization of logistic companies brings to an agenda a number of problems to be solved. The paper presents theoretical and technological foundations of an approach overtaking the problems of customer-oriented intelligent transportation network configuration and cultural differences between representatives from different countries. The approach is based on the concept of self-organising socio-cyberphysical network, and involves the technologies of ontology management, self-contextualisation and behavior analysis.

Keywords: Digitalization, Socio-Cyberphysical Systems, Self-Contextualization

1. Introduction

Globalization of logistic companies and digitalization of their operations is currently a dominating trend in the industry. German Deutsche Bahn AG (DB) and JSC Russian Railways (RZD) are plain examples. DB being a globally active mobility and logistics company is aiming to become the world's leading mobility and logistics company. To achieve this goal DB plans to be more customer-friendly, environmentally sound and successful. RZD has founded the United Transport & Logistics Company (UTLC) integrating Russian, Kazakh, and Belorussian railways. RZD strategy manifests the company's strong intention to develop logistics business. Both companies heavily rely on different transportation means to provide for the "door to door" services: railway, automobile, water, and air (DB only).

Globalization and digitalization of logistic companies brings to an agenda a number of problems to be solved. Efficient configuration of transportation networks (trends leading to Logistics 4.0 and Mobility 4.0) based on customer requirements and preferences, intelligent logistic resources and their efficient interaction (the Internet of Things concept), handling cultural differences of making business between representatives (employees and companies) from different countries (organizational behavior issues related to international dimensions and cross cultural aspects of collaboration and decision making) are among them (Figure 1).

	Cross-carrier	Rail freight	Road (regional traffic)	Road (long-distance traffic)
Digitization	Internet of Things (cyber-physical systems)	Intelligent freight cars Internet of Things (cyber-physical systems)	Intelligent traffic guidance systems Internet of Things (cyber-physical systems)	Intelligent traffic guidance systems Internet of Things (cyber-physical systems)
Flexible management	Deceleration Cooperative consolidation of transport volumes CT networks Integrating modes of transport	Attractive workplace design Cooperative consolidation of transport volumes	Quiet nighttime transport Cooperative consolidation of transport volumes	Attractive workplace design Cooperative consolidation of transport volumes
Technology	CT networks Modular container design	Waste heat utilization Automatic coupling Autonomous driving Hybrid locomotive	Vehicle and propulsion technologies Autonomous driving Modern vehicle fleets Waste energy utilization Networked assistance systems	Vehicle and propulsion technologies Autonomous driving Modern vehicle fleets Waste energy utilization Networked assistance systems

Figure 1: Research positioning in the areas of the future vision (adapted from Clausen et al., 2014)

The paper presents theoretical and technological foundations of an approach overtaking the above mentioned problems. The approach is based on the idea of self-configuration of resource networks. The process of self-configuration of a logistic network assumes creating and maintaining a transportation chain structure on top of the dynamically changing physical logistic network topology formed by its resources. This transportation chain structure then can be used as an infrastructure for various logistic operations like scheduling, routing, cargo delivery, etc. The context-based self-configuration can provide a new, previously unavailable level of flexibility via finding compromise decisions taking into account proposals of various network resources and task solving preferences.

The approach addresses the problem at three levels: the level of resources (cars, trains, trucks, etc.) responsible for their digitalization and intellectualization; the level of combined transportation networks integrating the resources and responsible for the network self-configuration; and the level of human beings – decision makers addressing the organizational behavior aspects (differences in culture, norms, and rules). The first two levels form the cyber-physical space integrating the physical and IT dimensions, and all three form the socio-cyber-physical space integrating physical, IT and social dimensions (Figure 2).

2. Self-Configuration of Socio-Cyberphysical Systems

Cyberphysical networks tightly integrate heterogeneous resources of the physical world and IT world (Antsaklis, 2014; Johansson et al., 2014). This term is tightly related to such terms as Web 4.0 (Aghaei et al., 2012; Zapater, 2014) and Internet of Things (Skarmeta & Moreno, 2014; Yang, 2014; Atzori et al., 2010). Currently, there is a significant amount of research efforts in the area of cyberphysical networks and their applications, e.g., in transportation (Wan et al, 2014), production (Fisher et al., 2014), and many other. Having analysed the state-of-the-art of different CPS approaches and supporting technologies, among the other conclusions, Horvath and Gerritsen conclude that “the next-generation of CPSs will not emerge by aggregating many un-coordinated ideas and technologies in an incremental fashion. Instead, they will require a more organized and coordinated attack on the synergy problem, driven by an overarching view of what the future outcome should be” (Horvath & Gerritsen, 2012).

Configuration of cyberphysical networks is a complex task, which is currently researched intensively (Michniewicz & Reinhart, 2014; Nie et al., 2013; Pradhan et al., 2013). Even though such systems often only one stakeholder (e.g., a production system), the centralized control is often not possible due to the complex interactions in the physical world.

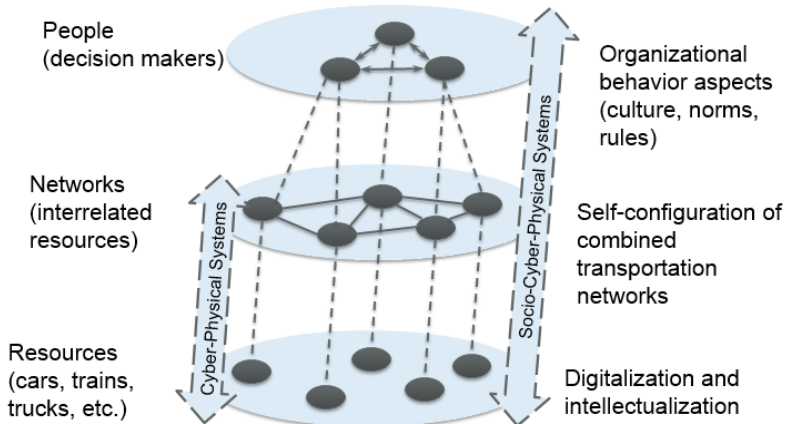


Figure 2: Research areas and connections

The situation becomes even more complicated when dealing with socio-cyberphysical networks. Such networks go significantly beyond the ideas of the current progress in cyber-physical systems, socio-technical systems and cyber-social systems to support computing for human experience (Sheth et al., 2013; Teslya et al., 2014). They tightly integrate physical, cyber, and social worlds based on interactions between these worlds in real time. Such systems rely on communication, computation and control infrastructures commonly consisting of several levels for the three worlds with various resources as sensors, actuators, computational resources, services, humans, etc.

Socio-cyberphysical networks belong to the class of variable systems with dynamic structures. Their resources are too numerous, mobile with a changeable composition. Planned resource interactions in such systems are just impossible.

The following example of socio-cyberphysical network can be considered. There are various techniques aimed at railway and road traffic situation detection based on the analysis of information from various devices and sensors. Those, which are based on the information accumulated within one car or train, are commercially available. Cyberphysical networks provide for extended possibilities in this area. Integration of several nearby trucks or trains with their sensors into one cyberphysical network makes it possible to increase the quality of situation detection and to provide for certain situation development prediction. The concept of socio-cyberphysical systems adds one more dimension – humans (passengers, engineers and drivers, managers, etc.). Obviously, it is not possible to control all members of such a network, but only some of its components (e.g., railway infrastructure such as traffic lights, intelligent signs, etc.) can be controlled to influence the whole network operation. Guided self-organization of socio-cyberphysical networks is one of the most efficient ways to organize its behavior.

However, taking into account not only combination of information from trucks and trains, including location, speed, directions but also application of behavior analysis techniques for predicting future (both short term [minutes-hours] and long term [days-weeks]) actions of people involved (caused by different cultural aspects of collaboration and decision making) could significantly improve the efficiency of the situation prediction and consequently improve it via regulation of its controllable components.

The analysis of literature related to organizational behaviour & team management has showed that the most efficient teams are self-organizing teams working in an enterprise context. The process of self-organization of a network assumes creating and maintaining a logical network structure on top of a dynamically changing physical network topology. This logical network structure is used as a scalable infrastructure by various functional entities like address management, routing, service registry, media delivery, etc. The autonomous and dynamic structuring of components, context information and resources is the essential work of self-organization (Ambient Networks Phase 2, 2006). An example of such self-organization could be obtained from the area of social self-organization (Hofkirchner, 1998; Fuchs, 2003). However, in this case there is a significant risk for the socio-cyberphysical system to choose a wrong strategy preventing from achieving desired goals. For this purpose, self-organizing systems need to combine having a certain guiding control with self-organization mechanisms and negotiation protocols.

The guided self-organization has got some significant attention in the scientific community (Prokopenko, 2013; Martius & Herrmann, 2012). An approach has been developed by the authors (Smirnov, 2013) that enables a more efficient self-organization based on the “top-to-bottom” configuration principle, which assumes conceptual configuration followed by parametric configuration.

An essential part of the self-organisation is self-contextualization. It is an ability of a system to describe, use and adapt its behaviour to its context (Raz et al., 2006). This, in turn,

assumes application of such technologies as context and ontology management. Ontologies are content theories about the sorts of objects, properties of objects and relations between objects that are possible in a specified knowledge domain. They provide potential terms for describing the knowledge about the domain (Chandrasekaran et al., 1999). An ontological model is used to solve the problem of heterogeneity of models of different enterprise elements. It provides the common semantics for interoperability, information reuse & sharing between disparate modelling methods, paradigms, languages and software tools (Uschold & Grüninger, 1996). Ontologies have shown their usability for this type of tasks, e.g., (Bradfield et al., 2007; Chan & Yu, 2007; Patil et al., 2005).

Context is any information that can be used to characterize the situation of a system (Dey, et al., 2001). The context is purposed to represent only relevant information and knowledge from the large amount of those. Relevance of information and knowledge is evaluated on a basis how they are related to a modelling of an ad hoc problem. The context is represented in terms of the service's internal ontology. Self-contextualization assumes that the system can change its behaviour should the context change.

3. Self-Organising Socio-Cyberphysical System for Logistic Network

The conceptual model of the self-organisation process in socio-cyberphysical systems is based on the idea of representing its resources via IT services. For the purpose of semantic interoperability, the services could be represented by Web-services using the common notation described by a common ontology. A detailed overview of the approach can be found in (Smirnov et al., 2012). The agreement between the resources and the ontology is expressed through alignment of the descriptions of the services modelling the resource functionalities and the ontology.

Depending on the situation, the relevant part of the ontology is selected forming a so-called “abstract context”. The abstract context is an ontology-based model embedding the specification of the current situation. It is created by core services incorporated in the environment. When the abstract context is filled with actual values from the CPS resources, an operational context (formalized description of the current situation) is built. The operational context is an instantiated abstract context and the real-time picture of the current situation. In the considered example, the context creation assumes involvement of other services. In particular, the services include those representing users (decision makers) of different roles (passenger, truck driver, train engineer, infrastructure operator, logistics manager, etc.). The resulting CPS is presented in Figure 3.

Since the resources are represented in the service network by services, they can negotiate in order to achieve desired states and, thus, change the current situation into the desired one. One of the ways to do it is to use the context variation idea that assumes comparing the current situation described by the context with available context variants describing some “pre-set” situations and assigned with pre-defined rules of actions. Variability modelling is tightly related to the enterprise modelling. Existing process models can be used as descriptions of the actions (scenarios) to be performed in certain situations. For example, a security incident scenario from the procurement model has to be engaged in case of the detected attempt of theft (unauthorized triggering of one or more sensors responsible for the electronic sealing functionality).

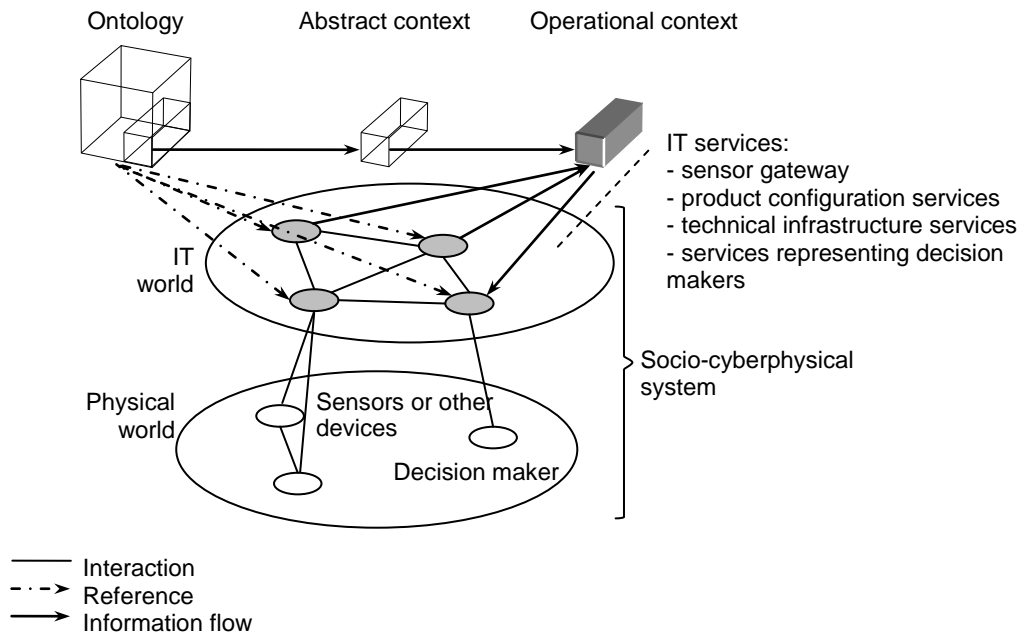


Figure 3: Generic scheme of socio-cyberphysical network.

4. Behavior Analysis

Since human participants play important roles in the socio-cyberphysical system, it is extremely important to take into account their preferences (both explicit and tacit) and possible decisions. The developed approach assumes description of the preferences and strategies of human participants via updatable and extendable profiles. Usage of the profiles makes it possible to “individualize” the ways the system interacts with human members. For this reason methods of human preferences revealing have been developed.

The preferences are revealed via the analysis of the situations the network member faces most often, parameters of objects and actions most often occurring or avoiding in the decisions (actions) made by the network member, optimization criteria the network member most often follows or not. One of the main features of the developed profile model is presence of the information related to antecedents and consequences of the made decisions and undertaken actions what makes it possible to perform the functional analysis of the human behavior.

The functional behavior analysis is one of the behavior analysis techniques considering frequency of key behavior events related to certain human activity (Kraus, 1995). It is also known as ABC analysis (antecedent, behavior, consequence) and is based on identification of both antecedents and consequences of the behavior. As a result, it is possible to build a conditional behavior model, which would let one know (to predict) how a human would act in a given situation.

The result of such an analysis produces typical decisions (actions) made by the considered person in certain situations (behavior patterns). Example of behavior pattern is presented below:

- **Context:** there are two orders in the queue to be processed.
- **Antecedent:** a complicated order arrives, which requires additional attention.
- **Possible behavior:** process the orders in the queue first; process the complicated order first.
- **Preferred behavior:** process the complicated order first.

- **Consequence:** the complicated order has been processed quickly; the orders in the queue have been delayed.

The behavior pattern revealing techniques used in the proposed approach include:

1. Revealing human behavior patterns for problems with the same structure but different parameters. In this case, the structural knowledge constituent will be the same, and the parametric knowledge constituent will be different.
2. Revealing human behavior patterns for different problems solved by the same person. This technique assumes analysis of structures of different problems trying to find similarities associated with the same decisions / actions.
3. Revealing human behavior patterns based on the optimization criteria (problem parameters with highest or lowest values) the person tends to follow or avoid (e.g., the driver prefers moves faster or with less maneuvers). Aggregated (e.g., weighted average) criteria can also be analyzed.
4. The above techniques applied not to one person but to different persons with similar profiles. This technique utilizes collaborative filtering mechanisms (Schafer et al., 2007).

To implement the first three techniques the following methods have been developed:

1. Decision / action clustering method. The decisions made by the person and actions undertaken are grouped into clusters. Based on the clusters built the common properties (parameters) of the problems and decisions / actions grouped into one cluster are identified. The results of this method can be refined if there is enough historical data accumulated and clustering can be done taking into account the context of the situation when corresponding decisions have been made (including and preferences of the person at the moment of decision making as well as information about behavior antecedents and consequences).
2. The alternative analysis method. Unlike the previous method searching for similar person's decisions, this method is aimed at the analysis of differences between decisions made by the person and actions undertaken. Based on the analysis of the identified differences taking into account the situation context (as well as preferences of the person and information about behavior antecedents and consequences) namely definition of the main generic differences of the made decisions, the behavior patterns are revealed.
3. To implement the fourth technique of human behavior pattern revealing, a method based on the collaborative filtering mechanisms used for building collaborative recommendation systems. This technique would enable to predict human behavior even in situations, in which this person has never got. For this reason, the decisions made by persons with similar properties are used.

Application of the above techniques would enable to build services with realistic behavior modelling real people (e.g., via usage of opportunistic planning (Hayes-Roth, 1980) mechanisms). As a result of such modelling, the most suitable policies can be identified to guide the self-configuration process of socio-cyberphysical networks.

5. Conclusion

The presented theoretical and technological foundations for solving problems of customer-driven global transportation network configuration are mainly based on the concept of socio-cyberphysical network self-configuration. This new vision of the complex IT-enabled systems involving people makes it possible to achieve a new previously impossible level of problem solving. The proposed service-based virtualization technology makes it possible to significantly extend the possibilities of negotiations between various elements of the logistic system. Application of the common ontology does not only provide for the interoperability at

the level of semantic but also enables the self-contextualization, which is essential for an efficient self-organisation. Behavior analysis mechanisms are aimed at personalization

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Eduardo Tomé
Universidade Europeia, Laureate Group, Lisboa, Portugal.
Contact – eduardo.tome@clix.pt

KM in the BRICS – An emerging question

Abstract *Purpose:* This paper is a first attempt analyses the situation of Knowledge Management in the BRICS. It is a relevant question because knowledge is the main asset in the economy of the 21st century and because the BRICS are the super-powers of tomorrow. *Methodology:* we base ourselves in known theories about Knowledge and Economic development and we use data published by the main world institutions and also by Journals. *Findings:* KM is known in the BRICS but, apart from education it is still emerging, and the BRICS are. However the potential KM induces is immense. *Implications:* to develop the BRICS will be to extensively and intensively implement KM. *Limitations:* this is a short, single authored paper. A bigger paper or even a book could ensue, as suggested in the Discussion section.

Keywords: KM, Brics, evaluation, implementation

Introduction

We all know we live in a Knowledge Based and Services Driven Economy (Tomé, 2011). It is therefore clear that in the 21st century, knowledge as creator of value will be the main driving force in the definition of the success of economies and countries. We also know that Knowledge Management (KM) has been defined in the 90s, starting from Polyani (1966), by Nonaka and Takeuchi (1995) and the SECI model. Finally it is generically assumed that in the developed world KM was a fashion that faded a bit away in the early years of this century when it became clear that it was not so easy to implement KM. In fact, main scholars like Edwards, (2011) pointed out that at least three generations of KM existed, the first one focused on technology, the second on people and the third, and current on routines and practices.

In the aforementioned context this paper wants to analyse the situation on KM in the BRICS. The question is important by a quantity of reasons. First the BRICS need KM to become world powers (O'Neill 2001). Second, the emergence of the BRICS may give KM a second breath and a bigger importance in the world (Andrieva and Kianto, 2012).

In consequence this paper will be constituted by the following five sections: Theories, Methodologies, Results, Discussion and Conclusions.

Theories

In the 21st century with the emergency of services economy, intangibles became the main production factor in advances economies, giving raise to a knowledge based and services driven society (Tomé 2011, Tomé 2012). Knowledge is the most important of those intangibles being defined as understood information, information being organized data, and wisdom being automatic knowledge according to a well-known scale (Maurer, 1999). Knowledge is basically studied by Knowledge Management (KM). Knowledge workers, knowledge companies, and knowledge cities, are three of the main concepts in the analysis. The basic model over KM was presented by Nonaka and Takeuchi and establishes the existence of four phases, oscillating between tacit and explicit knowledge in the framework of the knowledge flow, that put together generate the SECI model (Nonaka and Takeuchi, 1995). A debate has been existing over how knowledge is created (Kianto, 2008) and how knowledge is forgotten (Cegarra Navarro and Moya 2005). Also important analysis have been done about knowledge dynamics (like in the IFKAD conferences) and the knowledge cycle of live – creation, sharing, transferring, stocking and unlearning (Tomé 2011).

With more relation to this paper, the analysis on Knowledge has been done with the following perspectives:

- a) as an asset or a market; most of the analysis tend to consider knowledge an asset which has to be managed; however, particularly when we aim to analyse Knowledge and KM in a national perspective we believe it is fundamental to address the question of the market of knowledge. Following (Tome. 2011b. and Tomé and Goyal, 2015) we believe the analysis of the market of knowledge should be made in four broad stages, as the following; a) stocks, investments and outcomes; b) supply, demand, price and quantity; c) needs; d) market forces. We will use this approach in the Results section, number 8 and Table 8, see below.
- b) in a micro or in a macro perspective. Within the first perspective we are concerned with individual organizations or markets. Markets were already mentioned in item a). Knowledge is seen as an asset which is long to be acquired, and whose benefits last long. Knowledge may be acquired by individuals or organizations through learning. Learning can be made in education, training, or working experience. Self-training and

informal training are also very important ways of acquiring knowledge. Knowledge is beneficial because it can increase productivity, product quality, exports, and wages, and it also reduce costs. Within the second perspective we deal essentially with countries and regions; those regions can be classified as low, middle or high in knowledge, as in skills, and also in KM. In a low equilibrium few knowledge workers and few knowledge companies exist, because people don't learn and companies don't create vacancies for knowledge workers and vice versa. In a high equilibrium exactly the opposite occurs. Low equilibria exist in developing countries, high in developed countries (Ashton and Green, 1996). Economic integration may be a factor of transforming a low equilibrium into a high one, but social policies are also another important factor (Tome 2004 and Tomé 2007). A societal agreement is also important (Ashton and Green, 1996). Emerging countries are the ones that are transforming themselves from low to high equilibrium regarding knowledge. We will see that these ideas are very important to analyse the BRICS as knowledge economies.

Methodology

Following and adjusting Tomé, 2015, we ask several questions about each one of the five BRICS: 1 Context background; 2 Broad KM systems; 3 Institutional actors; 4 Political context; 5. KM systems at national level; 6. Organizational KM; 7. Impact; and 8. Summary.

Results

In this section we present the results of the application of the methodology defined in the previous section.

1. Context background

1.1 History and Politics

The five BRICS have very different histories, China and Russia being heirs of the two of the biggest and long lasting empires, India a mosaic of cultures also with millennial ancestry, with Brazil and South Africa old colonies from European empires. In political terms, India is a democracy since independence in 1947, South Africa since the end of the apartheid in 1990, Russia since the end of Communism in 1989, Brazil since the end of the military dictatorship in the eighties of last century and China is still a single party regime. It is worth mentioning that all the five BRICS had eventful political histories in the last years, India, Russia, Brazil and South Africa being in the stage of democracy building and China not yet there (Tomé, 2004).

1.2 Economy

The relevant data about this subsection are shown in Table 1, below. With the exception of South Africa the BRICS are among the 10 world biggest economies. However in terms of individual incomes the countries are very different, Russia has a high level, India a low level and the others three countries middle level. In terms of growth big differences also exist between rampant India and China and the other three countries which are almost stopped. The HDI and KEI figures replicate somehow the GDPph ones, even if Russia's advantage over the other countries is less clear. On unemployment, South Africa stands out for all the wrong reasons with a rate five times bigger than that of the other countries in general terms and four time regarding the youth. Brazil has a smaller proportion of unemployed as long run unemployed, and had a slightly better evolution in the recent times. China has a higher external debt in relation with the GDP than the other countries and Brazil a smaller one; on average the levels are small and sustainable. South Africa and Brazil's Gini Index values are stratospheric and indicate massive inequalities, China and India have middle and low levels of inequality.

Table 1 – Basic Economic Indicators

	Brazil	Russia	India	China	South Africa
GDP per capita, PPP, 2014	16.155	25.636	5.833	13.216	13.042
GDP ranking, 2014	7	10	9	2	33
GDP growth rate, 2014	0.1	0.6	7.4	7.4	1.5
HDI, 2013	0.7443	0.778	0.586	0.719	0.658
KEI, 2012	5.58	5.78	3.06	4.37	5.21
Unemployment rate, 2013	5.9	5.6	3.6	4.6	24.9
Unemployment evolution (2010-2013)	-2	-1.6	+0.1	+0.4	+0.2
Long run unemployment rate	14.6, 2010	30.9, 2012	38.2, 2010	NA	32.4, 2012
Youth unemployment rate, 2013	13.6	14.5	10.5	10.1	53.6
External Debt	15, 2012	23, 2014	27.8, 2014	37.5, 2013	23, 2012
Gini Index	52.7, 2012	NA	33.6, 2011	37.0, 2011	65, 2010

Source; World Bank

1.3 Institutions and culture

A common feature of all the five countries is the immense cultural background that they have to show: Portuguese and native heritage in Brazil, Slav and Asiatic traditions and works of art and culture in Russia, Confucianism in China, Hinduism and many other creeds and traditions in India, a mix of pre-colonial and colonial cultures in South Africa also known as the rainbow nation. Also the five countries have different lead institutions: family in Brazil, clan in Russia, the communist party in China, the tribe in South Africa and the caste in India,

1.4 Society

The data regarding this subsection are included in Table 2, above. Regarding health, South Africa health troubles related with the HIV epidemic result in a very low level of life expectancy; Russia has much more doctors than the other countries; China and South Africa have much higher levels of Infant mortality; China and India spend much less in health than the other four countries. Finally regarding education, Russia has high levels with a dominance of higher education graduates, South Africa has middle levels with a dominances of secondary school graduates, China and Brazil low levels with a dominance of primary school graduates. And India is by far the country with lower levels of education.

Table 2: Basic Social Indicators

	Brazil	Russia	India	China	South Africa
Life expectancy	74	70	66	73	51
Doctors per thousand	1.9, 2013	4.3, 2010	0.7, 2012	1.9, 2012	0.8, 2010
Infant Mortality, 2013	12	9	41	11	64
Expenditures in health, 2010, WHO	1009	1277	373	126	915
Less than primary	22.3	0.6	78.5	6.6	18.6
Primary	23.1	5.5	16.6	28.1	5.7
Lower secondary	14.0	8.9	NA	43	13.6
Upper Secondary studies, at least	28.6	21.9	0.8	13.5	47.2
University graduates,	12	60	4.1	8.8	6.4

Sources: UNESCO for all the BRICS with the exception of India (Malthorpe and al, 2014)

2. Broad KM systems

The major figures related to this section are shown in Table 3, above. Knowledge and KM depends highly on the educational base of countries. The main features of the educational and vocational training systems of the five BRICS are depicted in Table 3 above. Russia, closely followed by South Africa have considerable values on the completion of compulsory education, followed by China and then by Brazil. Again, about India, and according to Tomé and Goyal, 2015, the score is much lower. Importantly Russia relied almost exclusively, as China does in public schools, whereas Brazil, South Africa and India have more mixed systems, in which the private agents play a bigger part. The influence of the communist experience is certainly a cause for this divergence. When we come to tertiary education however, the situation is quite different because Russia stands in a different platform of all the other BRICS with a level of completion at least of more fifty percentage points that Brazil, who comes ranked in second place.

Table 3: Broad general educational base for KM

		Brazil	Russia	India	China	South Africa
Secondary	Compulsory education number of years	8	10	9	9	9
	Year CE definition	2006	2007	2008	2007	2007
	% of total population over 25 with CE	56	80	0.8	65	76
Higher Education / Tertiary Studies	% of population with HE (25-64)	12	60	4.1	10	6

Sources; UNESCO for four of the BRICS and Malhortra and al 2014 for India

The investment in lifelong education is small by comparison with the more advanced countries, a fact that is explained both by the gigantism of 4 of the five BRICS and also by the relatively lower standards of economic development of all the five countries in relation to the world leaders like the major part of the OECD countries. Quite strikingly all the countries have comparatively high levels of public expenditure in labor market policies even if the causes for that happening are different – Brazil the current government desire to develop the country and a certain level of historic tradition, Russia the communist tradition, India the government intention to implement a nationwide training scheme, in China the communist ideology and p system, in South Africa the idea of balancing the country.

3. Institutional actors

The main ideas about this section are expressed in Table 4, below.

In Brazil the Technical Committee of Knowledge Management and Strategic Information (TCKMSI) was created in 2003 within the Electronic Government Executive Committee (EGEC), which had been created in 2000, to promote KM and more specifically e-government in the Brazilian Federal Government. The EGEC formally stated that KM had become a strategic governmental strategic asset. However quite recently (Monaco, 2015) a research work for the National Industry found that 62% of the managers consider that the degree of innovation is low or two low, something which prompted an expert to defend the collaboration of government, private bodies and academia to foster a strategy of innovation. This finding is consistent with other from a recent survey on KM practices in Brazil (Milano and al, 2015); these authors found that basically the implementation of KM in Brazil are obsolete, not having gone much further than the awareness phase, as it happened with the

OECD countries ten years ago; Brazilian companies need to “identify their practices of KM and work towards them effectively” (Milano and al. 2015. 1306). Finally, Brazil has lots of labour unions, and even if they are keen to promote education and training, they are generically more concerned with protecting the employment; and it is not very clear that these unions perceive KM as a way of securing and developing or increasing the employment prospects of workers. To be fair the unions have not been asked to participate in a National KM strategy in Brazil. Finally Brazil has essentially received external influence on KM by the presence of MNCs and by the neighbouring of the United States, both serving as contagion forces.

For what we came across, in Russia there is no public policy for KM. This fact may be explained by the singularity of the Russian political system, which is very focused in tangible matters, civil liberties and foreign affairs. Another factor is the change Russia is undergoing and the fact that culturally KM is a very “Western” topic. However, in the last few years KM became a very popular topic with top managers, and related to the ICT sector (Kianto, Andreeva, Shi, 2011). Universities have been debating the problem of KM implementation with the support of bloggers and the social media. Due to its novelty, and scarce formal implementation, KM has also been absent from the discussions between workers representatives and employers. Finally the external presence has been felt nonetheless because within Russia’s identity, is the notion of being a world leader – and KM is a tool to achieve and maintain that leadership.

In India, the national Government has promoted a view of KM based in innovation and e-government. Universities have been studying more and more the implementation and use of KM practices in companies. The same scholars have pointed out the possibility of KM being used as a powerful by unions (Gorjoo 2015 and Malhan and Rao, 2008). Employers have also become more and more aware of the importance of Knowledge, Information and innovation to India’s companies (Pilania, 2006). This has to do with the size of the country and the relative size of India in relation to the world, and the enormous possibilities a company may have in India alone. Another interesting aspect of KM in India is the intense use of IT by India’s youth, and how these people have become experts in social media, transforming the country from a rural and inner-looking society to a more urban, connected and international one. Finally, MNCs have had an important role in developing KM in India, at least by locating in the number of subsidiaries, from call-centres to ICT development centres that effectively promote and build the foundations of a KM culture in the country.

Table 4: Main institutions for KM in the BRICS

	Brazil	Russia	India	China	South Africa
Government	EGEC	NA	Innovation and e-government	Education	Plan for KBE, 2008-2018
Governmental agencies.	TCKMSI	Universities	Universities	Internet Surveillance	KM initiatives in Universities, SAKM Summit
Employer bodies	National Confederations	Marginal concern	Awareness	Not significant	Involved
Labor unions	Employment concerns	Marginal concern	KM as weapon	Not significant	Involved
NGOs	Brazilian	Bloggers	Social	Surveillance	Known

	Society for KM	and social media	media		examples
Private companies	Awariness phase	ICT based	Multiple diffusion	Awariness	Wide range supported by consultants
External Bodies	MNCs and USA contagion effect	Adversaries in worldwide competition	Foreing MNCs located in India	Foreign Universities	UNDP and BRICS

Source: Own work

In China, the government has not issued specific laws regarding knowledge, or KM. The public investment in the Knowledge society has been done essentially by developing the education system. Tong and Mitra, 2009, pointed out the culture specifics of China, as modesty and fear to lose face and therefore propensity to keep knowledge implicit. and Peng, Li-Hua and Moffet 2007, demonstrated that China was still in the awareness phase considering the use of KM by companies. Quite interesting those studies were made by scholars studying abroad and we believe these small elite of people will be very important in China's development of a KM strategy. An important point regarding China is the known surveillance by authorities on the use of the internet, which besides being a civil rights or regime problem may also inhibit KM practices. Finally, China's labour relations have been adjusting within the scope of the transition system, but KM has not been a significant issue in the strategies of unions and employers.

Last but not the least, in South Africa some sketch of KM policy at national level was drafted by the government at national level, encompassing education, training, e-government, digital government, use of KM practices in the public sector and support for KM implementation in the private sector. One interesting policy in this context was the introduction of an indigenous Knowledge System (IKS) regarding the preservation and diffusion of traditional knowledge with a link to property rights. All this was compiled in 2008 in the plan "Innovation towards a Knowledge Based Economy" (2008-2018). There is no doubt that the South African Universities have tried to promote KM, by developing KM related programs in its various forms as well as other initiatives as forums, conferences, congresses, having its peak in the South Africa KM Summit. That effort has been followed by the implementation in a wide range of private and public companies with the support of a very important network of universities and NGOs. There is also evidence in the literature and information on the web about the involvement of SA's NGOs in KM. All the social movement aforementioned resulted in that workers unions perceive KM as an instrument for change and employer's organizations as a powerful skill . With regard to external bodies, South Africa has benefited from the support of the United Nations Development Program; also South Africa has tried to develop KM operations and co-operations on KM within the BRICS framework.

4. *Political context;*

The ideas regarding this subsection are summarized in Table 5, above.

In Brazil the laws that rule KM are somehow strict and defined, but due to the huge dimension of the country, and to its cultural roots, the practice of KM in its various forms tends to be relaxed if not a bit anarchic. Therefore very good ideas are managed with social easiness. The situation is somehow the opposite in Russia, where there are no formal rulings on KM but due to strict cultural concerns, political heritage and forms of education the

application is made with much rigor. Therefore, relatively broad guidelines are put in place with some kind of perfectionism.

Table 5: KM legislative and policy context

	Brazil	Russia	India	China	South Africa
Theory	Rulings	No general laws	Guidelines	No general laws	Plans
Practice	Relaxed	Strict	Diversity	Restraint	Social involvement
Difference	Big - Social easiness	Big - Perfectionism	Big - Spirituality	Small – confucionism	Small – rainbow nation
Causes	Dimension and social roots.	Culture, policy and education	Diversity and dimension	Culture and political system	Dimension, international support, pragmatism

Source: Own analysis

In China, there are still no general laws on KM, and the practice is governed by a culture of restraint within a very particular political system. Confucianism is also important to understand the situation, India is much more like Brazil than like Russia and China. Central based guidelines and plans exist, that are put into place in the subcontinent, by the absolutely diverse myriad of peoples that inhabit the land. Some spirituality where actions are more important than results also explains the India's specificity. South Africa stands out as the bright student within the five cases; plans exist and are carried out by the society. Smaller dimension is certainly a factor, but also the support from the UNDP, the master of the English language and also some cultural pragmatism inherited from the British colonizers.

5. *KM systems at national level;*

In Brazil the main programs that promote KM relate to basic education and digital government and they are promoted by the State. In Russia the biggest investment in on higher education and is also promoted by the State. In India educational based programs are yet at the literacy phase, whereas in China the situation is a little better than in Brazil. In South Africa education is at a secondary school level.

Table 6: Major Knowledge based programs and systems

	Brazil	Russia	India	China	South Africa
Main programs	Basic education e e-governance	Higher education	Literacy	Middle education	Secondary school
Provision	Public	Public	Public	Public	Public

Source: own work

South Africa and Russia have extended coverage of the country by internet broadband. The situation is worse in Brazil and much worse in China and in India.

6. *Organizational Level Developments in KM*

The basic situation we detected is described in the following Table 7. It is worth mentioning the importance of the public sector and of the international connections for the development of KM in the BRICS. South Africa seems to be in a more advanced of implementation.

Table 7 - Main Characteristics of Organizational KM in each country

	Brazil	Russia	India	China	South Africa
Positive	Large companies	Public and international	International	Public and International	Transversal and maturing
Negative	Elitism and lack of strategy	Secrecy and too much rigor	Anarchic and disperse	Control	Lack of general evaluations

Source: Own work

7. Impact

For Brazil (Ferraresi and al, 2012) it was found that KM directly contributes to market orientation, but it requires a clearly defined strategic direction to achieve results and innovativeness. It was also concluded that knowledge, as a resource, leverages other resources of the company, while it requires a direction in relation to the organizational goals in order to be effective. About Russia and China (Andrieva and Kainto, 2013) show that HRM and ICT practices for managing knowledge are quite strongly correlated and have a statistically significant influence on both financial performance and competitiveness of the firm; also ICT practices improve financial performance only when they are coupled with HRM practices. For South Africa, (Plessis, 2007) the creation of a shared understanding of the concept of knowledge management, identifying the value of co-creation of the knowledge management strategy, and positioning of knowledge management as strategic focus area in the organization. Finally for India, (Chawla and Josh 2011) show that and most of the KM dimensions have a positive impact on LO. However, the impact is shown only in Vision and Strategy (VS) and Performance Improvement Process (PIP).

8. Summary

A summary of the situation regarding each country is presented in Table 8, above. In Brazil KM is basically done by large and top companies. For the ordinary persons KM means education or social media. This means that KM policies will need to be implemented in the future, with the support of the broad societal forces. The supply is not great but the demand is even smaller even if the needs are very large and the impacts significant. In Russia KM benefits from the very high level of formal education of the people which in turn makes possible for companies to demand more KM systems; however Russian companies still have some resistance to KM implementation due both to a heritage of the soviet world and also to the perfectionism of the Russian culture; however KM is barely needed in Russia given that the country wants to be regain it old status of superpower quickly; finally some studies show that impacts positive impacts exist. India is the country with more problems regarding KM even if the Government is well aware of the importance of KM in the country; the educational basis is very low, demand is made by the companies that use IT professionally which are small fraction, with significant results – and in consequence the need is extremely high. China has not Russia’s educational base and has India’s dimension, even if its educational base is much better than India’s; therefore supply and demand already exist, above all in the internationalized sectors, and needs are very large, and supported by recent empirical studies. Finally in South Africa, supply seems to be important, even if not as in Russia, but demand is also interesting at least in the externalized companies, which have had significant results, making SA the most advanced of the BRICS on KM, even if the dimension is an advantage.

Table 8: Summary – KM in the various countries in a nutshell

	Brazil	Russia	India	China	South Africa
Supply	Modest	Important	Very small	Medium	Important

Demand	Small	Important	Very small	Medium	Important
Needs	Very large	Large	Enormous	Very large	Large
Impacts	Significant	Significant	Significant	Significant	Significant

Source: own work

Discussion

One strong limitation of this paper is that it the work of a solitary scholar. We would like to have time to contact colleagues and contacts we already have in each one of the five BRICS in order to check and update the information we provide for each one of the countries. In that line of thought a possibility of future research would be to make surveys, to researchers, educational institutions and KM bodies, political bodies, labour unions, companies and even elites of all the five countries in order to analyse how KM is implemented, lived, perceived and rewarded in each one of the five BRICS. That would be a mammoth task but the outcome of that study would be considerable. On second thoughts, if the cooperation of the BRICS organization could be obtained the study might be feasible. Let's see what the future brings, having in mind that the importance of the five countries in the world economy is sensed to grow and KM is a decisive instrument for that growth to occur.

Conclusions

From the data we gathered above, we got the distinct impression that KM is a good investment for the BRICS, but it is still a very rare one. South Africa stands a cut above the other countries being benefited by the smaller dimension and the relations with the Western UK, and USA led investments; also the fact that the regime change happened when the Knowledge economy was beginning, helped. China, Russia, India and Brazil are four giants that will emerge stronger and faster the more and the better they will use KM. So, we expect a bright future of KM in the 21st century, as bright as the BRICS future ! The BRICS emergence will only be consolidated by KM. and KM will dominate the world with the BRICS emergence.

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The role of national culture and university context in fostering student start-up activities: Embeddedness perspective*

Tatyana Tsukanova
(corresponding author)
St. Petersburg University, Graduate School of Management
tsukanova@gsom.pu.ru

Galina Shirokova
St. Petersburg University, Graduate School of Management
shirokova@gsom.pu.ru

Michael H. Morris, Ph.D.
James W. Walter Eminent Scholar Chair of Entrepreneurship
Warrington College of Business Administration
University of Florida
St. Petersburg University Graduate School of Management
michael.morris@warrington.ufl.edu

Abstract

Entrepreneurship among students can be influenced by multiple contexts where it is embedded including university context and national culture. They are highly interconnected because student entrepreneurship can be affected not only by university entrepreneurial environment where they can get their first resources but also by perception how useful these resources are and how desirable and feasible the entrepreneurial activities are considered in a given society what is reflected in national culture. Based on double embeddedness perspective we study the role of university entrepreneurship-related offerings in different countries in encouraging student start-up activities, and provide a deeper insight into the role of cultural contexts in facilitating or discouraging these entrepreneurial initiatives.

Keywords: *student entrepreneurship, embeddedness, national culture, university offerings, start-up activities, curricular programs, co-curricular activities.*

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The role of national culture and university context in fostering student start-up activities: Embeddedness perspective

1. Introduction

Context is now recognized as a critical factor in explaining entrepreneurial activity (Welter, 2011). According to this view entrepreneurs are embedded in a particular places, communities and networks which socially frame resources and opportunities (McKeever, Jack & Anderson, 2015). In this paper, we focus on the effect of different types of university offerings on the scope of start-up activities undertaken by young nascent entrepreneurs, which in our case are university students. We also explore the strength of this effect in different cultural settings. According to an emerging stream of literature, there is relationship between university context, and entrepreneurial activities undertaken by students (Bae et al., 2014). The spirit of the educational place, its shared values and norms can affect entrepreneurial intentions and actions. University entrepreneurial environment can be seen as the number of interrelated parts that may have an impact on student entrepreneurship (Morris, Shirokova & Tsukanova, 2015).

University environment is not an only one to define the level of students' start-up activities. Cultural values have a significant effect on entrepreneurial activity, with certain cultures encouraging and generating entrepreneurial behavior more than others (Shapero & Sokol, 1982). National culture can be defined as "the values, beliefs and assumptions learned in early childhood that distinguish one group of people from another" (Newman & Nollen, 1996, p. 754). National culture may influence the psychological characteristics of individuals, including values, motives and beliefs (Hayton, George & Zahra, 2002), and their willingness to become entrepreneurs (Davidsson & Wiklund, 1997). Overall, the characteristics of national culture may impact the supportiveness of the external environment for new venture creation (Etzioni, 1987; Hayton, George & Zahra, 2002) and explain the difference in the levels of entrepreneurial intentions and startup activity in different countries.

The current research seeks to determine how the university environment and national culture impact on students' entrepreneurial behavior. Building on embeddedness perspective and entrepreneurship research, we develop and test hypotheses linking university context to students' start-up activities and providing an explanation of moderating effects of national culture in these relationships, using large international sample of students from different universities and countries. To test the study hypotheses, we use data from the 2011 "Global University Entrepreneurial Spirit Students' Survey" (GUESSS) survey, selecting only those respondents who were actually involved in the process of starting up a business, to a usable sample of 31,812 students from 24 countries.

Thus, the potential contribution of this study is with regard to the insights about exploring new ways of testing the influence of multiple layers of the context where the students are embedded and that can influence the formation of their entrepreneurial career. The main findings provide the basis for assessing the role of universities and the impact from national culture in potential for students' start-up activities. The theoretical insights can be used for further empirical research, as well as policies that can stimulate the students' entrepreneurial behavior at universities.

2. Theoretical Framework and Hypotheses

Embeddedness is considered as "the social structural, cultural, political, and cognitive structuration of decision situations in economic contexts" (Beckert 1999, p. 3). The embeddedness concept enables understanding of how involvement in different social groups and places influences and shapes actions (McKeever, Jack & Anderson, 2015). In our paper we adopt embeddedness perspective by applying two levels of embeddedness for student

entrepreneurial start-up activities: university environment and national culture. University embeddedness explains the impact of different types of university offerings, conventions, norms, values and beliefs which are common in the university context where students are embedded, and can influence their entrepreneurial behaviors. Cultural embeddedness uncovers the influence of social conventions, norms, attitudes, values and beliefs of the nation where students were brought up and within which they make their decisions and the real entrepreneurial actions take place. Indeed, without understanding of the ways in which students' start-up activities are culturally constituted we can fail to explain the reasons why they don't consider entrepreneurial career as an eligible option.

Start-up activities are the events and behaviors of individuals who are engaged in the process of starting a new venture (Gartner, Carter & Reynolds, 2004). Research on organizational emergence and start-up activities has become an important branch of entrepreneurship research. Most findings indicate that entrepreneurs who were engaged in more start-up activities were more likely to continue the organizing effort (Brush, Manolova & Edelman, 2008). In other words, the greater the scope of start-up activities undertaken by early-stage entrepreneurs, the greater the likelihood of successful new venture emergence. Thus, the outcome variable of interest in our study is the scope of start-up activities undertaken by aspiring student entrepreneurs.

Universities can play a role of facilitators of their entrepreneurial behavior by supplying students with primary resources, which are crucial for launching a new venture. They are offering three basic types of resources related to entrepreneurship and start-up activities: lectures and seminars about different topics (curricular programming); networking and coaching opportunities (co-curricular programming); and financial resources for founding a business (Kuttim et al., 2014). We adopt embeddedness perspective in order to examine the students' entrepreneurial behavior within university context (Granovetter, 1992). The impact of universities is a function of the social engagement of the student with the resource infrastructure.

Each university has its own curriculum. Some of them can be regarded as more entrepreneurially-oriented, while others are following a traditional path. Universities with high level of entrepreneurial environment offer multiple entrepreneurship-related courses for their students because the exposure to entrepreneurial learning can facilitate students' understanding of entrepreneurial process and increase their entrepreneurial intentions. We argue that curricular lectures or courses on entrepreneurship are positively related to scope of entrepreneurial start-up activities because they may assist in the acquiring of knowledge important for entrepreneurial activity.

In recent years, studies have proposed that universities offer more co-curricular activities, which focus on learning efforts outside of the classroom, and allow students to be exposed to actual entrepreneurial environments (Morris et al., 2013). Co-curricular activities (e.g., entrepreneurial mentorships and coaching programs, speaker series, entrepreneurship clubs, entrepreneurship dormitories and learning communities) can provide students with opportunities to network with experts within the university, entrepreneurs, and other professionals (Kuratko, 2005).

Financial resources can be crucial for implementing the most important first steps in new venture creation, such as product development, purchase of equipment or materials. Financial support is especially critical, even in relatively small amounts, in the start-up phase (Stuart & Sorenson, 2003). Based on this discussion, we propose the following hypotheses:

H1. The engagement of students in entrepreneurship-related curricular programs is positively related to the scope of their start-up activities.

H2. The engagement of students in entrepreneurship-related co-curricular activities is positively related to the scope of their start-up activities.

H3. The engagement of students in special programs offered financial support for student entrepreneurs at university is positively related to the scope of their start-up activities.

Cultural values have a significant effect on entrepreneurial activity, with certain cultures encouraging and generating entrepreneurial behavior more than others (Shapiro & Sokol, 1982). Culture determines the mental models and the way how the information is managed by a person. It is well known that humans are “a cultural species” (Mesoudi, 2011), and culture is “the collective programming of the mind which distinguishes the member of one human group from another” (Hofstede, 1980, p. 25). Within the cultural dimensions developed by Hofstede (2001), *individualism*, *power distance*, and *uncertainty avoidance* can help to understand the “*how*” and “*why*” of student entrepreneurship.

One dimension is *individualism* as opposed to collectivism, and it reflects the degree to which individuals consider themselves different and independent from social groups, national cultures where they are embedded. The perception of the role of universities can vary a lot among individualistic and collectivist societies. In the university environment, the level of interdependence between individuals may shape the way university offerings forms students’ entrepreneurial intentions and start-up activities. Prior studies show that in high in-group collectivistic countries there is a positive effect of entrepreneurship education on students’ entrepreneurial intentions (Bae et al., 2014). The main explanation of this result is that “in-group collectivism can amplify the consensus with their cohort because of its association with an accepted social norm, connectedness, and relationship with others in the cohort” (Bae et al., 2014, p. 226). Thus students in higher collectivistic cultures are unlikely to contradict a class consensus, which might be regarded the level of entrepreneurial intentions and activities (Manikutty, Auradha & Hansen, 2007). Following this logic, we hypothesize that:

H4. The positive relationship between students’ engagement in (a) entrepreneurship-related curricular programs; (b) entrepreneurship-related co-curricular activities; (c) programs offered financial support for student entrepreneurs and scope of their start-up activities will be weaker in high individualistic countries than in low individualistic countries.

Power distance defined as “the extent to which a society accepts the fact that power in institutions and organizations is distributed unequally” (Hofstede, 2001). Regarding the university context, in low power distance countries students are more likely to be engaged in discussion and challenge a teacher’s authority based on their own experience (Bae et al., 2014; Holtbrugge & Mohr, 2010). On the other hand, students in a high power distance culture treat teachers with respect and are more likely to follow the lessons from their teachers to avoid being critical (Hofstede, 1986; Joy & Kolb, 2009). We can expect that when students in high power distance countries enroll in entrepreneurship education program and engage in different types of university offerings, they will accept the authority of entrepreneurship educators as well as mentors and coaches met during co-curricular activities. Thus, we suggest:

H5. The positive relationship between students’ engagement in (a) entrepreneurship-related curricular programs; (b) entrepreneurship-related co-curricular activities; (c) programs offered financial support for student entrepreneurs and scope of their start-up activities will be stronger in high power distance countries than in low power distance countries.

The cultural dimension of *uncertainty avoidance* refers to “the extent to which the members of an organization or a society strive to avoid uncertainty by relying on established social norms, rituals, and bureaucratic practices” (House et al., 2004, p. 11). In the university context, students from high uncertainty avoidance countries recognize the uncertainty of entrepreneurship and are less willing to pursue entrepreneurial initiatives, compared to students from low uncertainty avoidance countries (Bae et al., 2014). At the same time, in high uncertainty avoidance societies, students are more likely to apply skills and knowledge,

which are less risky and are not breaking existing rules in a society (House et al., 2004) while risky opportunities are not likely to be implemented. Thus, it may be assumed that relationship between different university entrepreneurship-related offerings and students' entrepreneurial behavior will be stronger in countries with low uncertainty avoidance. Building on these arguments, it is hypothesized that:

H6. The positive relationship between students' engagement in (a) entrepreneurship-related curricular programs; (b) entrepreneurship-related co-curricular activities; (c) programs offered financial support for student entrepreneurs and scope of their start-up activities will be stronger in low uncertainty avoidance countries than in high uncertainty avoidance countries.

3. Method

We used data collected for the Global University Entrepreneurial Spirit Students' Survey (GUESSS) in 2011 to test our hypotheses. We considered only "intentional founders". It means that we included only those students who are thinking about starting their own firms, working on a concrete time plan or starting with the realization. We excluded exchange students and those who were born before 1975 or after 1997. We had to exclude students from countries for which no institutional index or cultural scores were available. The final sample includes 31,812 students from 24 countries (Argentina, Austria, Belgium, Brazil, Chile, China, Estonia, Finland, France, Germany, Hungary, Ireland, Japan, Luxembourg, Mexico, the Netherland, Pakistan, Portugal, Romania, South Africa, Russia, Singapore, Switzerland, the United Kingdom) and 281 universities. The descriptive statistics are presented in the Table 1.

Our dependent variable, the scope of start-up activities, was measured as the total number of start-up activities. Students were asked to choose any activity (or activities) from the following options: (1) "nothing done so far"; (2) "thought of first business ideas"; (3) "formulated business plan"; (4) "identified market opportunity"; (5) "looked for potential partners"; (6) "purchased equipment"; (7) "worked on product development"; (8) "discussed with potential customers"; (9) "asked financial institutions for funding"; (10) "decided on date of foundation". The items that were marked were coded as "1" (and "0", if not). The answer "yes" for the first option "nothing was done so far" was re-coded as "0" if a person agreed with it and as "1" if he/she didn't mark it in the list. From these choices, we coded the scope of start-up activities as the sum of entrepreneurial steps undertaken by students. The number was ranged from 0 to 10.

The measure of *student's engagement in entrepreneurship-related curricular programs* focused on the student's obtained level of entrepreneurship knowledge. Respondents reported the absolute number of entrepreneurship-related courses attended by students during their studies, including the following: 1) entrepreneurship in general; 2) family firms; 3) financing entrepreneurial ventures; 4) technology entrepreneurship; 5) social entrepreneurship; 6) entrepreneurial marketing; 7) innovation and idea generation; 8) business planning, and 9) other. The *university entrepreneurship-related co-curricular activities* measure emphasized entrepreneurship-related offerings available outside of traditional coursework at the universities attended by students. This variable was measured as the absolute number of five offerings engaged in by students: 1) workshops/networking with experienced entrepreneurs; 2) contact platforms with potential investors; 3) business plan contests / workshops; 4) mentoring and coaching programs for entrepreneurs; 5) a contact point for entrepreneurial issues. *University financial support* was codified as a dummy variable with a value of 1 if a student participated in university programs offering financial resources for student venture creation (in the form of seed funding or other financial support).

To assess the cross-cultural differences, we employed the data from the Hofstede Centre¹. We used three cultural dimensions as moderators: *individualism*, *power distance* and *uncertainty avoidance*. Each item was coded in the range from 0 to 1. Each cultural score was multiplied by each type of university offerings. We *controlled* for students' *age* (calculated based on the self-reported year of birth), *gender* (dummy variable, coded as "0" for male and "1" for female students), *bachelor* (dummy variable, coded as "1" for bachelor students and "0", otherwise), *field of study* (dummy variable, denoting Business and Economics as "1" and "0" for others), *family background* (dummy variable, coded as "1" if the parents were self-employed at the moment of survey or had ever been self-employed, and "0", otherwise), *previous experience* (dummy variable, coded as "1" if the student reported professional experience relevant to the company to be founded, and "0", otherwise).

4. Results

We applied the hierarchical regression analysis to test the hypotheses. We added the variables step-by-step starting from the controls. Our dependent variable is a count (the level of student engagement in entrepreneurship), therefore we specified a hierarchical Poisson regression. In addition, we clustered the standard errors at the university level to account for the possibility of non-dependence of observations, as the observations (students) are nested within the universities. The results of the regression analysis are presented in the Table 1.

Table 1
Estimates of the Effects on the Scope of Start-Up Activities among Students

Variable	Model I	Model II	Model III	Model IV	Model V
Age	0.013*** (0.003)	0.013*** (0.003)	0.013*** (0.003)	0.013*** (0.003)	0.013*** (0.003)
Gender	-0.237*** (0.013)	-0.231*** (0.012)	-0.232*** (0.012)	-0.233*** (0.012)	-0.233*** (0.012)
Study level	-0.040** (0.018)	-0.043** (0.017)	-0.048*** (0.017)	-0.048*** (0.017)	-0.047*** (0.017)
Field of study	0.079*** (0.013)	0.051*** (0.011)	0.051*** (0.011)	0.051*** (0.011)	0.051*** (0.011)
Family background	0.098*** (0.007)	0.091*** (0.008)	0.090*** (0.008)	0.089*** (0.008)	0.090*** (0.008)
Previous experience	0.329*** (0.009)	0.321*** (0.009)	0.321*** (0.009)	0.321*** (0.009)	0.321*** (0.009)
Individualism	0.132** (0.062)	0.139** (0.059)	0.087 (0.058)	0.113* (0.059)	0.131** (0.059)
Power distance	0.553*** (0.067)	0.443*** (0.058)	0.407*** (0.061)	0.407*** (0.063)	0.447*** (0.059)
Uncertainty avoidance	-0.221*** (0.078)	-0.147** (0.069)	-0.119* (0.070)	-0.101 (0.070)	-0.135* (0.071)
Curricular programs		0.024*** (0.006)	0.026*** (0.004)	0.026*** (0.005)	0.024*** (0.005)
Co-curricular activities		0.044*** (0.007)	0.042*** (0.006)	0.043*** (0.006)	0.042*** (0.007)
Financial support		-0.097*** (0.018)	-0.088*** (0.018)	-0.092*** (0.018)	-0.097*** (0.018)
Individualism x curricular programs			0.072***		

¹ The Hofstede Centre. Accessed at: <http://geert-hofstede.com/countries.html>

				(0.023)	
Individualism x co-curricular activities			0.084***	(0.030)	
Individualism x financial support			0.114	(0.101)	
Power distance x curricular programs			-0.054**	(0.023)	
Power distance x co-curricular activities			-0.100***	(0.028)	
Power distance x financial support			-0.084	(0.083)	
Uncertainty avoidance x curricular programs					-0.063**
					(0.030)
Uncertainty avoidance x co-curricular activities					-0.050
					(0.039)
Uncertainty avoidance x financial support					-0.213
					(0.133)
Regression Function					
_cons	0.304***	0.186*	0.210**	0.191*	0.191*
	(0.102)	(0.106)	(0.104)	(0.102)	(0.106)
Wald chi2	2407.92	2695.00	3036.04	2892.44	2969.61
Pseudo R2	0.0362	0.0396	0.0406	0.0404	0.0399
N	31812	31812	31812	31812	31812

Notes: *p<0.10, ** p<0.05, ***p<0.01; Prob > chi2 = 0.000

Hypothesis 1 proposed that students' engagement in entrepreneurship-related curricular programs would be positively related to the number of start-up activities undertaken by students. As shown in the Models II – V, this effect remains positive and significant throughout all specifications (0.024-0.026, p<0.01). Hypothesis 2 proposed that students' engagement in entrepreneurship-related co-curricular activities would be positively related to the number of start-up activities among students and it was supported as it was highlighted in the Models II – V (0.042 – 0.044, p<0.01). Hypothesis 3 proposed that students' participation in special programs at universities where financial support was offered would be positively related to their engagement in entrepreneurship but this hypothesis was rejected. As shown in the Models II – V having an access to university financial support is associated with the lower number of start-up activities among students (-0.088 – -0.097, p<0.01), contrary to our expectations.

The results (Model III) revealed that the impact on the scope of start-up activities of entrepreneurship-related curricular programs (0.072, p<0.01) and co-curricular entrepreneurship-related activities (0.084, p<0.01) in high individualistic countries was stronger compared to low ones (contrary to our expectations). We found (Model IV) that in high power distance countries the effect of entrepreneurship-related curricular programs (-0.054, p<0.05) and co-curricular entrepreneurship-related activities (-0.100, p<0.01) on the scope of student start-up activities was weaker, and these results reject our Hypotheses H5a and H5b. We also found a significant and negative effect in relation to entrepreneurship-related curricular programs attended by students (-0.063, p<0.05). It means that high

uncertainty avoidance in the society diminishes the positive effect of entrepreneurial courses on the number of student start-up activities (only H6a was supported).

5. Conclusion

In this study, based on embeddedness perspective, we explored the relationship between different types of the university entrepreneurship-related offerings and students' entrepreneurial behavior in different cultural contexts. We found that culture can be depicted as a moderator of the relationship between university offerings and student entrepreneurship. The main findings of our study suggest that the effect of different types of university entrepreneurship-related offerings on students' entrepreneurial behavior could vary across national cultures and this effect may be opposite to the expected outcomes. Moreover, we found cultural values regarding entrepreneurship in society might affect greater on students' behavior rather than values regarding transmission of values from teachers to students (Perkun, 2000).

The study contributes to the existing literature on nascent student entrepreneurship and start-up behavior in at least three ways. *First*, extensive prior research, published in many of the major entrepreneurship journals, has explored the entrepreneurial intentions of university students (Autio et al., 2001; Zellweger, Sieger & Halter, 2011), but the actual realization of these intentions is relatively less studied. In this paper, we document how university students' entrepreneurial intentions are translated into entrepreneurial action. This is our empirical contribution. *Second*, the study furthers our understanding of the impact of key elements of the university environment on student start-up activity. Previous studies emphasized the roles of business planning (Shane & Delmar, 2004), legitimacy (Zimmerman & Zeitz, 2002), institutions (Choi & Shepherd, 2004) and related variables on start-up activity, but have not examined such variables, as curricular and co-curricular programming in a university context. *Finally*, the study provides insights regarding the role of national culture in moderating the impact of the university environment on students' start-up behavior. It focuses on the cultural contingency of entrepreneurial behavior and aims to reveal the role of national cultural characteristics in relationship between university context and the scope of students' start-up activities. Our study demonstrates that a cultural value paradox (de Mooij, 1998; Jung, Polyorat & Kellaris, 2009) might be useful theoretical framework for cross-country studies in entrepreneurship research.

The results reported in this paper have *implications* for entrepreneurship educators and public policy makers responsible for developing and supporting entrepreneurial university context. For policy makers willing to develop entrepreneurial activities in their countries, the study provides insights regarding the influence of cultural characteristics on the effect of different types of entrepreneurship-related university offerings on the level of students' entrepreneurial behavior. Some cultures have comparatively low level of entrepreneurial activity. However, even in such cultures there are a lot of young people who want to become entrepreneurs and who can benefit from entrepreneurship education. Thus, greater attention might be given to a total university entrepreneurship education systems concept as investments are made in the development of entrepreneurship-related programs with universities, where individual components are not designed in isolation, but instead, the inter-relationships among these components and the complementary roles they play are considered. For educators, this study provides insights about environmental factors that influence the benefits from different types of the university offerings for student entrepreneurship. This allows creating a favorable environment for entrepreneurship not only taking into account individual differences between students but also exploiting countries' cultural characteristics.

To conclude, while the present research marks only the beginning of a promising new area of investigation between university entrepreneurship-related offerings and students' entrepreneurial behavior; it nonetheless represents a cornerstone upon which future research exploring the cultural and other contextual contingences of youth entrepreneurship within different economic contexts may build. Moreover, it is our hope that our work will lead to greater incorporation of embeddedness considerations within the broader entrepreneurial behavior literature in general, which to date has been relatively agnostic towards contextual factors. It is our sincere hope that these findings serve to inspire additional scholarly inquiry linking contextual factors to the students' entrepreneurial behavior, and sparks further discussion concerning the differences and considerations which exist when encouraging students' entrepreneurial activity in different university and cultural contexts.

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José G. Vargas-Hernández, M.B.A.; Ph.D.
CUCEA, Universidad de Guadalajara
Periférico Norte 799 Edif. G201-7; Los Belenes; C.P. 45100, Zapopan, Jalisco, México
Tel. +523337703340 Ext. 25685
jvargas2006@gmail.com, jgvh0811@yahoo.com, josevargas@cucea.udg.mx

José Satsumi López-Morales
Economic-Administrative Sciences Department
Instituto Tecnológico de Veracruz
Veracruz, México
jsatsumi@gmail.com

Tania Martínez Haro
CUCEA, Universidad de Guadalajara
Periférico Norte 799 Edif. G201-7; Los Belenes; C.P. 45100, Zapopan, Jalisco, México
Tel. +523337703340 Ext. 25685
jvargas2006@gmail.com, jgvh0811@yahoo.com, josevargas@cucea.udg.mx

**DEPICTING THE ACQUISITION OF MODEL GROUP BY AB InBev: THE
IMPLICATIONS FOR THE MEXICAN BEER MARKET.**

Abstract: This paper depicts the most important acquisition of the Mexican economy in financial terms, which was carried out in 2013, in which the target was the leading Mexican brewer Model Group and the buyer the world leader in this sector Ab InBev. The acquisition has brought changes that directly affect the dynamics of the beer industry in Mexico. This condition favored the growing microbrewers and craft beer sub-market in Mexico. The results showed by the company were analyzed to make a comparative analysis of the effects of the transaction on the company, which have been mainly mergers and sales of other economic units belonging to corporate.

Keywords: Acquisitions, FDI, Grupo Modelo, internationalization, takeovers

JEL. F23, G34, L66, M16

1. Introduction

Historically the beer industry in Mexico has been important. This industry contributes with 2% of the country manufacturing industry with around 20,000 millions of dollars per year. It represents around 4% of total tax revenue and produces 0.3 % Gross Domestic Product (INEGI, 2014). In this context, Mexico is the 6th place as producer of beer around the world with 78, 000 millions of liters per year. Likewise as consumer Mexico also holds the 6th place, and in accordance with PROFECO (2013) the consumption per year is 62 liters per capita .

The role of Mexico in the international beer market is relevant too. Mexico is one of the most important exporters of beer in the world. The Mexican beers are sold in 180 countries around the world and generating 2,000 million to the Mexican economy. Mexican beer industry employs 55,000 people, according to the National Chamber of Industry Beer and Malta (Canicerm, 2014). However, also is relevant as indirect employer with 2 million of indirect employers in the country; where are outstanding the services which include food preparation; restaurants and recreation amenities.

The beer market in the country has a structure of oligopoly type duopoly because there are two large companies who have more than 98% of the national market. These two large companies are Model Group and Grupo Cuauhtemoc-Moctezuma, and both have ceased to be Mexican. In 2010 FEMSA sold to the Dutch company Heineken, the beer division, Cuauhtemoc-Moctezuma, and in 2013 the sale of Model Group materialize the most important worldwide Belgian-Brazilian brewer Anheuser-Busch InBev (ABInBev). Thus with these transactions the Mexican beer market has become an extension of the international competition between two of the most important beer companies around the world.

This article is focused on acquisitions, specifically analyzes the case of Grupo Modelo and the recent acquisition by the company AB InBev. The terms in which the acquisition is given and the effects it has had on Model Group and the reputation of the goods to consumers are discussed. Changes that have emerged in its corporate governance structure and the strategies commercial level are described. Also, there are analyzed the financial results reported by Grupo Modelo to the Mexican Stock Exchange over fiscal year 2013 to detail those in which acquisition had any effect.

2. Background of the problem

A. Model Group

It is a company dedicated to the development and marketing of beer in Mexico and globally. Model Group was founded in 1925 by Braulio Iriarte Goyeneche in Mexico, was sold in 1936 to Pablo Diez Fernandez and kept his Mexican citizenship until 2013 when the acquisition of Anheuser-Busch InBev, the leading brewer in the world, was defined by \$ 20,100 million USA Dollars.

Model Group holds a vertical integration since everything is owned by the company. It has a forward and backward integration, i.e., control inputs, production, distribution and sale of

beer. Model Group has defined a clear objective: To have a supply chain of excellence and production processes of world class that serve as a platform to develop high quality products at competitive costs with which to satisfy a growing number of consumers.

Model Group has an installed capacity of 61.5 million hectoliters of beer annually. Currently Model Group has 14 brands, including the Corona Extra, which is the main Mexican beer in the international markets. Model Group Export seven brands to a total of 180 countries around the world (e.g. United States, Hong Kong, Belgium, New Zealand, Australia, Brazil, Germany, Japan and so on).

Model Group produces, distributes and sells 14 brands of beer, in different presentations, returnable bottles, non-returnable and can, diversified in different sizes. Besides, through a strategic alliance with Nestlé, produces and distributes in Mexico watermarks bottled Sta Maria, Gerber and Nestlé Pureza Vital. The inputs required for the manufacture of beer are malt, water, hops, yeast and attachments.

Table 1. Sales of Grupo Modelo (Millions of hectoliters)

Year	Volume	% Change	Exports	%Export
2006	33.98		14.24	
2007	35.61	4.80	15.94	11.94
2008	36.28	1.88	16.03	0.56
2009	37.25	2.67	15.27	-4.74
2010	36.84	-1.10	15.83	3.67
2011	39.09	6.11	16.9	6.76
2012	38.98	-0.28	17.7	4.73
2013	38.18	-0.20	13.34	-24.63

Source: Own elaboration with data of Grupo Modelo

The Table 2 shows the percentage of change in volume of hectoliters and the volume of hectoliters for export. The trend of production was negative in some years and when it was not negative the positive trend was minimum. On the other hand, the export trend was positive in the most part of years. These trends explain the role of Model Group in the international markets, due to the best export performance.

B. Ab InBev

The Ab InBev group has been formed by a series of mergers and acquisitions that are not detailed in this article. It is considered subject to be treated separately. The group has its beginnings in the Belgian company Interbrew founded in 1987, which in 2004 merged with Brazilian brewer AmBev to form InBev. Then, in 2008 acquired the largest U.S. company, Anheuser-Busch, who had 50% of the shares of Grupo Modelo and Ab InBev was formed having annual income of 39, 758 million dollars.

It has headquarters in Leuven, Belgium and Sao Paulo, Brazil. It is the world's largest brewer, with a U.S. market share of 50% and 70% of the European market. Its market share globally is close to 25%. It is the company that produces Budweiser, Stella Artois, Beck's, Staropramen,

Lefte and Hoegaarden beers. The company has 120,000 employees in more than 30 countries and with the recent acquisition of the Mexican leader will increase its lead over its main competitors, the British company SABMiller and Heineken Dutch, who occupy the second and third, respectively, in terms of participation in global beer market is concerned.

Table 2.Sales of Ab Inbev (Millions of hectoliters)

Year	Volume	% Change	Exports	%Export
2008	416,13		2,788	
2009	408,63	-1.8%	5,663	103.12
2010	399,365	-2.26%	6,681	17.97
2011	402,631	0.81%	7,004	4.83
2012	430,821	7%	12,079	72.45
2013	425,939	9.90%	15,323	26.85
2014	345, 646 **	-18.85%	7,726**	-49.57

** Data available until September of 2014.

Source: Own elaboration with data of Ab Inbev.

The Table 3 shows the percentage of change in volume of hectoliters and the volume of hectoliters for export. The trend of production was negative in some years and when it was not negative the positive trend was acceptable. However, the export trend was positive in all the showed years. These trends indicate the importance and relevance of Ab Inbev Group in the beer industry, as a successful firm around the world.

3. Defining the problem

In the previous sections of this article it has talked a bit about the importance of the brewing industry in the country as well as companies involved in the acquisition of which is this document. Model Group has positioned his beer "Corona" not only in the country but has come to conquer international markets, placed fourth as the favorite among consumer preferences globally behind only Bud Light, Budweiser and Heineken according to the BrandZ Top 100 Most Valuable Brands 2013.

Model Group has a national market share of 55.9%, a total of 63 million beer drinkers and growing 1 million each year. After the economic crisis of 2008, the brewing industry in Mexico has grown and has a favorable prognosis and it is estimated to increase by 3% the value of the industry. Model has maintained its leadership in the country and had an internationalization strategy since 1933 when sporadically began exporting to the United States and for 1985 already exported to Japan, Australia, New Zealand and some European countries.

Through an efficient distribution network, a quality product and advertising campaigns and positioning Model Group get to 180 countries, became the most important globally Mexican beer. Model Group has achieved that Corona beer dominates the U.S. market as the beer imported beer most sold in the foreign country. The success of Grupo Modelo has never been in doubt, it was one of the most emblematic Mexican brands that was a source of pride for the

Mexican consumer, formed a sense of belonging to the brand through its campaign: "In Mexico and the world is Corona beer".

The success and the set of strategies that the company had to pre-acquisition gives place to question the motives that led the owners of this iconic Mexican company to sell their family empire. No doubt this has been the acquisition of greater monetary value for the Mexican economy that have sparked various concerns about the industry itself and the shares of Grupo Modelo. The questions guiding this research are what are the main reasons that led to the former majority owners to sell their profitable business? What have been the effects of the acquisition of Model Group on the same? What direction will have the beer industry in Mexico and globally?

A. Assumption

The acquisition of Model Group has brought changes that directly affect the dynamics of the beer industry in Mexico. This situation favored micro beers manufacturers and craft beer segments in the country.

4. Conceptual theoretical framework

Based on the theory of internationalization that posits that because the transaction costs to bear as a result of conducting business in imperfect markets, is more efficient (less costly) for firm to use internal structures instead of intermediaries market to serve a foreign market (Beamish and Banks, 1987). The theory suggests several strategies for firms when seeking to enter a foreign market. Pan and Tse (2000) suggest a hierarchical model of entry to other markets, where assets are divided into mode and non-material way. The equity mode is one in which the use of property or capital in the new market entry (Peng, 2010) is involved.

This input mode leads to foreign direct investment (FDI) that is the capital that a foreign firm brings to the economy of another country to invest or acquire a company in the local market. Apart from the benefits of internalization exchange of property assets across international borders, FDI diversified in different places allows a company to take advantage of various locational advantages as a workforce at competitive prices, access to critical resources and to develop new knowledge and skills to improve their international competitiveness (Lu and Beamish, 2001).

An input mode based on equity and FDI are acquisitions that Anand and Delios (2002) defined as a mechanism used to exchange capabilities that are otherwise not possible or redistribute efficiently. As an acquisition, it is the transfer of control of the operations and management of a company (target) to another (purchaser), which makes the first unit in the second (Peng, 2010). The advantages of Ab InBev to make the purchase is that it has full ownership and control of operations, improving its ability to control the global market, no need to add capacity to the company and its strategies are developed faster.

Comprehensive and global strategies are characterized by a high level of globalization of competition in the markets for domestic products that are internationalized and focus on

capturing economies of scope and scale (Harzing, 2002). The dominant strategic requirement is efficiency, and as a result, leads to integrate and rationalize its production to produce standardized products in a very cost effective manner.

International acquisitions give emerging-economy firms access to key strategic resources that may not be available in their domestic market (Gubbi, Aulakh, Ray, Sarkar & Chittoor, 2010). In addition, the acquisitions have prompted the development of some industries around the world. For example the big players in the beer industry as Anheuser-Busch InBev, Heineken, SABMiller and Carlsberg have the control the 70% of the market around the world using a strategy based in acquisitions (Rooney, 2014).

The acquisition is still very new as it has only been a year since the sale has been concredited and the change of Chairman and CEO of Grupo Modelo, Ab InBev faces the risk that the acquisition will fail due to shocks combined by organizational cultures with clashes of national cultures, poor organization or nationalist concerns against the takeover of foreign companies. For Model Group case must guard the organizational culture it has to, in the transition to Ab InBev's culture, employees have no conflict of adaptation.

From a market perspective, the issue to take care is protectionism for national brands that may arise in consumers to favor Mexican craft beers which may affect sales of Grupo Modelo to stop being Mexican. To avoid these conflicts will be important decisions to be taken by the new board. The directors seek to develop and maintain a favorable reputation as being active representatives of shareholders, increasing their human capital in the meetings for forming joints and increasing its attractiveness as candidates for board appointments at other firms (Zajac and Westphal, 1996). Also guarding and taking care of their reputation with domestic consumers.

5. Contextual framework

The Mexican and Brazilian economies have played an outstanding role in Latin America. In the period of 2000 to 2013, both countries contributed with the 63.2% of the total GDP in Latin America (UNCTAD, 2013). However, flows between 2000 to 2012 the FDI flows between Brazil and Mexico only represents the 0.4% (Morales- Fajardo & Diaz-Carreño, 2014). So the acquisition of Model Group by Ab InBev represented an important flow of FDI in the Latin American region.

Anheuser-Busch had 50% of the shares of Grupo Modelo and after being acquired by In Bev. The current company Ab InBev had in 2008 this participation in the actions of the Mexican company and 43.8% of the shares entitled to vote. In 2012 it began talking about the intentions to purchase 50% of the remaining shares of Grupo Modelo brewery giant. Finally, in June 2013 to complete the tender offer (OPA) Grupo Modelo sale was completed by 20,100 million dollars in cash, without conflicts that draw attention but with some resistance from the Mexican shareholders to sell their familiar empire.

The reasons why the Belgian-Brazilian company would acquire Model Group can be described with statistics and trends of the beer market in key markets in this sector. This

company dominates the U.S. and European markets but these markets have presented an unfavorable environment for beer as in the U.S. has decreased the average spending on alcohol consumers from 55% in 2000 to 48% in 2011. Also a report by Gallup (2013) poll shows that Americans' preference for beer is 39% the third time it has fallen below 40% since 1978.

Do you most often drink liquor, wine, or beer?

Based on those who drink alcohol

■ % Beer ■ % Wine ■ % Liquor



Figure 3: Preference for beer in the U.S. market
Source: Gallup, 2013

The European market has also shown a decrease in beer consumption, in part because consumers are changing the beer table wine and liquor, plus the stagnation of the European economy that does not favor the consumption of this product. This pessimistic outlook for the global brewer took Ab InBev to develop a strategy that would allow it to continue to strengthen as the global leader, saw in Grupo Modelo a chance of favorable conditions for growth presented by this sector in the country.

The beer industry in Mexico has had a growth of 3% each year. Business Monitor International forecasts a 44% increase in market sales in Mexico in 2016, resulting in a range of 188 billion pesos for this market. Mexico has culture of beer consumption and as a consumer is the sixth in the world, 53.6% men and 29.3% women prefer, according to the 2011 National Survey on Addictions.

In addition to the upbeat atmosphere of Mexico to the foreign firm, is the fact that this potential market is dominated by Model Group to have about 56% of the market share, plus an attractive position both in the domestic market and outside the country, mainly in the United States and countries in Asia such as Hong Kong and Japan. The Mexican leader has always been very attractive by the profit margins and handling is superior to most breweries worldwide, with EBITDA margin (EBITDA) of 30.1%. These conditions led to Ab InBev to put their eyes on the Mexican company in its ongoing strategy of M & As have placed it as number one worldwide.

The reasons for the counterparty have been detailed in the preceding paragraphs, then this is stating the reasons that led to the main owners of Grupo Modelo and board members, Carlos

Fernández González, María Asunción Aramburuzabala and Valentin Diez Morodo, decide to sell the most important and profitable brewer in the country, to leave the control of the brewing industry in foreign hands.

Competition among the big global brewers is strong. Grupo Modelo had responded well but its previous administration council decided it was necessary to leave the control to foreign group to increase the profitability of Grupo Modelo and be part of the largest group of global brewer. In 2010 FEMSA decided to sell its beer also a global giant. Modelo felt it necessary to do the same for the firm to grow. However, Grupo Modelo had a growth and its shareholders and directors were focused on it, possibly have overcome the challenges at the world scale but chose not to risk and sell.

Arrogance was also present as the best incentive that had shareholders of Grupo Modelo was the selling price. It is remembered that one of the effects of arrogance is that takeovers pay too much for their goals, even when accepting offers an assessment above the current market price represents an error of assessment (Roll, 1986). Ab InBev paid 20,100 million in cash, representing 15.2 times its value.

Announcing the intention to purchase in 2012, the Department of Justice of United States imposed a claim to oppose, arguing that the acquisition would generate monopolistic practices in the country, because Grupo Modelo had a strategic alliance with the brewer Constellation Brands that formed the Crown Imports. Thanks to this strategic alliance has had a 50% in the United States which added to the power of Anheuser-Busch could give rise to a monopoly. Ab InBev and Grupo Modelo reached an agreement with U.S. authorities to complete the acquisition.

Model Group was forced to sell its plant in Piedras Negras, Coahuila, the most modernized of the group and where all the beer is produced for export to the United States. The transaction also included the perpetual control of the distribution of the Corona brand and model in United States and its stake in the company Crown Imports. The transaction was done with its business partner, Consellation Brand for 2, 900 million dollars. This fact impacted on the final numbers of Grupo Modelo in 2013 as its level of exports decreased by 24.63%, according to the group. This is because the beer sales of the plant no longer belong to the company. Global sales of the company also had fallen in 2013 by 9.1%.

In 2013, prior to the closing of the sale of the Group, Mr. Carlos Fernández González, who had a dual personality of CEO because he was Chairman of the Board and CEO of Grupo Modelo resigned from his positions. On June 4, 2013, Ricardo Tadeu Almeida Cabral became Managing Director of Grupo Modelo and ceased to be a Director General Dual and does not occupy the position of President of the Council.

Table 3. Domestic sales and export, Grupo Modelo.

	2013	2012	2011
Beer sales (Millions of Hectolitres)			

National	38.18	38.98	39.09
Exports	13.34	17.70	16.90
Total volume	51.52	56.67	55.99

Fuente: Grupo Modelo

The Global Strategy Group Model consists of five key points:

- A. High growth in international markets
- B. Excellence in products and services
- C. To promote the standard of excellence in process management
- D. Focus on profitability.
- E. Integrate and develop human capital in each stage of the implementation of the strategy

In recent years, Model has followed the global strategy which considers the organization as a system. It focuses on improving processes, interaction and alignment with the strategic map and all companies within the group are aligned with the core business of manufacture, distribution and sale of beer and bottled water (Grupo Modelo, 2014). It is a strategy focused on organization, works in the effective dissemination of the same, the proper alignment of resources and the amount of effort towards creating sustainable economic value. No significant changes were made in the core strategy of the company.

Table 4. Comparison of Model Group sales 2011-2013

Net sales	2013	%	2012	%	2011	%
National	63.396	71.6	59.521	59.9	55.466	60.9
Export	25.206	28.4	39.776	40.1	35.540	39.1
Total	88.602	100.0	99.297	100.0	91.006	100.0

Source: Grupo Modelo.

Table 5. Dividend per share in Model Group.

Payment Year	Dividend per share
2011	2.23
2012	4.36
2013	3.57

Source: Grupo Modelo

Another change made by the new administration began in February 2014 when it announced that it reached an agreement with Circle K by which the company will acquire the business of convenience stores Model Group that operates under the name Extra. The

disintegration of the convenience store business allows Grupo Modelo Extra focus on its core business, the manufacture and sale of beer in Mexico and the world. This decision ended with a corporate business that does allow you to focus on the production, Grupo Modelo had been characterized by their full integration into its distribution channel, although it is noteworthy that this acquisition will benefit Circle K and allow you to advance your competition with OXXO.

Ab InBev also carried out a merger with the 3 marketing companies that work exclusively for Grupo Modelo, Marketing Modelo, SA de CV, Marcas Modelo, S. of R. L of C.V. and Cervezas Internacionales, SA Ltd., as merged companies which are extincted, so the total assets and liabilities became part of Ab InBev. This change also represents a change in its marketing strategy which had been successful so far. Also it was carrying out the merger with Diblo and DIFA who were subsidiaries of Grupo Modelo in some production activities of the company.

The disintegration of the convenience store business Extra allows Grupo Modelo to focus on its core business, the manufacture and sale of beer in Mexico and the world. This decision ended with a corporate business that does allow it to focus on the production, Grupo Modelo had been characterized by its full integration into its distribution channel, although it is noteworthy that this acquisition will benefit Círculo K and allow it to advance its competition with OXXO.

Table 6. Statement Model Group 2013.

Income Statement	2013	2012	2011
Net sales	88,603	99,297	91,006
Gross profit	48,201	52,466	47,595
Operating income	69,280	25,106	22,027
Income before income taxes	25,504	23,759	71,177
Consolidated net income	48,510	18,915	18,285
Net income from participation parent	48,510	12,344	11,826
* EBITDA	73,967	29,342	25,882

Source: Grupo Modelo

It can be observed that the sales of Grupo Modelo decreased this year, although by decreasing its operating expenses and increasing the range and price of the product, the difference was less, the utility is greater this due to acquisitions and mergers that kept Ab InBev year. For better comparisons it is necessary to wait at least another annual report of the company to verify to where it is going the strategy of the new administration.

6. Method

The method used in this paper is descriptive and analytical, which allows a comparison of the situation of Model Group before and after the acquisition. Because it has only been a year since the sale of the company was completed in June 2013, it is limited simply to compare marketing

and financial results in 2012 and 2013. Likewise the most important decisions that have analyzed the new board to try to visualize where are going the Ab InBev objectives to become the principal of Grupo Modelo.

7. Analysis results

Grupo Modelo is a profitable company, if it was fine to be immersed in a challenging global competition; the former owners had demonstrated that they had the ability to carry Grupo Modelo to success. However, the owners decided not to enter into the global battle and sell their business to the world leader to ensure cost effectiveness. This decision has brought changes to the business model of the company where uncertainty has arisen mainly from the Group's employees that have no assurance on decisions taken by Ab Inbev in terms of sales, mergers and closures of various economic units of the company.

The larger effect arising after the acquisition was the sale of the plant in Piedras Negras and the rights to its flagship brands in the U.S. market and the fact that these rights were ceded in perpetuity. This suggests that the company will focus on other foreign markets, as is the case in Australia where the beer has increased its market share.

The most important fact of the acquisition has been the loss of the tradition of Mexican beer and subsequent adjustments to positioning campaigns that had been the pride of Mexico. This paves the way for craft beers are positioned in the market as the only 100% Mexican beers but require large investments to achieve.

Owner-founders of Grupo Modelo did not take the risk of continuing to face the global market to become a leading company worldwide, but preferred to sell their business when they were in a boom and a favorable financial situation, to avoid facing financial problems, that may have subsequently emerged with the global competition, and be forced to sell at prices below the value of the company. In a financial approach to the shareholders, the acquisition was a good deal, but in the business world has been more visionary to remain in control of the company and face the global competition in which it was already immersed.

Finally, the expectations of growth in the craft beer industry in the next years are good. The resolution of the Comision Nacional de Competencia in Mexico against the two brewers giants in Mexico (Cuauhtemoc- Moctezuma and Model Group) in where reduce the exclusive contracts in restaurants and bars open the doors to the small and craft beer producer (Sigler, 2013). This fact can affect negatively the supremacy of Model Group in the Mexican market.

8. Conclusions

Grupo Modelo's sale to a foreign company represents the loss of a symbol as to Mexican brands are concerned. This is because Grupo Modelo had always focused its positioning and advertising campaigns in the pride of being Mexican, carrying various aspects of Mexican culture to countries like Russia, Australia, Japan that have some cultural distance with Mexico. The brand Corona beer created an image and a strong bond with their consumers through the efforts of its managers and employees at all levels; got to be a traditional brand.

The fact that is no longer true Mexican beer can cause disgust that in the local market of craft beer producers could exploit to increase its market share in the country. This situation could represent something favorable to the consumer because competition would achieve to be fairer where the brewing duopoly no longer have control over the prices of beer. Thus, the consumer can acquire other beers. This with the help of the Federal Competition Commission established antitrust regulations.

Ab InBev will continue to strengthen its position to exploit the domestic market and the Latin market also, which represents a great opportunity in terms of growth, although the situation in the U.S. apparently will remain the same. Due to the sale of rights in perpetuity Corona was forced to make a Constellation. Its market share will remain only from the sales Anheuser-Busch. Grupo Modelo has acquired not benefit greatly in that market. A further question that arises from this millionaire's business what will do the 3 families mostly benefited financially from the sale of Grupo Modelo?

Relevant to the best analysis of the effect on the reputation derived from Grupo Modelo resulting from the sale to foreign group would be developing a market research surveys through a given sample of consumers. It would allow knowing the views of consumers and having better certainty on how the brand has been affected after this decision. This study has not been performed due to the limited time that was done the sale. However, it is intended to do it later.

9. Future Research Lines

The analysis of acquisition of Model Group represents an important topic in the acquisitions literature and in the emerging economies topic. The relevance of this acquisition is centered in the economy importance of the transaction, and in the impact in the beer industry in Mexico.

Likewise, as future research topic is important to study the performance of Model Group in the medium and long term. As well is relevant to study the impact of this acquisition in the global beer market and in the performance of Ab InBev around the world. Furthermore, is important to understand if the local capabilities of Model Group as leader in the Mexican market were used as Ab InBev in order to gain competitiveness worldwide, a phenomenon known as “exaptation” (Marquis & Huang, 2010; Gould & Vrba, 1982).

Furthermore, it is important to research the consequences in the corporate governance of Model Group and Ab InBev due to the monetary amount of the acquisition is probably affecting the internal organization of both companies. Finally, is relevant to carry out comparative studies with similar acquisitions in different sectors and countries.

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Luidmila Veselova
Doctoral Student, Faculty of Oriental Studies St. Petersburg State University
milaveselova@gmail.com

Anna Veselova
Researcher, Graduate School of Management St. Petersburg State University
a.s.veselova@gsom.pu.ru

The Role of Informal Relations (Guanxi) in China: Institutional and Business Networks Perspectives

China with its population of more than 1,3 bln people is the biggest and one of the most attractive markets in the world. Interpersonal relations are one of the driving forces of Chinese society. During the last couple of decades, they also became an integral part of Chinese business environment. They tied millions of Chinese firms in social and business networks and turned to be the key determining factor of company's behavior in business. The aim of the paper is to examine the nature of *guanxi* and their role in business life of modern China. The paper reveals the notion, key elements and sources of *guanxi*. It identifies major benefits and drawbacks of the use of *guanxi* for different economic actors in their business activities. The paper also provides several illustrative cases of Western MNCs operating on Chinese market which faced the phenomenon and had to react. Institutional theory is chosen as a general theoretical framework for the research. It is also supplemented by network theory which allows proper positioning of research subject. The research is fully qualitative in its nature and combines methods of historical anthropology as well as common qualitative methods of management research, such as case study. The paper makes both theoretical and practical contribution. Theoretically, it contributes to strategic management and international business literature on emerging markets providing better understanding of the phenomenon of *guanxi*, and, practically, it casts a light upon the specificities of Chinese business environment which could be valuable for companies targeting Chinese market.

1. Introduction

During the last 66 years after the foundation of the People's Republic of China, especially in the years of the Chinese economic reform (1970-s), huge historical changes occurred in China. Today, even in the context of the global economic crisis, China is still one of the leading countries in the world in terms of its economic growth. Due to specific competitive advantages, Chinese companies started actively penetrating the world market, creating important technological, organizational and strategic innovations. These processes stimulated the interest of researches from different fields to investigate various aspects of this phenomenon. Publications of special issues started to appear in most high rating international scientific journals on business, management and sociology. On the one hand, the emergence of a large number of Chinese companies engaged in active geographic expansion has generated scientific debates on the causes and circumstances of this phenomenon. Some researchers argue that traditional theoretical approaches can be used for the companies from emerging economies (e.g. Narula, 2006; Rugman, Li, 2007), others see a need to revise old and develop new theoretical approaches (e.g. Madhok, Keyhani, 2012; Mathews, 2006). Though there is a number of theoretical and empirical research devoted to companies from emerging economies, there is still a space to contribute both theoretically and empirically. On the other hand, there is, as well, a large number of foreign companies penetrating Chinese market which is characterized by high purchasing potential, but also very high specificity. So, various aspects of competitive strategies of foreign companies on Chinese market is also of high interest.

Nowadays, we could see a significant strengthening of cooperation between China and Russia which are, without doubts, the most powerful actors in the region. Over a long period of the history, relations between the two countries have undergone changes, but now they are characterized by a dense and active interaction. A striking example is the thirty-year gas supply agreement, signed on 21 May 2014 by Russian company *Gazprom* and the *Chinese National Petroleum Corporation* (CNPC). The contract provides the supply of up to 38 billion cubic meters of gas per year with a total cost of \$ 400 billion over 30 years. Another important event is the contract signed in 2015, for the construction of a unique high-speed highway Moscow-Kazan by Russian-Chinese consortium, which will help Chinese companies to go global. This project is important for China's economic strategy "New Silk Road", because through this rail line China will be linked with the economies of both East and West. In 2015 there were signed several important agreements, such as the agreement between *Sberbank* and *China Development Bank* for a loan of 6 billion Yuan, the agreement on the establishment of the *Russian-Chinese Investment Bank*, which will finance joint projects between the two countries, the agreement on establishment of heavy civilian helicopters and wide-body aircraft for onward flight, etc. Though in our study we focus on Russian-Chinese cooperation, its results could be interesting and useful for companies from other countries as well.

The Chinese government has a great influence on activities of national companies, using different mechanisms to control their actions. It provides favorable conditions and full support to Chinese companies in their competition with Western corporations. It also tries to support them in achieving and holding positions on domestic and foreign markets. Such support strengthens the position of Chinese companies increasing their competitiveness. However, it should be highlighted that the difference in political, economic, cultural and legal fields between China and other countries often create barriers for the successful performance of Chinese companies abroad and foreign companies in Chinese market.

While operating on Chinese market both foreign and domestic companies regularly face situation when some companies have better access to different resources or institutions due to the fact that their managers have good personal or institutional relations with people/organizations of interest, so called *guanxi*. In this paper we are trying to consider the origin of *guanxi* phenomenon, to develop the most appropriate theoretical framework of this phenomenon from strategic management and international business framework, and to create an agenda for further research. To achieve the aim of the paper we apply institutional and business networks perspectives to position the research question within

international business field. We use methods of historical anthropology and some illustrative cases to unveil the notion of *guanxi*.

2. Theoretical Background

While implementing its activities, every company has to interact with its internal and external environment. This paper is focused on external environment of companies operating on Chinese market and their use of particular specific element of Chinese business environment, i.e. *guanxi*. One of the most powerful theoretical frameworks that could help in addressing these issues is institutional theory and its concepts of power and legitimacy. Institutional theory, extended by basic statements of business networks approach, could provide a solid basis for research on particular type of informal relationships, so called, *guanxi*.

Any organization is in constant various interactions with its external environment, represented by institutions. North (1990) defines institutions as formal rules (e.g. constitutions, laws, and regulations) and informal constraints (norms of behavior, conventions and self-imposed codes of conduct). Institutions set the “rules of the game”, which organizations, in pursuit of their own resources allocative and other goals, must follow. An institutional system is complete only when both formal and informal institutions are taken into account (Dunning & Lundan, 2010).

Every organization is operating in some organizational field formed by “those organizations that, in the aggregate, constitute a recognized area of institutional life: key suppliers, resources and product consumers, regulatory agencies and other organizations that produce similar services or products” (DiMaggio & Powell, 1983: 148). Organizational fields include both populations of competing organizations and interorganizational connections (Powell & DiMaggio, 1991). Through intensive interaction organizations become aware about their involvement in a common domain which clearly defines coalitions and patterns (Friedland & Alford, 1991; Hoffman, 2001). So, despite the fact that organizational fields consist of very diverse members, they undergo structuration (Giddens, 1979). Some scholars state that multinational companies, which are at the front scene of this research, as a specific type of organization form its own organizational field (Kostova et al., 2008). Multinationals across countries and industries belong to an institutional field that operates according to particular rules, logic, and norms and that might be a subject to scrutiny and sanctions by certain legitimating actors in the case of deviation and violation.

When applying the concept of organizational field to multinationals, some scholars highlight the existence of intraorganizational institutional environment within the company with its internal regulations, cognitive structures, and norms that make certain practices and structures more acceptable and desirable than others (Kostova & Zaheer, 1999; Westney, 1993). Such intraorganizational institutional field usually has even stronger influence than the external one, because subsidiaries are often more dependent on the parent company in terms of critical resources than on their local external environment. Driving by the feeling of independence from host external environment companies and relying on headquarters companies could ignore the rules of host country institutional environment and fail. So, the right balance between independence and ignorance is vital, especially, if institutional environment is full of implicit elements.

The core concept of institutional theory is isomorphism. Isomorphism is a constraining process that forces one unit in population to resemble other units that face the same set of environmental conditions (Hawley, 1968). It is stated that isomorphism within organizational field is crucial for company’s survival. There are three mechanism through with institutional isomorphic change occurs: coercive isomorphism, mimetic and normative isomorphism (DiMaggio, Powell, 1983). Coercive isomorphism is the result of different types of pressure (formal or informal) posed on organization by other players on which it is dependent, as well as of cultural expectations of the society in which it operates. Mimetic isomorphism derives from uncertainty which encourages imitation. Poorly performing organizations begin to imitate more successful ones. Normative isomorphism results from professionalization in its two aspects: formal education and legitimation in a cognitive base produced by university specialists; and, the growth and elaboration of professional networks. Institutional theory

implies that there is substantial isomorphism among organizations that result from the adoption and diffusion of certain business models, practices and structures established as a standard in the respective organizational field. However, when we consider isomorphism in its application to multinationals we can argue that it is quite limited (Kostova et al., 2008).

One more aspect of institutional environment is of high relevance for multinationals entering foreign markets, it is legitimation, i.e. acceptance and approval of organizational actions by external constituents. Institutional theory states that isomorphism helps the company to gain legitimacy. However, latest studies show that the process of getting legitimacy by multinationals makes them less similar to each other, less isomorphic. Achieving and maintaining legitimacy are very difficult for multinationals because of the multiplicity and complexity of legitimating environment, intraorganizational complexity and diversity, and ambiguity in the process of legitimation (Kostova & Zaheer, 1999). The process of legitimation is more challenging if there is a large institutional distance between country of origin and host country. As it was already mentioned, isomorphism is not the best mechanism for multinationals to reach legitimacy; instead of this, multinationals are usually trying to negotiate their status with institutional actors to become legitimate in their eyes. Here, negotiation is perceived as a political process of interaction, communication and exchange, which creates a perception about the organization without its necessarily having to implement certain models and practices (Kostova et al., 2008). Negotiations are especially crucial in such countries as Russia and China. Though the basis for this requirement is different in these countries - in Russia, it is the central role of governmental agents, in China – it is cultural specifics in terms of building relationships – doing business in both countries are strongly dependent on legitimization.

Chinese companies are deeply embedded in networks of interpersonal interactions. Managers can use their social capital and business networks to influence the allocation of resources and make economic transactions (Batjargal, 2003; Uzzi, 1997). Building political and business networks in emerging markets plays an important role both for local companies and for subsidiaries of foreign firms. Foreign companies often enter Chinese market to save up on production costs or to obtain access to a new large market. Considering comparatively low level of institutional development subsidiaries of foreign companies are trying to reach competitiveness in different ways. Some of them try to increase concentration of ownership; others aim to build relationships with other companies or state authorities which could perform as an informal substitute of formal institutional support (Bhaumik et al., 2010). These tendencies are in line with the basic statements of network theory which assumes that in the process of implementing their activities companies are embedded in close networks of business relationships with different agents, organizations and institutions. Within this approach existence of markets is explained by existence of more or less stable business networks, which are built and constantly maintained by companies making rather significant investments in their development (Forsgren, Johanson, 1992). Sustainable business networks are one of key sources of competitive advantages for companies as they are rare and hardly substitutable for competitors, and, simultaneously, they are crucial for performance.

To build successful business networks a company should possess knowledge about the market, and past experience significantly facilitates obtaining and processing knowledge about a new market. Uppsala internationalization model states that the major obstacle for successful internationalization of a company is a lack of knowledge on a new market (Johanson & Vahlne, 1977, 2009) and within the process of knowledge gaining the key factor is direct involvement/presence of the company on the market, but not its distant learning via information and data collection. The model assumes a sequential process of internationalization when a company starts to invest in one or a small number of neighborhood countries simultaneously, making investment cautiously and progressively, and in parallel with this process company's management is learning to operate on this market. Market knowledge obtained by one company's business unit is transferred to and shared by others.

3. Notion of *Guanxi*

During 1979-1980 more than 300 thousand companies, among which were MNCs, moved production to China. The total volume of foreign capital that has been invested in China amounted to more than 522.4 billion dollars. Low level of institutions development in emerging economies stimulates building of informal relations between companies and government structures, which provide additional support to companies. In China such informal relations are called *guanxi*. *Guanxi* means the relationships between individuals, groups of people or companies. It is interpersonal communication and prolonged exchanges of the courtesies and favors. In most cases, individuals are not linked by kinship, but they have common background, such as place of birth or living, interests or goals. *Guanxi* are one of the most important criteria for success in modern China. Every Chinese develops its character and skills to build a harmonious and stable social networks and take rightful place in it. *Guanxi* is a stable institute, which appeared in China in ancient times, and it has been developing through the years and now became a key factor in doing business in China. *Guanxi* are much more complicated than ordinary European relations and ties. When person is involved in *guanxi*, these relations and obligations are placed above other considerations, including written law. *Guanxi* are not clearly expressed, it has no time limits and not necessarily equivalent. Every person has its own

network of contacts - *guanxiwang* (关系网), which give additional advantages to an individual or company. That is why the nature of competitive advantages for companies from countries with stable and well-developed institutional environment and countries with weak institutions (like in China) is different. The first ones prefer focusing on strategy while the last ones tend to diversify their activities, in particular, to create business group, which brings many advantages, such as an access to rare resources, well-qualified personnel, intellectual capital, social and business networks.

In order to get qualified staff in China the company Microsoft has built relationships with local governments and conducted the recruitment of talented students in the best technical universities in China. In 2004, Asian branch of Microsoft - Microsoft Research Asia - has signed an agreement with the Chinese Ministry of Education to establish joint science laboratories in the four most prestigious universities in the country: Hong Kong University of Science and Technology, Zhejiang University, Harbin Institute of Technology and Tsinghua University. Moreover, finding top managers they tried to recruit ethnic Chinese, who were well aware of the Asian mentality, but for a long time lived in the United States and were able to interact with European and American counterparts (Burderi & Huang, 2006).

In China *guanxi* plays a role of social capital, which can guarantee the success and development of the company. Social capital is an aggregate of real or potential resources connected with possession of durable networks of more or less institutionalized relationships of mutual acquaintance and acknowledgement, in other words, group membership. It gives the members support in a form of collectively-owned capital and credentials allowing obtaining various types of credits (Bourdieu, 2002). The main component of *guanxi* is "face" (面子, *mianzi*), which means social status in the society, person's ability to meet not only the standards of internal control, but also external standards of society. It is a measure of how society values a person, as it corresponds to the accepted social norms, which were formed throughout the history of China. The term "mianzi" has long been dissolved in the blood of the Chinese people, created a characteristic nature and isolated gene. It is believed that this is a category of irrational values, which includes moral principles. In China the company which has a "face" can solve problems without resorting to legislation. "Face" helps in business networks to obtain unofficial loans, guarantees, and execution of informal agreements. In case of nonfeasance the injured party may transmit this information to the other partners of the network. Injured party can apply to the family, relatives or friends in hope of group pressure, and thus ruin the reputation of the offending obligations (Bocharov, 2012).

In this respect, we could define *guanxi* at micro- and macro- levels. As stated above *guanxi* are interpersonal relations but their implications and consequences could be witnessed both at person-to-person levels and company-to-company level, however, even at company-to-company level very often the direct contact is happening at personal level. For example, one Chinese factory was run out of

necessary components for manufacturing key product. These components were difficult to find on the open market, and the manager of the factory decided to use *guanxi* and contacted his friend working for another factory, which had the necessary components. The payment was arranged to be done after the receipt of components. However, by time of delivery the factory faced problems with cash flows. The manager, who asked help, paid the full price for the components on his own, although the amount was the size of his annual salary. He explained that, otherwise, his *guanxi* with his friend would be destroyed and he will lose the “face” (Luo, 2000). This example shows that when individuals are in *guanxi* network they can be sure that other person from the network will be honest with them and try to do his/her best to solve the problems.

Another import component of *guanxi* are *renging* (人情) - “human feelings”, *xinren* – “trust” (信任) and *kexing* (可信) – reliability. Often when doing business in China companies attracts a third party trusted by both sides. This person acts as an intermediary in the negotiations. Trust is an important element with which you can give up the legal mechanisms, such as contracts. 85% of managers of companies operating in China, said that trust is an essential condition for establishment of *guanxi*. Without it the informal communication can't exist (Luo, 2000).

A specific feature of *guanxi* is the fact that these relations are universal and crucial for everyday life of Chinese people. Chinese turned *guanxi* in a well-thought science. In modern Chinese society there is a notion “*guanxiology*” – “the art, science of *guanxi*” (关系学). This notion includes the art of gifts and favors exchange, organization of banquets and receptions, as well as, skills of relationships building and maintenance, creation of networks of relations based on mutual trust and benefits. Building and developing *guanxi* is an obligatory prerequisite for salespeople, managers, officials and even college students. To perform better a person should have a wide circle of people who could support him/her. For sales managers, it means creation of large network of clients who trust and bring their friends. For officials, it means securing support from powerful people from various areas to strengthen their positions.

The most vivid example of fruitful *guanxi* between local authorities and foreign company is a case of *Shanghai Volkswagen*, which signed a contract with Chinese partner in 1984. In contrast to some other large automobile concerns, like *Jeep* or *Peugeot*, when entering Chinese market Volkswagen decided to make a joint venture: 50% owned by Volkswagen, 25% - *Corporation Shanghai Automotive Industrial Corporation* (SAIC), 15% - *Bank of China* and 10% - *Corporation China National Automotive Industrial Corporation* (CNAIC). The Chinese partners helped Volkswagen in dealing with various problems: *Bank of China* helped in issue and guarantee of necessary loans, the corporation SAIC solved local problems and CNAIC Corporation had a link with the central planning committee. Due to good relations, Volkswagen was permitted to convert their profits from yuan into hard currency (but only to a certain limit, i.e. until production of cars reached 89 000), and the Chinese partners had made a commitment to attract local qualified suppliers. By the mid-1990s *Shanghai Volkswagen* became the largest joint venture in China (Peng, 2000). Due to high negotiation power Volkswagen succeeded on Chinese market, while *Jeep* and *Peugeot* failed. Often when doing business in China companies attracts a third party trusted by both sides, this person acts as an intermediary in the negotiations. Trust is an important element, with which you can give up the legal mechanisms, such as contracts. 85% of managers of companies operating in China said that trust is an essential condition for the establishment of *guanxi*. Without it, the informal communication cannot exist (Luo, 2000).

Research on *guanxi* often addresses the similarity and difference between *guanxi* and bribery. A thorough analysis of the phenomenon allows to conclude that *guanxi* have different nature. In most cases a company will have support and help only if the project it offers is really good. Money is not so important in China in solving questions. Considering “Smeshariki” case could be very illustrative. “Smeshariki” is a famous Russian cartoon, which was adopted in China. For the first time “Smeshariki” was shown in the Russian pavilion of the World Universal Exhibition “EXPO 2010” in Shanghai, and attracted attention in China. Then, there was 8-months period of negotiations about the translation of cartoon on the main Chinese channel CCTV. Unfortunately, because of reduction of

quotes for foreign movies on Chinese TV, the negotiation failed. However, the Head of "Smeshariki" office in China Eduard Konovalov was an orientalist, specialist in Chinese history and culture, who had been living in China from 1989 and knew well Chinese way of doing business and *guanxi* strategy. After the negotiation fail, he contacted the department of Chinese Ministry of Culture, which was in charge of cooperation with Russia and CIS. During the meeting, it was found out that the Head of this department graduated from the Moscow State University and had very warm feelings about Russia. Moreover, he considered that "Smeshariki" was a very successful project which will further strengthen Russian-Chinese cooperation. The common background and perspective project became a good platform for making *guanxi*, and, as a result, after one week the problem with CCTV was solved (Ulyanova, 2015). This case confirms the idea that informal relations work in China much better than European style negotiations. In addition to strengthening the "face" and prolonging *guanxi*, cartoon's start was timed to the tenth anniversary of the Treaty of Good-Neighborliness, Friendship and Cooperation between China and Russia signing which also influenced positively. When targeting Chinese market any company should consider the relevance of informal relations concept for achievement of good results.

Summarizing all that written above, we can conclude that *guanxi* is complex and comprehensive phenomenon that doesn't fit a simple definition of relationships in its traditional understanding. This phenomenon was developed for centuries, basing on Confucian norms and morals, adapting them to modern Chinese reality. *Guanxi* consists of a number of concepts and principles that form its uniqueness (Fig. 1)

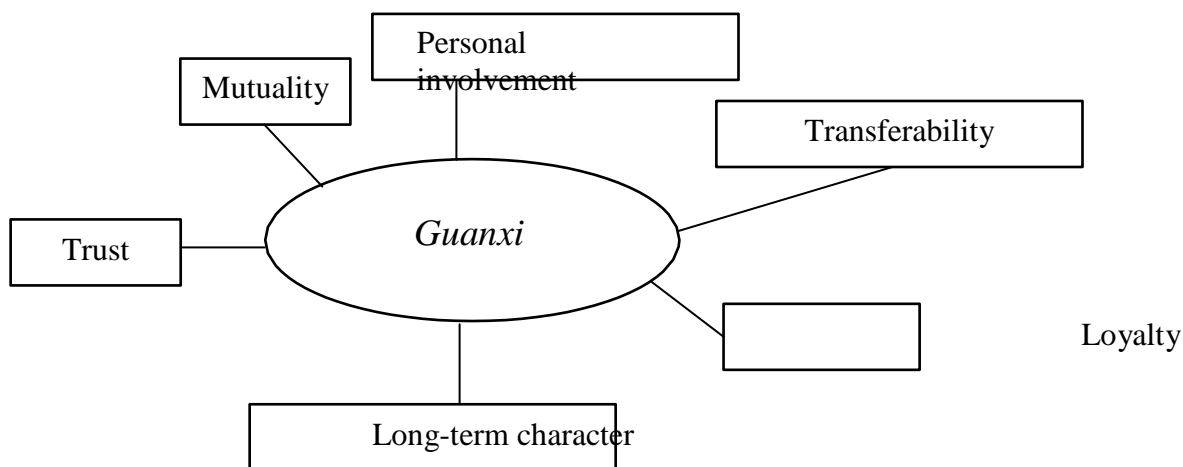


Figure 1. Major principles of *guanxi*.

Conclusion

In China any kind of business and any type of company, whether it be a local firm or foreign investor or vendor, regularly faces the driving force of *guanxi*. It's a serious struggle for any company to promote itself on Chinese market without a wide network of *guanxi* within its organizational field. During the last three decades China has achieved fantastic success in economics, which to a large extent, could be explained by diligence and commitment of Chinese people, social stability in the country, and some other factors among which an important role is given to specific way of doing business. Chinese business world is complex and tangled, each person plays the role which is prescribed to him by his status in family or social hierarchy.

Our study of the notion of *guanxi*, their specific features and implication allows us to conclude that a company which plans to penetrate Chinese market should evaluate its capabilities in terms of building stable relational networks with major elements of Chinese institutional environment within its organizational field. Considering that building of such networks requires enormous efforts and resources of different types, first of all, time, one of the possible and most appropriate strategy that

could be considered is to find a good mediator. That is not so easy to create a network between Chinese and non-Chinese person. We assume that there could be two approaches to mediator selection:

1) the mediator could be a Chinese by origin who has spent some time abroad and managed to build a reliable and stable network with non-Chinese partners, and this network could be integrated with *guanxi* network he/she has at home;

2) the mediator could be a non-Chinese person who spent quite long in China, knows Chinese culture and “rules of game” so well that Chinese partners could fully rely on him/her and allow to introduce his/her foreign network to them.

In both cases a mediator performs as a guarantor of the trust, loyalty and stability of the integrated network.

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**Felix Villalba-Romero, Grenfell-Baines School of Architecture, Construction and Environment - University of Central Lancashire.
fvillalba@uclan.ac.uk**

Champika Liyanage, Grenfell-Baines School of Architecture, Construction and Environment - University of Central Lancashire

Evaluating Success and Limitations in Funding and Financing PPP Road Projects in Europe

Abstract: This research aims to identify how to measure the level of success of Public Private Partnership (PPP) projects using 13 road case studies along Europe. The analysis is based on a Performance Measurement System (PMS) using a step-by-step approach. Herein, 29 performance measures (PMs) and 9 key performance indicators (KPIs) have been considered. In spite of limitations accessing to detailed information, the paper offers a unique chance to explore the links between projects performances and funding and financing schemes. The results of the success evaluation could be used as a benchmarking tool that compares success of within and across projects.

Key words:

Key Performance Indicators (KPIs); Performance Measures (PMs); Success Analysis; Public Private Partnership (PPP); Case studies;

1. Introduction

The concept of a project success is commonly referred to in the academic literature as broad criteria including diverse Critical Success Factors (CSF); and the way to measure the criteria usually includes diverse elements known as Key Performance Indicators (KPI). Although analysis of success could vary according to the type of sector and class of project, there is no clear consensus about the method of measuring the success of projects using KPIs. Many authors define project success in different ways; Ashley *et al* (1987) describe project success as “achieving results much better than expected or normally observed in terms of cost, schedule, quality, safety, and participant satisfaction”; Shenhar *et al* (1996) indicates that project success should be perceived as major vehicles for organisational and societal prosperity. Likewise, defining success can differ according to different contextual factors of a project. It takes more of a subjective form depending on what someone wants to look at in a project. For example, a project can be successful in terms of achieving cost targets; however, it may be unsuccessful in the view of time targets. Similarly, a project can be successful from a private partner point of view but it may not be a success in view of user perspective.

A project is traditionally being considered successful when it has satisfactorily met the “iron triangle” measures: time - finished on-time; cost - within budget; and quality - finished according to specifications (Atkinson, 1999; Khosravi and Afshari, 2011); or a good combination of these measures (Phua, 2004). Nguyen *et al.* (2004) have measured success of a project using this traditional approach, but also includes the measurement of project development in accordance with stakeholders’ satisfaction. Furthermore, Savindo *et al* (1992) base the success of the project on the achievement of expectations of different stakeholders, such as the owner, the planner and engineers, the constructor or the operator; introducing, therefore, the participants’ requirements. Authors such as Pinto and Slevin (1988) and Bryde and Brown (2005) also identify the main elements of project success as satisfaction of the stakeholders. Cox *et al* (2003), however, have evaluated project success based on contract specification; not only technical specifications but also other quantitative measures. On the other hand, Freeman and Beale (1992) and Toor and Ogunlana (2008) have identified process performance (efficiency and effectiveness of different processes involved in a project) as the main criteria of project success. Villalba-Romero *et al* (2015a) focus success on road from a sustainable point of view. Although attempts such as above remain, according to Hodge and Greve (2007), strong and independent evaluation of PPPs has been sparse. As Hodge and Greve further affirm, it appears that insufficient research has been undertaken to be fully informed on outcome of the PPPs to-date, thus, there is a serious need for rigorous assessment of PPPs. Therefore, research fulfil this gap in presenting a robust assessment of success of PPPs. This assessment is presented as a Performance Measurement System (PMS); and the PMS is tested using selected cases studies from the case database of the P3T3 COST TU1001 action Public Private Partnership in Transport: Trend and Theory networking project.

2. Assessment of Success – A Performance Measurement System (PMS)

The assessment of success of PPP projects is carried out in this research using a performance measurement system (Liyanage *et al*, 2015b). The process includes the following step-by-step approach, which is presented below in a summarized way for space limitations:

Step 1: Use of a case study approach

Step 2: Case descriptions

Step 3: Development of the KPIs and performance measures (PMs)

- Step 4: Three-stage Delphi approach to refine and prioritise the KPIs and PMs
- Step 5: Assigning mean zones (M)
- Step 6: Filling in the KPIs table
- Step 7: Calculation of the weighted score (WS)
- Step 8: Calculating the overall level of performance
- Step 9: Interpretation of the performance results

The case study methodology used a template developed by P3T3 COST Action, (COST TU1001, 2013a), which included questions ranging from actors, project specifics to performance monitoring. Primary data for this study are obtained from semi-structured interviews filling descriptive templates. Secondary data was widely available on the web or some information was collected from relating project reports. Overall, 13 PPP road projects were chosen for the analysis of success. Choosing a particular type/mode of project makes the cross case analysis and synthesis consistent, reliable and valid. All the selected road projects represent the utmost prominent developments in their respective countries, also considered as ‘active’ users of the model of PPP (UK, Spain, Greece, Portugal, Belgium and the Netherlands) what added advantage to maintain consistency and reliability. A summary of the main details/features of the projects is shown in Annex I. For more information about the case studies, please refer to COST TU1001 (2013b) and COST TU1001 (2014).

The case study data on the 13 projects were analysed using qualitative content analysis. During this process, different categories and codes were developed to make them comparable. The categorisation and coding was done using QSR NVivo. The main categories developed for the data emerged from the different sections of the case template itself. The codes were given a Likert scale to easily quantify the results (Liyanage and Villalba-Romero, 2015a).

The categories developed were identified as Key Performance Indicators (KPIs) and the codes developed within them were identified as Performance Measures (PM) to define the success criteria of a project. A 3-stage Delphi study was conducted to refine the KPIs and PM and then to prioritise them in accordance to their level of importance (based on a Likert scale). The initial set of KPIs and PM were refined using a focus group. This was considered as the first Delphi round. The focus group was conducted in June 2013 in University of Twente, Netherlands. Eleven (11) members, COST member, were present during the focus group discussions. All the members have in-depth knowledge and experiences on the subject of PPP. Altogether 09 KPIs and 29 PM were developed (and refined) using the qualitative content analysis described earlier and the focus group, as it is shown in Table 1. These indicators and measures were then prioritised/assigned weightings using the level of consensus achieved during the second and third rounds of Delphi exercises.

Table 1: Mean Scores and Ranks of Performance Measures

KPI and Performance Measures - PM	Code	Mean Score	Rank
Objectives	KPI-1		
Are the objectives specified in the contract SMART?	PM-1	3.1765	25
To what extent has the objectives being achieved?	PM-2	4.3514	2
Have/will user benefits been monitored?	PM-3	4.1765	8
Have user benefits been as large as expected?	PM-4	3.6471	20
Risk	KPI-2		
How much risks have been transferred to the private sector?	PM-5	3.9730	13
Was risk allocation agreed quickly?	PM-6	3.3529	23
Specifications (contract project)	KPI-3		

Has the deliverables specified clearly in the contract?	PM7	4.1892	7
Are the roles and responsibilities of different parties involved in the contract clearly defined?	PM-8	4.3243	3
Are minimum standards for condition of infrastructure and equipment specified in the contract?	PM-9	3.7778	18
Are there any performance targets?	PM-10	3.9091	15
Is the method of measuring performance targets clearly defined?	PM-11	3.2500	24
Are there penalties for non-compliance?	PM-12	4.5556	1
Does the contract have procedures for amendments, dispute resolution or termination?	PM-13	3.8919	16
Has the contract proceeded without renegotiations?	PM-14	3.0606	27
Are there any guarantees specified in the contract?	PM-15	3.7188	19
Tendering Process	KPI-4		
No. of bidders (negotiation vs. final)	PM-16	2.8788	28
Time from tender notice to financial close	PM-17	2.3824	29
Legal challenges to outcome	PM-18	3.0909	26
Construction Phase	KPI-5		
Was the project completed on time?	PM-19	4.0270	12
Was the project completed within budget?	PM-20	4.1389	9
Was the project completed according to the specifications and design?	PM-21	4.2432	5
Are there any penalties for non-compliance?	PM-22	4.0541	11
Operations	KPI-6		
Were the services specified in the contract delivered?	PM-23	4.2973	4
Maintenance	KPI-7		
Are the deliverable standards for infrastructure and equipment being met?	PM-24	4.2162	6
Monitoring and Evaluation	KPI-8		
Is there a formal monitoring procedure in place?	PM-25	3.8919	16
Finance	KPI-9		
Was finance available when needed?	PM-26	3.9189	14
Was the project cash flow sufficient to expected payments to all parties?	PM-27	4.1351	10
Did the project result in financial benefits to users (e.g. in terms of charges)?	PM-28	3.5000	22
Has the financial outcome been equal or better than expected for the private partner?	PM-29	3.5135	21

Based on the mean score results of the Delphi exercises, the PM were ranked into varying levels of importance in PPP transport projects. To distinguish the PM according to levels of importance, they were categorised into four mean zones using the following scale: ≤ 4.28 to ≥ 5 ; ≤ 4.01 to > 4.28 ; ≤ 3.75 to > 4.01 ; and < 3.75 . The mean zones were also assigned weightings on a range of 4 to 1, where 4 and 1 represent the highest and lowest mean scores respectively. The next step was to adopt the weightings to measure the level of performance of the 13 PPP projects, identified by filling in the KPIs table (Table 1) on a Likert scale.

Since the PM have varying levels of importance towards the success of PPP transport projects, a weighted score for each PM was calculated by multiplying the level of performance (L) against the weight (W), to establish the overall level of performance of the 13 PPP projects. This was achieved by adding the weighted score for all the 29 PM that are categorised under each of the PPP transport project. The total weighted score of a PPP transport project can be calculated by adding together the scores of the 4 mean zones. Therefore, the maximum weighted score is calculated as $WSA(20*4) + WSB(15*8) + WSC(10*7) + WSD(5*10) = 320$. Finally the overall performance is identified as an average.

Once the overall level of performance was calculated, in order to provide a uniform measure across all the transport projects, the final score for each case was multiplied by 100 (to portray the result as a percentage). The maximum weighted score is the same for all PM in a mean zone i.e. 260 for WSA, 195 for WSB, 130 for WSC and 65 WSD. A 4-point scale was then developed to interpret the results on a Likert scale (Very poor - $\leq 25\%$; Poor $\geq 25\% - < 50\%$; Good $\geq 50\% - < 75\%$; Excellent $\geq 75\% - \leq 100\%$).

3. Funding and financing schemes

An important term in PPPs is “funding”, which often is confused with the term financing. In the area of infrastructure, funding is related to the origin of the payments to cover the costs of the public services, that is to say, who pays for it in the end; whereas, “financing” considers the source of the funds needed to build the infrastructure. Therefore, the party who lends or provides the money in the beginning usually requires a return as a compensation for the risk assumed and also expects the funds to eventually be repaid. The resulting amount of payments should cover the initial investment of the assets, the cost to maintain and replace them and usually an amount for expansion (Villalba and Liyanage, 2015b). BENEFIT project¹ is currently carrying out a global model working with these concepts, based on different transport mode in Europe, using in part, all cases included in this research. Funding schemes refer both to: 1) the origin of revenue streams, i.e. by whom and how is the income provided, and 2) remuneration, i.e. to whom and how the revenues related to the project are attributed. The revenue stream is mainly characterized by the funding agent (i.e. the party who supplies the funding), and the indexation variables (i.e. distance, number of passengers, externalities, etc.). The funding agent may be: a) Public entity, representing the general public at any level (national, regional, etc.); b) Users, which may be vehicles using the infrastructure, individual passengers, cargo owners or consumers of commercial bundled activities; c) Other stakeholders such as property owners. The remuneration scheme refers to how the entity responsible for the investment and/or the operations in the infrastructure gets the necessary income, which may be most typically collecting funds from users or being paid by the grantor for the services provided and therefore, it mainly affects to the revenue risks and incentives. Remuneration methods, which may be indexed to some project performance variables, are: 1) Usage payment linked to the use of the infrastructure, either in the form of user charge or shadow toll paid by the grantor entity; 2) Availability payment, in accordance of how the infrastructure is made available to the users; 3) Quality performance payment, linked to quality of service criteria, and 4) Subventions or subsidies, usually fixed and indexed to inflation indicator.

The effects of funding schemes on the performance factors are determined both from general and specific characteristics of those schemes within the local economic, social and institutional context. Some general characteristics of each type of funding scheme allow to produce a general assessment at a theoretical level. Revenue streams are equivalent to the funding scheme and also influence in the financing scheme. Funding schemes, represent the means by which revenues are collected. Financing schemes in many ways describe the perceived risk of the funding scheme making the later more or less attractive for financiers. A low-risk project will be expected to more easily attract risk-averse investors. However, it may also get them to choose more risk-sensitive instruments, than those in a high-risk project. This is because a low-risk project can usually be perceived as more robust and resilient to unexpected events thus resulting in more “aggressive” financing structures that may aim to maximize expected returns. It shows an inverse relationship between the risk-profile of the Financing scheme on the one hand and the risk-profile of the project on the other hand. Two basic characteristics are herein presented to feature the financing scheme of the projects: 1) Debt share, easy way to represent the project gearing ratio in the financing structure; and, 2) Sources of finance, i.e. types of financiers, and their composition. These project features are included in Annex I.

¹ BENEFIT project “Business Models for Enhancing Funding & Enabling Financing for Infrastructure in Transport”. For additional info see: <http://www.benefit4transport.eu/>

4. Findings and Discussions

Based on the analysis described above, the findings obtained from the case studies are given below (Table 2).

Table 2: Overall Level of Performance of PPP Transport Projects

Performance Level Rating (L) 1 – Very Poor, 2 – poor, 3 – Average, 4 – Good, 5 – Excellent			Weighted Score (WS) = (L×W)												Total WS for each PM	Overall Level of Performance per PM	
Mean Zones	Weight (W)	Performance Measures (PM)	Coen Tunnel (Netherlands)	M 6 (UK)	M 80 (UK)	A 19 (UK)	Via Invest Zav. (Belgium)	A 23 (Portugal)	Olympia Odos (Greece)	Attica (Greece)	Iona Odos (Greece)	Rio Antirio (Greece)	R-2 (Spain)	Eje Aeropuerto (Spain)			M – 45 (Spain)
WS _A ≤4.28 to ≥5	4	PM-12	20	12	20	0	20	16	-	12	-	-	12	12	20	144	55%
		PM-2	20	-	-	-	-	16	-	20	-	20	8	4	16	104	40%
		PM-8	16	20	20	20	20	20	12	12	16	20	16	16	20	228	88%
		PM-23	20	20	20	20	-	20	-	20	8	16	20	20	20	204	78%
WS _B ≤4.01 to >4.28	3	PM-3	15	15	15	-	-	12	-	15	-	-	6	6	12	96	49%
		PM-7	9	12	12	12	12	12	12	12	12	15	12	12	15	159	82%
		PM-19	15	15	15	15	15	15	3	15	3	15	3	3	-	132	68%
		PM-20	15	15	15	15	3	15	3	15	3	15	3	3	3	123	63%
		PM-21	15	15	15	15	15	15	-	15	-	15	15	15	15	165	85%
		PM-22	15	-	-	-	15	15	3	15	3	3	15	15	15	114	58%
		PM-24	15	15	15	15	-	15	6	12	3	12	15	15	15	153	78%
PM-27	15	15	15	-	15	12	3	9	3	15	3	3	15	123	63%		
WS _C ≤3.75 to >4.01	2	PM-5	-	-	-	-	-	8	-	-	-	-	10	10	8	36	28%
		PM-9	10	10	10	10	-	10	8	8	8	10	8	8	10	110	85%
		PM-10	8	2	8	6	6	8	4	8	4	2	8	8	10	82	63%
		PM-13	10	10	10	10	10	10	2	2	2	10	2	2	2	82	63%
		PM-15	10	10	-	-	10	10	10	10	10	10	10	10	10	110	85%
		PM-25	10	4	8	0	6	10	6	10	2	8	6	6	6	82	63%
		PM-26	8	8	10	8	10	10	2	6	2	10	8	8	10	100	77%
WS _D <3.75	1	PM-1	4	1	4	-	4	5	4	4	4	5	2	2	4	43	66%
		PM-4	5	2	-	-	-	5	1	5	1	-	2	2	5	28	43%
		PM-6	1	4	4	5	3	4	4	4	4	4	4	4	5	50	77%
		PM-11	5	1	4	4	-	5	2	4	2	3	3	3	5	41	63%
		PM-14	5	5	5	1	5	5	1	1	1	5	1	1	1	37	57%
		PM-16	3	3	3	-	4	2	2	3	2	2	3	3	3	33	51%
		PM-17	1	1	5	5	5	5	1	1	1	1	5	5	5	41	63%
		PM-18	1	1	5	5	5	5	5	5	5	5	5	5	5	57	88%
		PM-28	3	1	5	4	3	5	2	5	1	5	2	2	5	43	66%
PM-29	3	2	5	4	-	4	-	5	-	5	1	1	5	35	54%		
Total WS per Case (X)			277	219	248	174	186	294	96	253	100	231	208	204	265		
Overall Level of Performance per Case (%)			87	68	78	54	58	92	30	79	31	72	65	64	83		

Taking all above, of the 13 projects tested, there are 05 projects with a very high percentage of success. First, it is the A-23 Beiras Interior (Portugal) project, which has gone through renegotiation, after which the grantor changed the charger toll to users. Secondly, the Coen tunnel, which is the first project procured through competitive dialogue route in the Netherlands. Third most successful project of the 13 projects is M-45 (Spain). In this project, the initial shadow toll concession contract was modified to absorb some project cost overruns. Attica Tollway (Greece) comes 4th in the success analysis followed by M-80 Haags (UK). Olympia Odos and Ionia Odos are the two projects that marginalises on very poor level of performance due to heavy cost overruns and time overruns. Both Olympia Odos and Ionia

Odos should be evaluated again, once they reach project completion. The success of other 06 projects of the 13 case studies can be categorised as ‘good’, although some come at the lower end of the success percentage spectrum (e.g. A-19, UK) whereas some others are placed at the higher end of the spectrum (e.g. Rio Antirio, Greece). Many of the (comparatively) less successful projects have had a significant impact during financial crisis that has resulted in renegotiations.

It is clear that PM-8 (assigning clear roles and responsibilities) and PM-18 (legal challenges to outcome faced during the tendering process) have overall, has been successfully achieved/fulfilled in most of the projects with a success score of 88%. PM-9 (minimum standards for condition of infrastructure and equipment are specified in the contract), PM-15 (guarantees are specified in the contract), and PM-21 (project is completed according to specifications) are also not far off with a percentage score of 85%, and PM-7 (deliverables are clearly specified) with 82%, which are all excellent. In contrast, the lowest scored PM across all projects is PM-5 (transfer of risks to the private sector) with a percentage score of 28%. This may raise questions about the lack of risk allocations in PPP projects. Although there are many studies on risks and risk allocation, the performance results highlight that the area of ‘risk’ need further investigation in PPP projects.

Considering the performance of the overall KPIs (please refer to Figure 1), KPI-3 (contract specifications) is the highest performing KPI in most of the projects, meaning that many PPP projects do have clear deliverables, specifications and roles and responsibilities specified in the contract. Within KPI-3, the only weakness is lack of specifications of performance targets and penalties for non-compliance in many PPP contracts. Perhaps the reason for this could be, since PPP projects form the basis for a long-term relationship between the private and public sector, specifying penalties may deem to jeopardise ‘trust’ factor and the coordination and collaboration between the two parties. KPI-1 (objectives) seems to be the lowest performing KPI in many of the projects due to lack of specification of SMART objectives (specific, measurable, achievable, relevant and time-bound) and failure to achieve project’s objectives and user’ benefit.

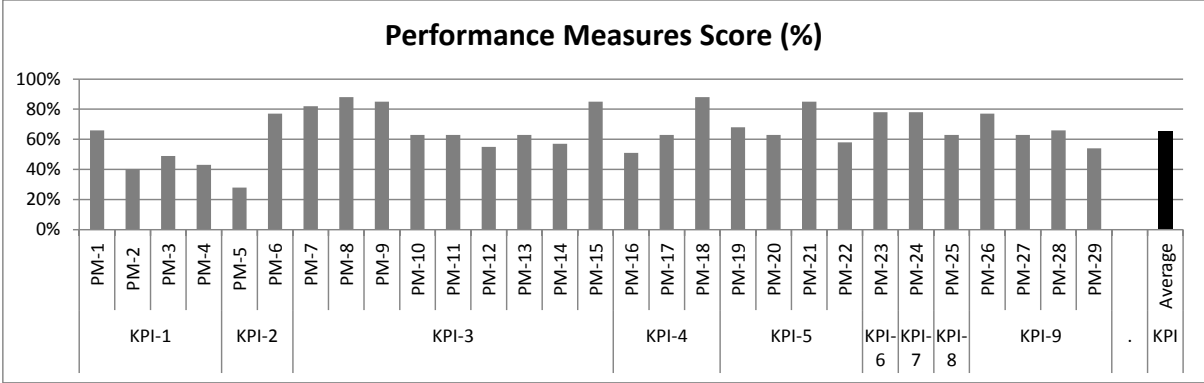


Figure 1: Performance Measures Score

Having applied the Delphi analysis to the 13 projects and having looked at Figure 1, the average score of performance measures and its relating KPIs can be considered as a benchmark for comparing other projects as well as comparing same projects at different intervals.

It is worth noting how the two most successful projects (please refer to Table 2), namely Beira Interior and Coen Tunnel that have a success score of approx. 90%, have achieved high level of performance especially in higher weighted mean zones, e.g. WSA, and WSB. In contrast, less successful projects such as Olympia Odos and Iona Odos that have a success score below 30% have achieved lower level of performance in most of the mean zones. Indeed, the 12 performance measures that come under the higher weighted mean zones (WSA, and WSB) may have contributed to the high percentage score of success to the high performing projects as the two mean zones account for a maximum score of 200; whilst the remaining 17 performance measures of the lower weighting zones (WSC, and WSD) only account for about 120. This shows the importance of fulfilling PM in higher mean zones as they have a significant impact on the overall level of performance of PPP projects.

In terms of project funding, comparing project success with the type of agent for the revenues stream, it may be noted that those projects whose funding sources are based on public entities, in contrast with those based on user charges, achieve a higher level of success (clearly A-23, Coen tunnel and M-45 rank the highest three positions, though Via Invest. Zav. and A-19 are the exceptions), either based on shadow toll or availability fees (please refer to Annex D).

Considering projects debt share as a key indicator of the project financing, there is not a clear relation with projects success score, either linking higher or lower debt share with project success. Indeed, A-23 that ranks the highest has a high level of debt share and Coen Tunnel ranking the second position, has a low level of debt. The analysis should be extended to a larger number of projects and further research should be carried out to develop potential links.

5. Summary and Conclusions

In this research, a methodology for measuring the success of PPP projects has been developed. The methodology has been applied and tested for 13 road projects carried out in some PPP 'active' countries within the EU (i.e. UK, Spain, Portugal, Greece, Belgium and the Netherlands). The methodology adopted, firstly, developed 09 KPIs defined by 29 performance measures (PMs) using the Qualitative content analysis. These then have been refined, prioritised and weighted using a three-stage Delphi technique to evaluate expert consensus on the importance of KPIs and performance measures. The final weighted performance measures have then been used to evaluate the level of performance of the projects. The success of the road projects has been measured and a ranked in this research.

The results obtained can be used for both benchmarking purposes and for ex-post evaluation of PPP projects. Other than highlighting results as above, the main purpose of the research was to present a methodology to measure the success of selected projects. The overall methodology can be presented as a performance measurement system (PMS) that has been tested on the 13 road projects in the EU. The PMS can be used on a variety of PPP case studies to identify overall successes (or failure) of projects. It can also be used to analyse how success could be evaluated from a set of KPIs and performance measures. Despite the limitations, the availability of a large number of cases of different transport modes from different EU countries, with different funding and financing schemes and project dimensions, offers a unique chance to explore the links between projects performances and funding and financing schemes. Furthermore, the assessment can present results in terms of performance of dominant KPIs and PM, which could be useful when prioritising project tasks. This approach is valid and may be used for other PPP road projects as well. The analysis can also be extended to other modes of transport within the PPP context.

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ANNEX I: Summary of the case studies

PROJECT NAME	<u>Coen Tunnel</u>	<u>M6</u>	<u>M80 Hagg</u>	<u>A19 Dishforth</u>	<u>Via-Invest Zaventem Airport</u>	<u>A23-Beira Interior</u>	<u>Olympia Odos</u>	<u>Attica Tollway</u>	<u>Ionia Odos</u>	<u>Rio-Antirio Bridge</u>	<u>Radial 2</u>	<u>M-12 Airport Axis</u>	<u>M-45</u>
COUNTRY	<u>Netherland</u>	<u>UK</u>	<u>UK</u>	<u>UK</u>	<u>Belgium</u>	<u>Portugal</u>	<u>Greece</u>	<u>Greece</u>	<u>Greece</u>	<u>Greece</u>	<u>Spain</u>	<u>Spain</u>	<u>Spain</u>
Identification													
Geographical region	Noordelijke Randstad, Netherland	Midlands UK	Scotland, UK	North East of England, UK	Brussels, Belgium	Beiras, Portugal	Northern Peloponeso, Greece	Athens, Greece	Western Greece	Patras Gulf, Greece	Madrid, Spain	Madrid, Spain	Madrid, Spain
Cost	€ 500 mill.	£485 mill.	£320 mill.	£ 29,4 mill.	€ 220 mill.	€ 628 mill.	€ 2,200 mill.	€ 1,300 mill.	€ 1,200 mill.	€ 815 mill.	€ 500 mill.	€ 382 mill.	€ 500 mill.
Contract Duration	30 yrs.	53 yrs.	33 yrs.	30 yrs.	30 yrs.	30 yrs.	30 yrs.	25 yrs. (or before)	30 yrs.	42 yrs. (or before)	25 yrs. (Ext. to 39)	25 - 26 yrs.	25 yrs. (Ext. 4-15)
Tender call	2005	2007	1992	1995	2006	Oct. 1997	2001	18/02/1995	2001	1991	04/02/2000	05/03/2002	03/03/1998
Contract approval	2008	2009	2000	1996	2007	13/09/1999	20/12/2007	23/05/1996	19/12/2006	03/01/1996	02/01/2001	08/11/2002	28/10/1998
Operational start	2013	08/12/2003	01/11/2011	02/09/1998	01/02/2012	27/07/2003 (Completion date)	Partial start, project not finished	18/03/2001	Partial star, project not finished	12/08/2004	06/10/2003	June 2005	2000
Public Authorities													
Government Sponsor	Dutch Minister of Transport	Department of Transport	Scottish Government	Department of Transport	Flemish Government	Ministry of Public Facilities	Ministry of Development and Infrastructure Transport	Ministry of Development and Infrastructure Transport	Ministry of Development and Infrastructure Transport	Ministry of Development and Infrastructure Transport	Ministry of Public Works	Ministry of Public Works	Public Works Dept. of Madrid Regional Government
Commissioning Authority	Dutch Highways Agency	DFT/ Highways Agency	Transport Scotland	DFT/ Highways Agency	Via Invest Vlaanderen NV	National Road Institute	L.S.E.P	L.S.E.P	L.S.E.P	L.S.E.P	Infrastructure Secretariat	Infrastructure Secretariat	Regional Road Management
Private Contract holder													
Name Consortia/Contractor	Coen Tunnel	Midland Expressway Ltd	Highways Management	Autolink Concessionaries UK	Via Invest Zaventem NV	Auto Estradas da Beira Interior, S.A.	Olympia Odos	Attiki Odos	Nea Odos, S.A	GEFYRA, S.A.	HENARSA, S.A.C.E.	Eje Aeropuerto, C.E.S.A.	Concesiones de Madrid; Euroglosa 45; Trados-45.
No. partners Consortium	7	2	3	1	2	6	6	3	3	6	5	2	10
Details	Dura Vermeer and others	Macquarie	Bilfinger Berger	Robert Mc. Alpine Ltd.	Perticipatiemaatschappij Vlaanderen	Soares da Costa, ES Concessões, Globalvia, Alves	Vinci Concessions	Ellaktor	Ferrovial, ACS, and GEK Terna	Vinci Concessions	ACS Group	OHL Group	OHL, SACYR; Cintra, ACS; Dragados; FCC.
No of contractors	5	4	3	N/A	5	6	3	14 originally	3	6	2	1	6
Funding													
Revenues stream -Agent	Public entity	Users	Public entity	Public entity	Public entity	Public entity / users (*)	Users	Users	Users	Users	Users	Users	Public entity
Remuneration scheme	Availability fees	Usage payment: Direct toll	Availability / Usage paym. (Shadow)	Usage payment: Shadow toll	Usage payment: Shadow toll	Usage paym. Shadow (*) /Availability.	Usage payment: Direct toll	Usage payment: Direct toll	Usage payment: Direct toll	Usage payment: Direct toll	Usage payment: Direct toll	Usage payment: Direct toll	Usage payment: Shadow toll
Financing													
Debt share (**)	Low	High	Low	Medium	High	High	Low	Low	Low	Low	High	High	High
Sources of finance	EIB+>5 banks	Holding/Bank	Holding/Bank	2 Banks	1 Bank	EIB+>5 banks	EIB+>5 banks	EIB+>5 banks	EIB+>5 banks	EIB+>5 banks	EIB+>5 banks	Holding/Bank	EIB+>5 banks

(*) User charges are collected after Dec. 2011, when evaluation refers.

(**) For these type of projects: Low <50%, Medium 50-70%, High >70%

**S. Vlasov (stanislav.a.vlasov@gmail.com),
T. Andreeva (andreeva@gsom.pu.ru),
A. Ryzhko (st033348@student.spbu.ru)
St. Petersburg State University Graduate School of Management**

Knowledge signaling and fundraising: the role of conferences participation¹

Despite the growing body of studies on such professional gatherings as conferences, thus far little research has been conducted on the link between particular strategies of firms' participation at conferences and subsequent attraction of investments. Using signaling theory as our theoretical framework, we argue that participation at such industry events as conferences can be seen as effective means for a firm to signal about its qualities to external stakeholders, such as investors. Using longitudinal data on 104 SMEs in electronics industry we found no effect of the intensity in conferences participation on subsequent probability of attracting investments. However, we found that the diversity of conferences' participation increases the chances of receiving investments.

Keywords: *small and medium enterprises (SMEs), fundraising, conferences, networks, informational asymmetry, signalling*

¹ Research has been conducted with financial support of Saint Petersburg State University (project No. 16.38.378.2015).

1. Introduction

The study investigates the role of such professional gatherings as industry conferences for the attraction of investments by small firms. Using signaling theory as our theoretical framework (Connelly, Certo, Ireland, & Reutzel, 2011; Ndofor & Levitas, 2004), we argue that participation at such industry events as conferences can be seen as an effective means for a firm to signal about its qualities to external stakeholders, such as investors. Indeed, prior research has shown that conferences participation helps firms to receive recognition and establish legitimacy in the community such event represents (Garud, 2008). Moreover, conferences provide rich opportunities for face-to-face interactions that allow for providing so called “honest signals” to potential investors, i.e. the information firm conveys about itself during conferences is difficult to fake (Pentland & Heibeck, 2010).

Despite the growing body of literature on studies different aspects of such professional gatherings as conferences (Binz-Scharf, Kalish, & Paik, 2015; Möllering, 2010; Pollock & Williams, 2015; Stam, 2010), thus far little research has been conducted on the link between particular strategies of firms’ participation at conferences and subsequent attraction of investments. We address this research gap by investigating how the intensity of participation at conferences by SMEs affect its attraction of funds. We also look at how firm’s participation in various conferences in terms of their topics and geographical locations (what we refer to as *knowledge* and *geographical diversity* of participation) is associated with the success of attracting investments.

Our research setting is the industry of consumer and industrial electronics and computers. Using SDC Platinum VentureXperts we sampled 104 small and medium-sized firms that received some investments between 1990 and 2012. Controlling for important firm-level factors we tested a number of regression models that predict effects of conferences participation on firm’s success in attracting investments. The results reveal no significant relationship between the intensity in conferences participation and subsequent investments. However, we found that both geographical patterns of conferences participation and the diversity of types of conferences have significant effects on the dependent variables.

2. Theory and hypothesis

Previous research has identified a number of firm-level factors that influences the investors in their decision-making about whether to invest in certain SME or not. These factors include, for example, a portfolio of ties that SMEs have with external stakeholders, as it signals about SME’s social capital. Such characteristics as patents or scientific publication portfolio of SME allow investors to assess its intellectual capital. Another key factor is SME’s management team and its managerial capabilities (i.e. human capital). Usually SMEs are considered for investments only in cases when SME can show qualities that sufficiently characterize them as promising in relation to these three types of factors, i.e. human, social and intellectual capital. Indeed, prior research found that investors do not even consider SMEs for a potential investment if there is at least one fatal flaw in their business proposals (Maxwell, Jeffrey, & Lévesque, 2011).

Recent research shows that in some cases investors can be especially helpful even if the firm has a prominent technology that has potential for future success, but lacks sufficient managerial competences. In these cases, investors can act as “coaches”, i.e. mentoring the firm, helping them to build the managerial capabilities it lacks and helping them to succeed in the future (Baum & Silverman, 2004). Drawing on these findings, we can conclude that it is the quality of the firms’ technology that is of the most central importance for firms if they want not only to attract investors, but also achieve longer term success.

How can a firm signal about the quality of its technology? According to the signaling theory, information about the qualities of the firms' R&D come from variety of sources in the form of signals (Connelly, Certo, Ireland, & Reutzel, 2011). A signal can be, for example, a filed patent, a published paper, a press release, media coverage, etc. Some of such signals can be intentionally misleading (so-called "dishonest signals"). However, compared to the traditionally considered means for signaling, professional and scientific conferences represent essentially distinct (i.e. richer and thus more "honest") source of signals as well as the means for signaling. This is due to the very nature of face-to-face interactions that conferences mostly consist of. The so-called concept of "honest signals" explains that it is harder to imitate some absent or misleading qualities or intentions when there are face-to-face interaction and especially if a large number of parties are involved (Pentland, 2010). Thus, we can assume that by participating in conferences a firm is likely to reveal its true qualities and intentions (send honest signals) that can reach potential investors.

Moreover, participation at conferences not only allows SMEs to send signals about qualities of their technology, it also helps them to legitimize it. Legitimizing technology is of crucial importance because it helps with attracting resources that SME needs, especially at its early stages of development (Delmar & Shane, 2004). Research has shown that among the various legitimizing activities that SMEs undertake to get recognition for their technology, participation at conferences is the most effective one (Garud, 2008). Finally, investors tend to go in favor of SMEs that they have some similarities in ways of thinking (Murnieks, Haynie, Wiltbank, & Harting, 2011). Conferences as a prominent way to connect with a community of like-minded people can help to identify firms with such similarities. To sum up, SMEs' participation at conferences provides them with more exposure, more contacts, more legitimacy, more recognition which in turn is likely to positively affect their success in attracting investments. Thus these arguments allow us to formulate the following hypothesis:

Hypothesis 1: The number of conferences a firm has participated in is associated with the higher probability of subsequent investment attracted.

We can also hypothesize that different investors either attend or consider the information stemming from various conferences. Some of them focus on conferences in certain geographical regions, for example, because of lower travel costs or their residence in a particular region. Alternatively, they may be interested in investing in a particular region, such as for example, Boston area. Other investors may focus on conferences dedicated to specific technological domain (e.g., medicine or electronics, depending on the expertise of the potential investor). If this is true, then firms that diversify their participation at conferences, either in terms of their geography or knowledge domain, may increase their access to a wider pool of investors and, therefore, increase the chances of successful investments attracted. In addition, for the firms it might be beneficial to establish themselves as "spanners" between multiple categories and areas. Indeed, recent research has established that, in contrast to what is commonly assumed, firms that mix and diversify different knowledge categories are evaluated and perceived more positively than the ones focusing on a single area (Wry, Lounsbury, & Jennings, 2014). Drawing on these arguments, we formulate the following hypotheses:

Hypothesis 2: The higher is knowledge diversity among conferences that a firm has participated in, the higher the probability of subsequent investment attracted.

Hypothesis 3: The higher is geographic diversity among conferences that a firm has participated in, the higher the probability of subsequent investment attracted.

3. Methods

3.1. Data collection and sample

The data collection and sampling were performed through following steps. First, we identified all conferences related to the domain of electronics between 1992 and 2012. We used Web of Science's (WoS) Conference Proceedings Citation Index (CPCI) database to obtain data about conferences. We searched conferences that were listed under WoS category "Engineering, electrical and electronics". If the category was not assigned, it was manually assigned based on categories of related proceedings. By doing this, we found 2656 such conferences.

Next step was to identify all organizations that participated at these conferences. In order to do this, we used information about affiliations of authors from books of abstracts and conferences proceedings. Further, we matched obtained names of organizations with the all SMEs indexed in LexisNexis Academic database that have "Electronics" as their primary or secondary business activity. In line with the definition of United States Small Business Administration we define SMEs as firms with less than 500 employees. To identify that an SME belongs to electronic industry we used North American Industry Classification System (NAICS) and consider firms listed under the following codes: 335 – electrical equipment, appliance, and component manufacturing; 334 – computer and electronic product manufacturing.

In the next step we searched if the identified SMEs participated at conferences related to other topics, i.e. outside electronics domain, for example, in conferences on medicine or chemistry. Thus, data on additional 5167 events was collected.

Average duration of these conferences is 4 days. The geographical distribution is quite wide: the conferences in the sample were held all over the world but more than half of them (58%) were conducted in USA. Our sample of conferences is highly diversified in their topics.

Finally, for the sampled SMEs we collected additional firm-level data from a number of available sources. The longitudinal data about firms' financial performance, investments, formal agreements (the number of alliances and joint ventures) were extracted from Amadeus and SDC Platinum databases. The information about granted patents was obtained from Derwent Innovation Index Database. In order to integrate the large amount of obtained data from different databases into the single database we used multiple names transformations and fuzzy string matching methodology (Thoma et al., 2010).

The final sample included 2184 observations and 104 small- and medium size firms. The biggest part of the firms is located in USA (70,19%), followed by Canada (8,65%) and France (5,77%). Economic environment of the studied organizations is relatively akin with GDP per capita between 50 and 100 thousand USD. Most of the firms had zero or one investment round per year.

3.2. Operationalization of study variables

Dependent variables. We operationalized success in attracting investments using two distinct measures: the *amount of investments* received by a company in the subsequent period of time and the *number of investment rounds* a firm had in subsequent period of time. The amount of investments received by the firms was log transformed because monetary amounts are commonly considered to be skewed in its distribution and log transformation allows to make distribution nearly normal (Zumel & Mount, 2014).

In order to investigate both short- and long-term effects we constructed our dependent variables for time frames of one- [t+1] and three-year [t+1; t+3] respectively.

Independent variables. *Conference participation* was measured using conference proceedings and books of abstracts. We assume that, if a firm was mentioned in a report, it participated at a conference. Nevertheless, we understand that the number of attended conferences can be higher since the companies can just attend them, without being presenters. However, we suggest that conferences proceedings are more suitable proxy for the purposes of our study as it takes into account not only potential networking possibilities, but also signalling to potential investors about the internal qualities of a firm in terms of its R&D progress. *Knowledge diversity of participation* was estimated by the number of distinct WoS categories that were assigned to each conference. For example, if a SME participates at conferences only on engineering topics the knowledge diversity of its participation equals 1. If this SME participates also in conferences on medicine, its knowledge diversity increases to 2. *Geographical diversity of participation* was calculated by the number of distinct countries where attended conferences were held.

Control variables. We included several control variables in our models to account for the factors and other type of signals that can affect the likelihood of investments. We control for *number of patents* granted to each firm per year and a *number of publications* a firm have per year. *Firm size* was calculated as the logarithm of the total number of employees per each year. *Firm revenue* was taken as the logarithm of the amount of revenue received by each firm per year. Also *origin of a company* was included into the model as country dummy variables for each home country presented in the sample.

3.3. Model specification

All the data analysis was performed using STATA 13.0 software. Descriptive statistics of the sample is represented in Table 1. Most of standard deviations are higher than means which is a sign of over dispersion of the data. Low means of independent variables show that zero values dominate in the sample during examined period of time.

Table 1. Descriptive statistics of the variables

Variable	Mean	S.D.	Min.	Max.
<i>Dependent</i>				
Amount of investment	1,27	3,15	0	12,77
Amount of investment per 3 years	2,76	4,32	0	12,77
Number of investment rounds	0,22	0,53	0	4
Number of investment rounds per 3 years	0,7	1,22	0	8
<i>Independent</i>				
Number of proceedings per year	0,4	1,39	0	21
Knowledge diversity	0,22	0,63	0	9
Geographical diversity	0,19	0,48	0	4
<i>Control</i>				
Patents per year	1,89	4,76	0	52
Publications per year	0,31	1,29	0	24
Firm size (log)	4,42	0,73	1,79	6,07
Firm revenue (log)	9,41	1,26	4,61	11,54

Table 2 reports correlation statistics. For each model we checked levels of variance inflation factors (VIFs) and it shows that multicollinearity does not significantly affect our results and thus can be safely ignored (Allison, 2012). Several correlations appeared naturally due to the nature of the data (68% between log-transformed amount of investments within one year horizon and log-transformed amount of investments within 3 years horizon). High correlation between number of proceedings and event category (85%) shows that majority companies in the sample attended one event (which gives 1 proceeding and 1 category). Also high correlation between number of proceedings and event country (74%) indicates that the firms

either attended one conference or different conferences in the same country (most probably, US, since it represents 70% of the sample). Interestingly, the number of publications is correlated with the number of proceedings and event category (49% and 50% respectively) which suggests that conference participation is an integral part of the research activities because a lot of reports subsequently become published in journals. Also log-transformed firm revenue correlates with log-transformed number of employees (46%) and it is natural because both variables represent the different size characteristics of a firm.

Table 2. Correlation matrix of the variables

	1	2	3	4	5	6	7	8	9	10
1. Amount of investment	1									
2. Amount of investment per 3 years	0,68*	1								
3. Number of investment rounds	0,82*	0,59*	1							
4. Number of investment rounds per 3 years	0,65*	0,79*	0,73*	1						
5. Number of proceedings	0,14*	0,14*	0,10*	0,11*	1					
6. Knowledge diversity	0,12*	0,12*	0,10*	0,09*	0,85*	1				
7. Geographical diversity	0,17*	0,17*	0,16*	0,14*	0,74*	0,84*	1			
8. Patents per year	0,13*	0,14*	0,12*	0,14*	0,23*	0,22*	0,26*	1		
9. Publications per year	0,09*	0,10*	0,07*	0,09*	0,49*	0,50*	0,36*	0,21*	1	
10. Firm revenue	-0,06	-0,08*	-0,07*	-0,11*	-0,01	0,01	0,01	-0,08*	-0,06	1
11. Firm size	-0,09*	-0,13*	-0,10*	-0,16*	0,03	0,05	0,04	0,05	0,03	0,46*

Significance level: * - $p < 0,001$

3.4. Hypotheses testing and analysis

The results of the regression analysis are presented in Tables 3, 4 and 5. Models with count dependent variables do not include dummy variables of the countries because these models were too complex to run in STATA 13.0.

Hypothesis 1, which assumed that the number of attended conferences has a positive impact on both amount of investments and number of attracted investors, is rejected. Only control variables were found to be significant in these models.

Table 3. Regression results for 1-4 models

	Model 1	Model 2	Model 3	Model 4
	Amount of investment (t+1)	Amount of investment (t+3)	Number of investment rounds (t+1)	Number of investment rounds (t+3)
Number of proceedings	0,13	0,16	0,06	0,04
Number of patents	0,04	0,04	0,03***	0,02*
Number of publications	0,09	0,05	0,06	0,04
Firm revenue	-0,48*	-0,45	-0,07	0,03
Firm size	1,72**	3,12**	0,16	-0,04
Constant	-1,86	-6,87	0,62	0,11
R ² (between)	0,04	0,06		
N	2080	1872	2080	1872
Df			5	5
Wald χ^2			32,79	19,34
Log-likelihood			-918,3	-1682,97

Significance level: * - p< 0,05, ** - p< 0,01, *** - p< 0,001

Hypothesis 2 is partially confirmed. After the default standard errors were modified to robust standard errors, Hypothesis 2 was rejected for the models with amount of investments as dependent variable for both short- and long-term time frames. Hypotheses 2 for models with number of investment rounds as dependent variable was confirmed with p<0,05 significance level for both time frames. The results show that in the short-term the increase in knowledge diversity of attended conferences by 1 in time period t leads to 0,19 increase in number of attracted investors in t+1 and 0,16 increase in long-term ([t+1;t+3] – following three-year period).

Table 4. Regression results for 5-8 models

	Model 5	Model 6	Model 7	Model 8
	Amount of investment (t+1)	Amount of investment (t+3)	Number of investment rounds (t+1)	Number of investment rounds (t+3)
Knowledge diversity	0,34	0,4	0,19*	0,16*
Number of patents	0,04	0,04	0,03***	0,02*
Number of publications	0,09	0,04	0,06	0,03
Firm revenue	-0,48*	-0,44	-0,07	0,02
Firm size	1,72**	3,1**	0,15	-0,04
Constant	-1,89	-6,83	0,64	0,15
R ²	0,04	0,06		
N	2080	1872	2080	1872
Df			5	5
Wald χ^2			33,09	22,04
Log-likelihood			-917,83	-1681,47

Significance level: * - p< 0,05, ** - p< 0,01, *** - p< 0,001

Hypothesis 3 was confirmed for both time frames. The coefficients indicate that by increasing geographical diversity by 1 in time period t, the amount of received investments by firm increases by 57% in t+1 period and by 75% in [t+1; t+3] period. Interestingly, geographical diversity has lower effect on the number of attracted investors in the long-term than in the short-term (change by 0,22 and 0,29 respectively with the change of the country of attended conference by 1).

Table 5 Regression results for 9-12 models

	Model 9	Model 10	Model 11	Model 12
	Amount of investment (t+1)	Amount of investment (t+3)	Number of investment rounds (t+1)	Number of investment rounds (t+3)
Geographical diversity	0,57**	0,75**	0,29**	0,22**
Number of patents	0,03	0,03	0,03**	0,01
Number of publications	0,09	0,04	0,06	0,03
Firm revenue	-0,5*	-0,48	-0,09	0,01
Firm size	1,75**	3,06**	0,18	-0,03
Constant	-1,87	-6,41	0,71	0,2
R ²	0,03	0,06		
N	2080	1872	2080	1872
Df			5	5
Wald χ^2			38,25	25,84
Log-likelihood			-915,53	-1679,84

Significance level: * - p< 0,05, ** - p< 0,01, *** - p< 0,001

To sum up, our Hypothesis 1 was rejected, Hypothesis 2 was partially supported and the Hypothesis 3 was fully supported by the regression analysis. The results did not offer any proof that the intensity of conferences participation is significantly associated with the likelihood of attracting investments. Also we found that in the long run the effect of knowledge diversity and geographical diversity on the number of investments rounds slightly diminishes. The impact of the geographical diversity among conferences on the amount of attracted investments slightly increases in the long run. The implications of these findings are discussed in the next section.

4. Conclusion

Summarizing the results of our analysis, we can conclude that the quantity of the conferences in which the firm has participated does not matter. Instead, we found that only participation diversity (both geographical and knowledge) explains variation in attracted investments among firms. In other words, it is not the quantity of attended conferences, but rather the diversity among them is important for attracting investments.

Knowledge diversity of attended conferences was found to be a significant predictor for number of investment rounds. Knowledge diversity of attended conferences is likely to offers to a firm a wide pool of different investors because it is assumed that various conferences are attended or screened by distinct investors while the members of a particular community (e.g. medical electronic equipment) remain the same. As for time frames our results show diminishing effect of knowledge diversity on the number of investments rounds. It indicates that investors are more likely to make a transaction in the first year after the conference than within longer periods.

We found that geographical diversity of attended conferences has a strong effect on both the number of investment rounds and amount of received investments. This means that firms have higher chances to attract investors from different geographical areas. A cultural aspect can be important in this case. Investment decisions that are made by American, European or Japanese investors might have different rationales. An idea or findings that were presented by a firm might seem unpromising for the investors in one country, but it might intrigue investors from another one. The long-term effect of geographical diversity of attended conferences is higher than short-term one in case of amount of received funds. This can be explained by the accumulating nature of received amount of investments.

Overall, our findings suggest that conferences are indeed important vehicles for attracting the investments. Moreover, we specify particular characteristics of conferences participation strategies of SMEs (knowledge and geographical diversities) that are associated with success of attracting funds. Our reasoning was grounded in the institutional and signaling theories. However, more research is needed to further specify and distinguish the exact mechanisms through the identified effects are produced.

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S.I. Voinova
South Ural State University, Chelyabinsk, Russia
voynova.si@gmail.com

The algorithm of the state promotion of the entrepreneurial activity in a region based on its socio-economic assessment

The aim of the research is to suggest the algorithm of the state promotion of the entrepreneurial activity in the Russian regions, from the comprehensive socio-economic assessment of the entrepreneurial activity and ending with the analysis of the results and making the necessary adjustments to the directions and incentives, the use of which can increase the development of entrepreneurship in the regions and in the country as a whole.

The author used the methods of system and cause-and-effect analysis, economic-statistical and sociological methods, analysis, synthesis, generalization and analogy. The results of the research can be used by the legislative and executive branches of the federal, regional and local levels as a scientific and methodological basis for the assessment of the entrepreneurial activity in a region and identifying the opportunities, trends and methods of the promotion.

Keywords: *entrepreneurship, entrepreneurial activity, promotion of entrepreneurial activity, regional entrepreneurial system, regional economics.*

The algorithm of the state promotion of the entrepreneurial activity in a region is a system of interrelated organizational, economic, administrative and legal methods of the state influence on the entrepreneurial activity in a region through the development of goals and objectives of regulating the entrepreneurial sector, the choice of indicators to assess the impact of the entrepreneurial activity, forecasting of possible changes of the entrepreneurial system in the long term and adjusting goals and objectives, depending on the internal and external factors, as well as through the use of measures of legal regulation and business support in a region.

The algorithm of the state promotion of the entrepreneurial activity in a region consists of *five stages*.

The first stage of the algorithm of the state promotion of the entrepreneurial activity in a region is the socio-economic assessment of the entrepreneurial activity in the regions of Russia (Voynova & Shindina, 2013, 2014).

Currently, there are a number of methodologies for assessing the entrepreneurial activity: the methodology of the international project “The Global Entrepreneurship Monitor” (Global Entrepreneurship Monitor, 2015), the methodologies proposed by Russian scientists, including different criteria for analysis (Belikova, 2013; Mineva, 2010; Popovskaya, 2013), the methodology of “Expert RA Rating Agency” (Expert RA Rating Agency, 2015) etc.

Based on the analysis of these methodologies the author proposes to develop the methodology of the socio-economic assessment of the entrepreneurial activity in a region, which can be used not only to determine the general level of the development of the entrepreneurship in a region, but also to work out the tools of the further increase of the entrepreneurial activity.

According to the analysis of the different factors affecting the entrepreneurial activity in a region and in accordance with the need of working out the practical tools of using the socio-economic assessment, the author proposes to use a system of indicators, reflecting the various aspects and including four characteristics:

1. The demographic processes in the entrepreneurial system – is a system of the processes that reflect the change in time of any elements that directly affect the change in the composition and the structure of the enterprise sphere in a region. The demographic processes in the entrepreneurial system include the creation and the liquidation of enterprises, the change of their source of funding, size and legal form of organization.
2. The specialization of the entrepreneurial activity – is associated with the level of development of the extractive and manufacturing industries, construction, trade and services sectors.
3. The investment activity – is included in the list of the characteristic because of the fact that the investment in the modern world is not only a source of the enterprise development, but it also contributes to the development of the socio-economic sphere.
4. The employment in the entrepreneurial organizations – it plays the most important social role, providing the satisfaction of the needs of the population, improving the competitiveness of entrepreneurial organizations and people's living standards.

After that, the author using the data of the official statistics (Regions of Russia: socio-economic indicators, 2013) suggests choosing four factors for each characteristic and to present them in two planes: in statics (reflecting the current state of the development of entrepreneurship in a region) and in dynamics (reflecting the changing values of the indicators from the previous period). Table 1 shows the characteristics of the entrepreneurial activity in a region in statics and in dynamics.

Table 1 – The characteristics of the entrepreneurial activity in a region

Characteristic	Static factors	Dynamic factors
1. The demographic processes in the entrepreneurial system	1) The number of enterprises and organizations	The growth rate of the number of enterprises and organizations in comparison with the previous period, %
	2) The number of small enterprises	The growth rate of the number of small enterprises in comparison with the previous period, %
	3) The number of medium-sized enterprises	The growth rate of the number of medium-sized enterprises in comparison with the previous period, %
	4) The number of enterprises with foreign capital	The growth rate of the number of enterprises with foreign capital in comparison with the previous period, %
2. The specialization of the entrepreneurial activity	1) The volume of shipped goods of own production, works and services on their own by economic activities “Mining and quarrying”, “Manufacturing” and “Production and distribution of electricity, gas and water”	The growth rate of the volume of shipped goods of own production, works and services on their own by economic activities “Mining and quarrying”, “Manufacturing” and “Production and distribution of electricity, gas and water” in comparison with the previous period, %
	2) The volume of agricultural products	The growth rate of the volume of agricultural products in comparison with the previous period, %
	3) The volume of construction works	The growth rate of the volume of construction works in comparison with the previous period, %
	4) The turnover of wholesale and retail trade	The growth rate of the turnover of wholesale and retail trade in comparison with the previous period, %
3. The investment activity	1) The fixed capital expenditures	The growth rate of the volume of the fixed capital expenditures in comparison with the previous period, %
	2) The fixed capital expenditures (residential buildings)	The growth rate of the volume of the fixed capital expenditures (residential buildings) in comparison with the previous period, %
	3) The fixed capital expenditures (non-residential buildings, land)	The growth rate of the volume of the fixed capital expenditures (non-residential buildings, land) in comparison with the previous period, %

Characteristic	Static factors	Dynamic factors
	4) The foreign investment	The growth rate of the volume of the foreign investment in comparison with the previous period, %
4. The employment in the entrepreneurial organizations	1) The economically active population	The growth rate of the economically active population in comparison with the previous period, %
	2) The average number of employees in the economy	The growth rate of the number of employees in the economy in comparison with the previous period, %
	3) The number of unemployed people	The growth rate of the number of unemployed people in comparison with the previous period, %
	4) The need in employees	The growth rate of the need in employees in comparison with the previous period, %

With the data of “Regions of Russia: socio-economic indicators” (Regions of Russia: socio-economic indicators, 2013) the absolute values for each of these factors of the regions are written (static factors), and then on this basis and in view of the data for the previous period, the growth rates of the factors are calculated (dynamic factors), then the ratings are placed. To determine the rank of the region of the characteristic it is necessary to use the arithmetic mean of the ratings of its component factors.

The author suggests using rating assessment for each factor considering the direction of the influence of the factor to the characteristic (if there is a direct dependence of the factor and the characteristic, the rating is spread in direct order: the maximum value of the factor corresponds with the rating “1”; the reverse - the minimum).

The rating method allows comparison of disparate dimensions of the factors that allows us to determine the total rating values of the four characteristics of the entrepreneurial activity in the regions.

After the ratings of the Russian regions on the characteristics in statics are placed, the author suggests dividing all the regions into four groups (groups “A”, “B”, “C” and “D”) on the each characteristic: if the region rank is up to 20, it is assigned the group “A”; from 20 to 40 – “B”; from 40 to 60 – “C”; more than 60 – “D”. In this case, the regions of the group “A” can be defined as the leading regions which are characterized by the extensive entrepreneurial network, high standard of living, an increase number of new jobs and reduction of unemployment, the opportunities for the intensive economic growth and the increasing entrepreneurial activity. The groups “B” and “C” unite the regions that are currently not ready to take a leading position on the level of the entrepreneurial activity. The group “D”, according to the author's methodology, consists of the outsider regions where the entrepreneurship is difficult for different reasons of political nature, harsh and adverse climatic conditions, lack of the state support of the entrepreneurship etc. These regions do not yet have the established economic foundations for the successful development, and therefore do not have the sufficient own funds. After the groups on the four characteristics are determined it is necessary to determine the summary group is statics, based on the preponderance of one or another group. So there may be more groups, such as “AB”, that is intermediate between “A” and “B”.

After the ratings of the Russian regions on the characteristics in dynamics are placed, the author suggests dividing all the regions into four intervals (intervals “++”, “+”, “-” and “—”) on the each characteristic: if the region rank is up to 20, it is assigned the group “++”; from 20 to 40 – “+”; from 40 to 60 – “-”; more than 60 – “—”. The value of “++” corresponds to the maximum growth of the characteristic among all the regions, “+” – slight increase, “-” – slight decrease, “—” – strong decrease. It is useful to add the interval “+ -” to the overall rating of the Russian regions in dynamics that unites the regions which have the high ratings on the one characteristic and the low ratings on the other and characterized by a general lack of changes in comparison with the previous period. After the groups on the four characteristics are determined it is necessary to determine the summary group is dynamics, based on the direction and the intensity of the changes.

Thus, it is possible to determine the total socio-economic assessment of the entrepreneurial activity in the regions, which can be conveniently represented in the form of a matrix. In this case, it is necessary to mark the groups in statics horizontally, the intervals in dynamics – vertically.

The horizontal axis corresponds to the static value of the entrepreneurial activity in the regions marked by the alphabetic component: A, AB, B, BC, C, CD, D. The vertical axis corresponds to the rate of the changes in the level of the development of entrepreneurship. The value is determined from the maximum growth rate (++) to a minimum (—) with the possibility of a general lack of changes (+ -).

Next, the crossing of the vertical and horizontal axis is established, and the color indicator is used. The author suggests dividing the regions into four sectors, using four different colors where the most intense color corresponds to the leading regions, the least – outsider regions (Table 2):

Table 2 – The matrix of the total socio-economic assessment of the entrepreneurial activity in the regions

	A	AB	B	BC	C	CD	D
++	Very high activity – strong increase	High activity – strong increase	Activity above average – strong increase	Moderate activity – strong increase	Minor activity – strong increase	Low activity – strong increase	Very low activity – strong increase
+	Very high activity – slight increase	High activity – slight increase	Activity above average – slight increase	Moderate activity – slight increase	Minor activity – slight increase	Low activity – slight increase	Very low activity – slight increase
+ -	Very high activity – lack of changes	High activity – lack of changes	Activity above average – lack of changes	Moderate activity – lack of changes	Minor activity – lack of changes	Low activity – lack of changes	Very low activity – lack of changes
-	Very high activity – slight decrease	High activity – slight decrease	Activity above average – slight decrease	Moderate activity – slight decrease	Minor activity – slight decrease	Low activity – slight decrease	Very low activity – slight decrease
--	Very high activity – strong decrease	High activity – strong decrease	Activity above average – strong decrease	Moderate activity – strong decrease	Minor activity – strong decrease	Low activity – strong decrease	Very low activity – strong decrease

1. Sector I (high activity – intensive growth) – unites the regions characterized by the high entrepreneurial activity and the high rates of growth of the main indicators of the level of the entrepreneurial activity (groups A ++, AB ++, B ++, BC ++, A +, AB +, B +, A + –, AB + –). These regions are currently the leaders in comparison with the other regions of Russia in terms of business development. The calculated dynamic rating also indicates the intensive growth of the number and the turnover of the enterprises, the share of the employed people in the economy, generally improving the entrepreneurial climate and the socio-economic situation.

2. Sector II (high activity – slow growth / decrease) – unites the regions characterized by the high entrepreneurial activity and the decrease of the basic indicators of the entrepreneurial activity. The following group of the regions are in this sector: B + –, BC + –, A –, AB –, B –, BC –, A —, AB —, B —. Currently, these regions are the leaders; however, the slowdown of the entrepreneurial activity shows the unstable position of the regions and the possibility of losing the competitive advantages in the nearest future.

3. Sector III (low activity – intensive growth) – unites the regions characterized by the low entrepreneurial activity and intensive growth of the basic indicators of the entrepreneurial activity. This sector includes the regions of the groups: C ++, CD ++, D ++, BC +, C +, CD +, D +. Despite the fact that currently, the entrepreneurial activity in these regions is difficult and not developed, the situation may change in the nearest future. It is connected to the fact that the regions have the great potential due to the high rate of growth of entrepreneurial activity; and they can take the leading positions in case of the competent state support.

4. Sector IV (low activity – slow growth / decrease) – unites the outsider regions characterized by the low entrepreneurial activity and slow growth or decrease of the basic indicators of the entrepreneurial activity. This sector includes the regions of the groups: C + –, CD + –, D + –, C –, CD –, D –, BC —, C —, CD —, D —. These regions do not have the established economic foundations for the successful social and economic development; they are not endowed with natural resources and raw materials, and therefore do not have the sufficient own funds for the development of the entrepreneurship. In order to increase the entrepreneurial activity in the regions it is necessary to put into practice the external intervention: a large-scale state policy to support the entrepreneurship and the implementation of the large investment into the economy of the regions – due to the fact that the level of depending of the budgets of these regions from the federal government remains quite high (Voynova & Shindina, 2014).

The second stage of the algorithm of the state promotion of the entrepreneurial activity in a region is matching the type of the region according to the level of the socio-economic development, natural and climatic conditions, industry specialization with the sector of the region.

According to the level of the socio-economic development (Ministry of Regional Development, 2014):

– **Sector I** includes the regions called “Growth drivers” that carry a large contribution to the GDP of the country and have a high potential for the development of the entrepreneurial sphere (the regions with the most favorable socio-economic conditions and high entrepreneurial activity);

– **Sectors II and III** consists of the regions called “Strong regions” the entrepreneurship of which is currently difficult because of the high dependence on the traditional industries, the need to update the reproduction base, the transition from the traditional type of production to the innovational one and the lack of capital (**Sector II**) or the lack of information among the general population about the methods and the opportunities of doing business in the region (**Sector III**);

- **Sector IV** includes the regions called “Special regions”; they are characterized by the low entrepreneurial activity, which is due to the harsh climatic conditions, the low standards of living and the instability of the political system.

According to the shape and extent of the financial support:

- **Sector I** includes the regions called “Donor regions” that are the regions where the volume of the fiscal charges exceed the amount of the necessary payments;
- **Sectors II, III and IV** unites the regions called “Subsidized regions” that are needed of the federal subsidies and grants.

According to the specialization:

- **Sector I** includes the leading regions with the highest level of the entrepreneurial activity in many sectors of the economy: industry, construction, trade etc.;
- **Sector II** includes the regions that are the leaders in one of the industries and providing not only the internal but also the external needs: the fuel and raw materials, industrial, agricultural;
- **Sector III** consists of the regions with the moderate, but increasing levels of one or more sectors of the economy;
- **Sector IV** consists of the mostly underdeveloped regions, not dominating in any of the industries.

The third stage of the algorithm of the state promotion of the entrepreneurial activity in a region is identifying the need of the state promotion. If there is no need of the state promotion of the entrepreneurial activity in a region, the author proposes to focus on the constant monitoring of the entrepreneurial activity in the region, not taking the next step.

The fourth stage of the algorithm of the state promotion of the entrepreneurial activity in a region is defining the directions and the methods of the state promotion of the entrepreneurial activity in a region according to the type and the sector of the region. The author proposes to distinguish four groups of recommendations for the state promotion of the entrepreneurial activity in a region:

1. For the regions of **Sector I** it is necessary *to reduce the administrative barriers* due to reaching the current high level of the development of the entrepreneurship, the developed entrepreneurial networks and the involvement of the population to the entrepreneurship made at the current stage. The authorities have already created the favorable conditions for the development of the entrepreneurship in the regions of the sector, so it is only necessary to maintain them by reducing the bureaucracy and the need of the constant interaction with the supervisory and regulatory authorities.
2. For the regions of **Sector II** the authorities need to use the *additional financing* for the restructuring of the regional economy, focusing on the innovative type of production and the upgrading of the reproductive base and thus the increasing the entrepreneurial activity. The regions of this sector are characterized by the highly specialized innovative activity focused mainly on the improvement of the existing technologies and then on the creation of a new product. The entrepreneurial activity in these regions is concentrated in the large, traditional, industrial enterprises, while the small and medium-sized enterprise organizations remain not developed. In this connection, there is a problem of not only the insufficient financing of the large enterprises that need to update their equipment and technologies but also of the supporting the small and medium enterprises, that ensure the satisfaction of the basic household needs of the population.

3. For the regions of **Sector III** the authorities need to carry out the *property, legal and financial support* for the development of the entrepreneurial infrastructure. The main problem of the entrepreneurship development in these regions is a lack of information about the ways and the opportunities of doing business among the population and a lack of financing for the development of the entrepreneurship. In these regions, the authorities should pay attention not only to the financial matters, but also to the trainings, consultations the entrepreneurs on the economic and legal matters.

4. For the regions of **Sector IV** the highest priority should be given to the *stabilization of the political situation, the equalizing of the standards of living and the reducing of the unemployment*. In such regions the entrepreneurship is difficult not only because of the lack of financial infrastructure and legal support of the entrepreneurial sector, but also because of general downturn in the economy, social tensions, political instability.

The fifth stage of the algorithm of the state promotion of the entrepreneurial activity in a region is the analysis of the results and correction of the objects and the methods of the state promotion. Afterwards, the algorithm is closed: the entrepreneurial activity in a region is assessed again according to the state promotion policy and then the other steps are repeated (Voynova & Shindina, 2014).

Thus, the report reveals the author's methodology of the socio-economic assessment of the entrepreneurial activity in a region and the mechanism of its practical use, which is an algorithm of the state promotion of the entrepreneurial activity depending on the type of the region and the level of the development of the entrepreneurship and the entrepreneurial activity.

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Yusupova Almira

**Novosibirsk State University, Institute of Economics and Industrial Engineering Siberial
Branch of Russian Science Academy**

yusupova@icie.nsc.ru

Integration of Small and Medium Size Innovative Companies: Types and models of Formation and Development

Paper deals with intercompany cooperation which is understood as an element of relational resources. The influence of external relations on competitiveness is discussed. Main attention is paid to hybrid schemes. They appeared to be examples of quasi integration of companies providing them opportunities to obtain all advantages of integration to formally independent firms. Any integration enforces companies' market power. According to main hypothesis, suggested in the paper, choice of the cooperation model depends on company's type, market structure and specificity of assets used in the production. Models of partnership cooperation of companies which are listed in national rating "Tech Success" as well as several innovative SMEs from Siberia are studies within empirical part.

Keywords: *interfirm cooperation, hybrid forms of cooperation, quazi integration*

Quazi Integration as a Type of Companies' Interaction

Most companies have incentives to dominate at the market, as well as to get market power and therefore strong leading position. Effective organization of intercompany relations could help to achieve mentioned goals (Methodology of Network Forms of Business Organization Research, 2014). Such organization deals with integration which provides the way to increase company's production and market facilities (Avdasheva, Goreiko, 2011). Real transformation of competitive relations takes place at the market under integration as coordination of incentives and decisions becomes necessary. Forms and levels of this coordination can vary. Integration doesn't always mean formal legal merger of several earlier independent companies. Important role on many markets is played by models of quasi integration (Sheresheva, 2014). Quazi integration provides to one or several cooperating companies an opportunity to control management and decision making of other firms without getting formal legal ownership rights. Quazi integration could develop both within horizontal and vertical relations and cooperation.

Quazi integration means economic actors' union which leads to the development of sustainable long term relations between companies and delegation of authorities and powers without legal ownership transfer (Sheresheva, 2014).

Such forms have different origin; they appear as a result of "quazi internalization" when long term detailed contractual relations established between autonomous actors limit possibilities of opportunistic behavior. From the other side externalization of some internal functions as a reaction to environmental challenges also cause quazi integrative entities.

O. Williamson in his classical analysis showed that simple market forms or relations are ineffective when transactions are arranged around highly specified assets and deal with high level of uncertainty (Williamson, 1981). Due to post contractual opportunism existing in such transactions market type interaction doesn't create incentive to invest. Non market mechanisms are beneficial in these situations. The simple example could be presented by full merger of actors which brings definite advantages. At the same time these advantages are available within quazi integration schemes also. It should be noted that high uncertainty and assets specificity are characteristics of innovative activities therefore non market forms of relations are attractive for innovative companies.

Main characteristics of different types of inter firm cooperation organization are presented in table 1 below.

Table 1

Types of inter firm cooperation and their main characteristics

Type Characteristic	«Market»	«Soft restrictions»	«Hard restrictions»	«Firm» (hierarchy)
Level of integration	Independence	«Qazi integration»		Full integration
Period of interaction	Short term	Medium term	Long term	
Contracts which are used	Classical	Neo classical		Relational
Independence of companies	Remains	Is restricted	Is strongly restricted	Disappears
Formal autonomy of companies	Exists			Doesn't exist
Influence to market structure	Doesn't exist	Level of market concentration and market power of selected firms increase		

Source: Developed by author

Hybrid forms of interaction combine elements of market and hierarchy and therefore have great potential. Each type of interrelation has both advantages and disadvantages, so decision in every case is made basing on many factors which deal with external and internal terms of firm’s activities.

Figure 1 reflects some analysis of connection between firm’s market positions (particularly its market power), its product and forms of interaction with other economic actors. Main and peripheral products are separated within analysis. Company’s market power determines its capacity to form inter firm cooperation. If market power is relatively high production of peripheral products could be arranged with the help of partner firms through quazi integrative hybrid schemes which are managed by firm under consideration.

If company doesn’t have market power its main products are produced within modified market relations which are transferred to hybrid ones. Sometimes basic forms - market or hierarchy - are also effective.

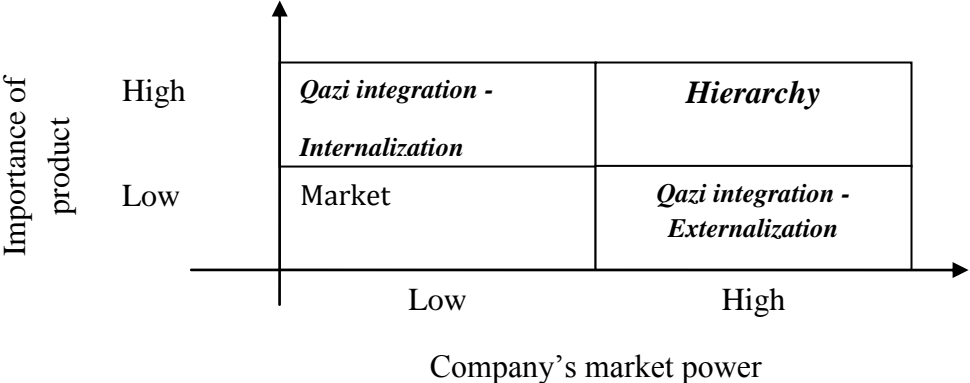


Fig. 1 Types of intercompany interaction for different firms and products

Source: Developed by author

All these comments prove the statement that effective organization of inter firm cooperation plays important role in the development of company’s market power. Our research is devoted to this topic. Inter firm partnership relations could be found in the activities of any company. At the same time it is very difficult to find relevant homogeneous and detailed information concerning experience of real companies.

Empirical part of our research is based on the analysis of real cases of inter firm cooperation and companies’ attitude to different forms. Main attention is paid to the behavior of innovative companies. Empirical sector of the paper deals with the partnership cooperation of high-tech fast developing Russian companies which take part in national rating “Tech Success and a set of Siberian small and medium size innovative companies.

Characteristics of Partnership Relations of Companies Included to National Rating “Tech Success”

National rating of Russian high tech fast developing companies “Tech Success” is created every year since 2012 by Russian Venture Company together with Association of Innovative Regions. This activity is supported by Rosnano and by Foundation of Small Innovative Businesses Support. Pricewaterhouse Coopers (PwC) as well as Small and

Medium Size Entrepreneurship Support bank also take part in the preparation of this rating. (Study of Fast-Developing High-tech Companies in Russia 2014).

Rating is based on the performance of medium size technological business; such indicators as turnover, turnover growth rate, production technological level, level of novelty, intellectual rights, R&D expenditures and technological innovations are taken into account.

We've studied 54 companies which took part in rating of 2014 year. According to yearly report all companies consider themselves to be market leaders with high level of competitiveness. 87% of companies according to self assessment are real leaders.

Even if self assessments are too optimistic it is possible to think that these companies have relatively high market power.

Formal questioning and individual deep interviews were used under rating development. One of the questions concerned models of interaction with other economic actors (Study of Fast-Developing High-tech Companies in Russia 2014).

It was found that companies develop active partnership relations within different forms of open innovations, arrange exchange of information on innovations with other enterprises, utilize facilities of external designers, use acquisition of technological start-ups or create spin-off firms for new technologies. Spin-off model is often used when new technology with high potential is developed as separate business. Leaders of high technological companies pay great attention to the formation of partnership relations considering openness as one of the important success factors. Universities and research and special applied institutes are mentioned as important partners. Sometimes applied institutes provide significant help in the dissemination of innovation.

In most cases relations with universities are regulated by different agreements on cooperation. Sometimes special departments for definite skills training are opened at universities. Besides education and training such departments help to create consumers' locality; they are used for joint research projects. Cooperation with universities takes form of joint ventures or universities' start-ups purchase. Companies form partnership relations with other small and medium size businesses.

Summing up all these observations it is possible to note that all forms of quazi integrative hybrid interactions which were defined earlier are used by high tech companies from Tech Success project.

Basing on open information presented on official web sites of these companies we made an attempt to analyze some available indicators of partnership cooperation and to connect them with companies' characteristics. Some general results are presented in table 2.

Basing on available information all 54 companies were divided to groups according to area of their activity (industry). Two groups - IT and Pharmaceutics, biotechnologies, medicine – are included in knowledge economy which is supposed to play crucial role in structural reconstruction of national economy.

Affiliation with the group of companies was taken into account as important factor of partnership relations. Partnership relations within group might be regulated by neoclassical contracts during long term period. Number of partners indicated on the company's web site also is important for the interrelations. If company provides information about definite contractors it is reasonable to propose that their cooperation is not limited by one-time transaction. Number of such contractors shows how complex and diversified cooperation is. Data presented in table confirm our hypothesis that areas of company's operation, market structure as well as the level of firm's assets' specificity have great influence on the type of partnership relations. So companies which have high level of innovative activity, operate at competitive markets and use specific assets choose complicated hybrid schemes of quazi integration. Firms related to knowledge economy and oil extraction and proceeding are examples of such companies.

Table 2

**General characteristics of partnership relations of companies included to Tech
Success rating**

Industry	General number of firms	Number of firms affiliated with groups of companies	Average number of partners per company	Number of companies which didn't provide information on partners
IT	13	4	23	4
Pharmaceutics, biotechnologies, medicine	12	4	15	5
Communication	2	0	4	1
Equipment for oil extraction and processing	1	1	22	0
Other	26	6	5	16

Source: Author's calculation

Partnership Relations of Siberian Small and Medium Size Innovative Companies

Empirical part is based on data collected with the help of special survey of Siberian innovative companies. Major part of the sample is presented by companies and entrepreneurs who work at Novosibirsk research center which is marked by innovative environment which helps to develop partnership cooperation. Several companies representing other Siberian cities are also included in the sample. Forms of innovative firms' intercompany cooperation were studied; companies' attitude to the role of this cooperation was analyzed. Small and medium size Siberian innovative companies were selected for the analysis

We studied relations between companies' characteristics and their attitude to different types of intercompany cooperation. Main survey was developed as the part of large scale research of innovations transfer. The general methodology is explained in several publications (Kravchenko et al, 2011, Yusupova, 2012).

Separate part of research was based on a special survey which included set of questions concerning partnership relations directly. Our aim here was to find out business partners who have great importance for companies, dominant types of agreements, relations between companies' characteristics and models of cooperation. Total number of analyzed observations is 44. Cooperation with partners of main types was examined. These types include following groups: small and large business companies, state institutions, foreign companies. These partners could act both as resource suppliers and as consumers of innovative companies' products. In addition questions covered cooperation with banks, competitors, BAs, universities and research institutes. It was also assumed that state authorities could act not only as supplier or consumer but also an informational, infrastructural, regulative partner.

Respondents were asked to give scores reflecting importance of each partner. It turned out that all types of consumers got higher scores than suppliers. According to respondents' opinions the most important role was given to large companies as consumers. In the group of

suppliers the highest score was obtained by small business. It is possible to suggest that innovative companies prefer to get orders from large corporations and to buy components and semi-manufactured articles from small firms.

44,5% of all companies are affiliated with business groups and therefore have extended cooperation with other firms.

Some data reflecting stability of partnership relations and their perspectives are presented in table 3.

Table 3

Duration and perspectives of partnership cooperation

Types of partners	Average duration of cooperation (years)	Share of firms planning to (%)		
		Stop partnership	Maintain current state	Expand partnership
<i>Consumers</i>				
Small business (C-SB)	3,1	0	45,5	59,1
Large business (C – LB)	3,8	2,3	31,8	61,4
State structures (C- Gov)	5,2	0	40,9	43,2
Foreign companies (C – FC)	2,5	0	15,9	52,3
<i>Suppliers</i>				
Small business (S – SB)	3,6	0	40,9	40,9
Large business (C – LB)	3,5	0	34,1	38,6
State structures (S – Gov)	2,2	0	25,0	18,2
Foreign companies (S – FC)	1,6	0	20,5	31,8
<i>Other partners</i>				
Companies working at the same market (Competitors)	2,6	4,5	34,1	34,1
Banks and other financial institutes (Banks)	1,6	0	50	25
Research institutes (RI)	1,3	0	29,5	27,3
Universities (Univ)	0,5	0	22,7	18,2
Business associations (BA)	0,6	2,3	29,5	15,9
State structures (Gov)	2,3	0	38,6	25

Source: Author's calculation

Average period of cooperation with consumers was about 3,65 years, with suppliers - 2,73 and with other contractors - 1,48. Cooperation with consumers turned to be the

longest moreover the share of firms which plan extension of interrelations with consumers is rather high. These results reflect the priority of formation and development of company's market orientation and position. In general vertical relations presented by partnerships with consumers and suppliers turned to be important. Their relatively long duration and expansion perspectives show that quazi integrative vertical schemes are used by many innovative companies.

It turned out that partnerships with foreign companies and so-called other partners are examined by companies only in shorter (or sometimes midterm) period. This is quite understandable due to current economic situation in Russia.

In general the longest relations are built with state authorities as consumers and small and large business both as consumers and suppliers. Many respondents plan to expand relations with these partners.

It should be noted that very few companies plan to stop cooperation with any existing partner. About half of the companies in the sample are interested in maintaining current cooperation with banks and financial institutes. It is possible to suggest that they are satisfied by current state of financial infrastructure.

Results reflected that relatively less attention is paid to the development of cooperation with research institutes, universities, and business associations.

It is interesting to analyze relations with competitors which show horizontal relations. Average duration for these relations is greater comparing with other types of other partners. Many respondents plan to increase cooperation with competitors. This means that competitive structures are likely to be modified and replaced by cooperative and integrate ones.

Some formal methods including correlation and regression analysis were applied to analyze obtained data. Analysis of the results obtained revealed that there is no any correlation between the level of product novelty and scores of partners' importance. No correlation was found for the level of novelty and use of informal models of cooperation.

Separate step was devoted to the analysis of correlation between the scores of the importance of different partners. Such correlation was found for large business and foreign companies. It could be interpreted so that innovative companies consider these actors to be reliable partners and in general are interested in cooperation with them.

In spite of the existence of many indirect confirmations of the importance of partnership relations for innovative companies in general these relations in most cases are formed spontaneously without deep justification. This is reflected by various controversies in the results of formal survey data analysis. Regular management of partnership relations doesn't exist yet. Similar results are indicated in a number of research papers (Cheung et al., 2010, Ziolkowska 2014).

Summing up the results of partnership relations analysis it is possible to conclude that various forms of partnership cooperation are developed by companies.

Industrial characteristics of company, type and level of competition at the market, level of assets' specificity have great influence on the models of partnership cooperation.

High competition and utilization of highly specific assets require the development of complex schemes of integration which combine efforts of many economic actors. Innovative firms having specific assets and operating at highly competitive markets with high level of uncertainty can benefit from different forms of quazi integration which provide them with access to integration advantages and give an opportunity to remain independent.

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**Elena K. Zavyalova
Dmitriy G. Kucherov
Sofia V. Kosheleva
Victoria S. Tsybova
Artem I. Alsufyev**

**Analysis of effective utilization of human capital (by example of the
Russian oil and gas companies)**

Abstract: Human capital is one of the most important intangible assets of modern companies. In this paper, the human capital is considered in terms of microeconomic approach as a set of knowledge and skills of the worker, which influences the level of productivity and well-being of the company. The paper presents results of empirical research on evaluating the effectiveness of the use of human capital in the Russian oil and gas sector of the economy.

Keywords: *human capital, efficiency, oil and gas companies*

Introduction

One of the topical issues under discussion in labor and personnel economics academic community is a human capital theory. In contemporary knowledge economy the interest to the notions of human capital theory is deepened: human resources and knowledge become the key intangible asset which strengthens company's value and enables to the unique competitive advantages in the market and stable leadership position.

In the present paper we attempt to evaluate human capital efficiency in Russian companies from oil and gas industry.

Theoretical background

Human capital is "a specific reserve of health, knowledge, skills, capabilities, motivation generated by the investments and accumulated by individual. It is appropriately used in this or that area of social reproduction, contributes to employee qualification growth, promotes to labor productivity and quality growth and thereby influence the salary growth of the particular individual" (Dyatlov, 1994, p. 83).

By now there is no common approach to the definition of human capital. It is mainly caused by the fact that human capital and its properties are considered by researchers in 2 dimensions: macroeconomic (human capital as a source of common weal); microeconomic (human capital as a source of particular firm welfare); and individual (human capital as a source of particular and his/her family welfare).

In this paper we use the working definition of human capital from the microeconomic point of view: human capital is "any stock of knowledge or characteristics the worker has (either innate or acquired) that contributes to his or her "productivity" (Acemoglu, Autor, 2010, p. 3).

Organizations can develop its human capital using internal training activities. At the same time organizations do not have access to other sources. Nevertheless forming up the recruitment and hiring policies organization can make the requirements to the particular education and minimum acceptable knowledge, skills and abilities.

It might be supposed that individual continues to invest in his/her human capital after job placement. These investments usually mean training activities which are organized by the employer and accepted by the employee by means of professional development programs.

One of the actual streams in contemporary studies is human capital measurement and evaluation of its significance for organizational efficiency. The research of Saratoga Institute, conducted in the middle of 1990-s with a sample of more than 1000 companies aimed to identify HRM practices which differs leading companies from outsiders. The important results are received: the most profitable enterprises do not use any specific HR programs, but actively use HR data, which consists of quite extensive list of factors (Fitz-enz, 2006).

The next step is to make the tools to operate with "human values" and connect them with financial metrics. The elementary metric is the coefficient called "Human Capital Revenue Factor" or labor productivity. Simultaneously Human Capital Expense Factor and Human Capital Income Factor are calculated. These are the simplest organizational efficiency metrics linked with a human capital. However, this approach is reductive and it is difficult to draw conclusions on basis of these metrics (Fitz-enz, 2006, p. 49).

There is another point of view concerning effective utilization of human capital in organization. It is shown by two key metrics: Human Capital Value Added and Human Capital Return on Investment. These metrics could fairly evaluate the useful human capital functioning. Human Capital Value Added shows how much value is created by one employee. Human Capital Return on Investment shows how the investments in employee are compensated.

Investments in training are the only option for organization to develop its human capital inside. Therefore after considering organizational effectiveness metrics it is necessary to focus on HR training and development data.

According to annual questionnaires of top-managers in oil & gas sector, conducted by Deloitte, shortage of highly qualified human resources is a typical problem for the industry. In 2010, 39% of companies have called this problem substantial for their business, in 2011 this number dropped to 17% and for the next year increased to 20%. Moreover, in the ranking of problems, the shortage of staff stands at 2-5 places (Deloitte, 2010-2012).

Investments in education are discussed in the oil & gas sector from different angles – despite the recognition of the problem of personnel shortage, only a quarter of the companies in 2010 and 2011 increased the investment in training, half of the market players in the segment did not change significantly investments, and the remaining quarter cut expenditures on education. In 2012, the situation has changed; every second company reviewed education policy and tended to increase funding in this area. This can also be explained by the fact that increased the share of companies implementing technological innovation in the workplace that reduced costs only on 5%.

In the oil & gas sector companies do not believe that any strategic initiatives directly related to the staff management can help to maintain competitive advantage. Basically, the company called the sources of competitive advantages the introduction of new technologies and innovations, efficient portfolio management and reduction of production and administrative costs. Only in the first case, we can indirectly consider the role of human resources in increasing companies' efficiency. And, as has been said, in this regard, companies increase their expenditures on education, so investing in the human capital of the organization.

Thus the main preposition of this study is the following: *the company which utilizes its human capital in the most efficient way has maximal profit.*

Research methodology

For the purposes of this study we collect and analyze data on both preliminary metrics (Human Capital Expense Factor and Human Capital Income Factor) and key metrics (Human Capital Value Added and Human Capital Return on Investment).

Preliminary metrics. The ideal representation of this study is to analyze all 7 groups of benchmark indicators (organizational effectiveness, the structure of human resources, compensation, benefits, layoffs, staffing, training and development). In terms of restrictions to access the information is needed, it can be guaranteed access only to the following information:

- profit and loss statement: annual revenue, cost of sales, selling and administrative expenses;
- annual and quarterly reports: the annual average number of personnel.

With the above-mentioned data, it can be created a factor of profit, costs and revenues related to the group of "organizational effectiveness".

Key metrics. To calculate the Human Capital Value Added and Human Capital Return on Investment, which also relates to organizational effectiveness, it is needed the information about the costs of compensation and benefits. By Russian standards there are no disclosure requirements of this information. Only five companies disclose this information (Gazprom, Rosneft, Bashneft, Gazprom Neft, Yatek, etc.). Thus, to calculate the results for the remaining metrics of organizational effectiveness of human capital is not possible for the entire industry.

Thus, having a fairly wide range of instruments, lack of information on most of the investigated metrics significantly limits our research ability, and we are able to calculate only three factors: factors of profits, costs and revenues.

All the necessary for calculations financial information from the profit and loss statements is collected through an electronic information resource "SCREEN Enterprises".

Sample

The sample consists of 27 companies in the oil & gas industry. The list is formed based on the rankings "Capitalization-200" (16 companies) and "Expert-400" (18 firms) for 2013 and represents companies registered in the Russian Federation.

For the purposes of this study, this sample is sufficient: it presents the most efficient and \ or capitalized companies which main activity in the oil & gas industry. All together they realize more than 88% of oil & gas recovery, as well as its refining. Therefore, we can say that the processes taking place in these companies represent the situation in the industry. In fact, analysis of the human capital allows us saying that a set of trends occurring in these enterprises can be called industry trends.

Results

Preparatory metrics

Since the factors of revenue, expenditure and income of human capital can not give acceptable information to confirm hypotheses, we do not use them as evidential base. Nevertheless, they provide a very interesting and exemplary picture of what is happening in the industry. Further, it is considered the case of each factor.

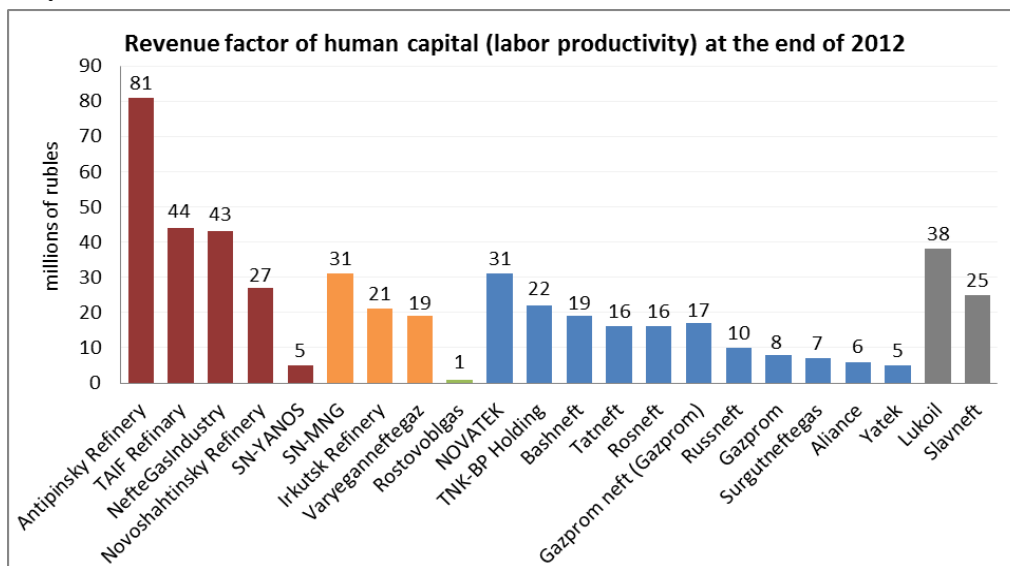


Fig. 1. Revenue factor of human capital (labor productivity) at the end of 2012

Red color means companies engaged in oil refining, orange – oil production, green – transportation, and blue – vertically integrated companies. Data are presented for the year 2012.

Maximum productivity is achieved by Antipinsky Refinery – 80 603 thousand rubles in revenue per staff member. The minimum value states for Rostovoblgaz that operates in transportation and distribution of gas. Note that the minimum value of the index is 54 times lower than the maximum. This is a very great distribution. More stable situation is in vertically integrated companies, where it can quite clearly be divided into 3 groups of companies, depending on their performance. The first group includes only the leader by a prominent gap – Novatek. The second group consists of organizations with average efficiency values from 16 to 22 million of rubles and the third group is a company whose labor productivity is distributed between 5 and 10 millions of rubles per employee.

Flow factor of human capital

It is very difficult to interpret this factor not relating it to the performance of companies. In other words, it is pointless to conduct any analysis of this factor, without data on productivity or revenue. Thus, it is more appropriate to analyze the share of income factor to the revenue factor of human capital. So, firstly, we have an idea of the share of costs in the company's revenue, and even get rid of the human factor in this metric, and thus establish a multiplicative factor model between labor productivity and operational efficiency.

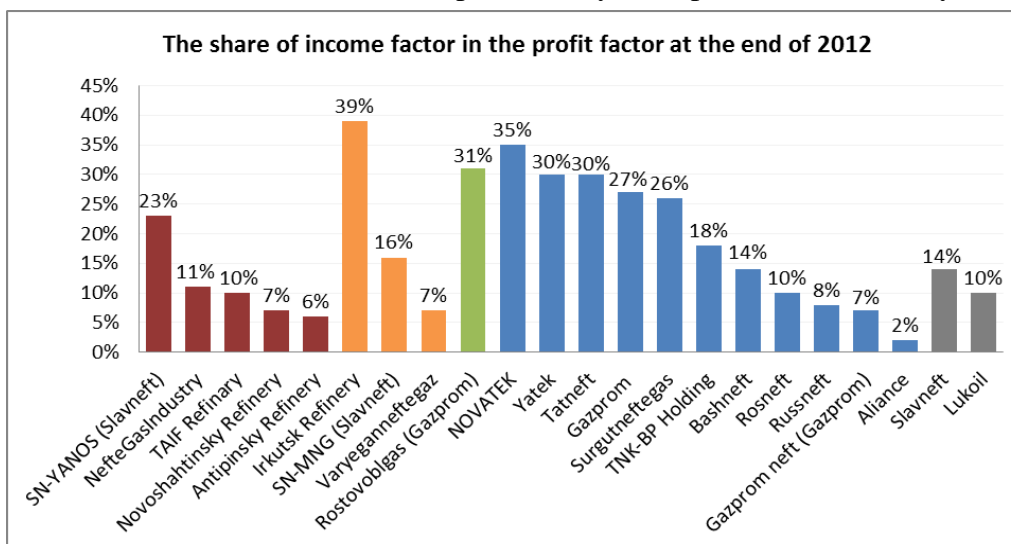


Fig. 2. The share of income factor in the profit factor at the end of 2012

As in the previous situation, vertically integrated companies are clearly drawn three groups. NOVATEK is again leading alone. The second group includes companies with a share of 26% to 35%. The third group is outsiders with shares below 18%. In companies related to oil recovery there is no particular trend – the value of all three is quite different. In oil refining companies there is a clear leader named Slavneft, and the rest have quite similar results.

Group by companies' effectiveness

Ranking companies by a factor of revenue and the share of income factor in the profit factor and summing obtained places in the rankings, we can get the total rating of companies according to two factors:

Table 1. Ranks of companies by efficiency

Company	Profit factor		Human Capital Income factor		Sum of ranks	Group of efficiency
	Value	Rank	Value	Rank		
Lukoil	37 733	1	10,1%	2	3	1
Slavneft	25 329	2	13,7%	1	3	1
Aliance	6 343	10	1,7%	11	21	3
Bashneft	19 258	3	13,6%	7	10	2
Gazprom	8 486	8	27,1%	4	12	3
Gazprom neft	16 515	6	7,5%	10	16	3
NOVATEK	31 224	1	35,3%	1	2	1
Rosneft	15 627	5	9,9%	8	13	2
Russneft	10 175	7	8,1%	9	16	3
Surgutneftegas	7 173	9	26,4%	5	14	3
Tatneft	16 216	4	29,6%	3	7	2
TNK-BP Holding	21 687	2	18,1%	6	8	2
Yatek	4 932	11	29,9%	2	13	2
Rostovoblgas	1 434	1	31,0%	1	2	1

Varyeganneftegaz	18 675	3	6,9%	3	6	2
Irkutsk Refinery	21 107	2	39,0%	1	3	1
SN-MNG	30 691	1	15,8%	2	3	1
Antipinsky Refinery	80 603	1	5,9%	5	6	1
NefteGasIndustry	42 875	3	10,7%	2	5	1
Novoshahtinsky Refinery	26 644	4	6,9%	4	8	2
SN-YANOS	5 405	5	22,8%	1	6	1
TAIF Refinery	43 563	2	9,9%	3	5	1

Based on the “rating” of companies, we divide groups of efficiency. After assessing the added value and return on human capital of organizations, we compare which efficiency groups these companies belong to. This allows us to see relationships between the preliminary and key factors.

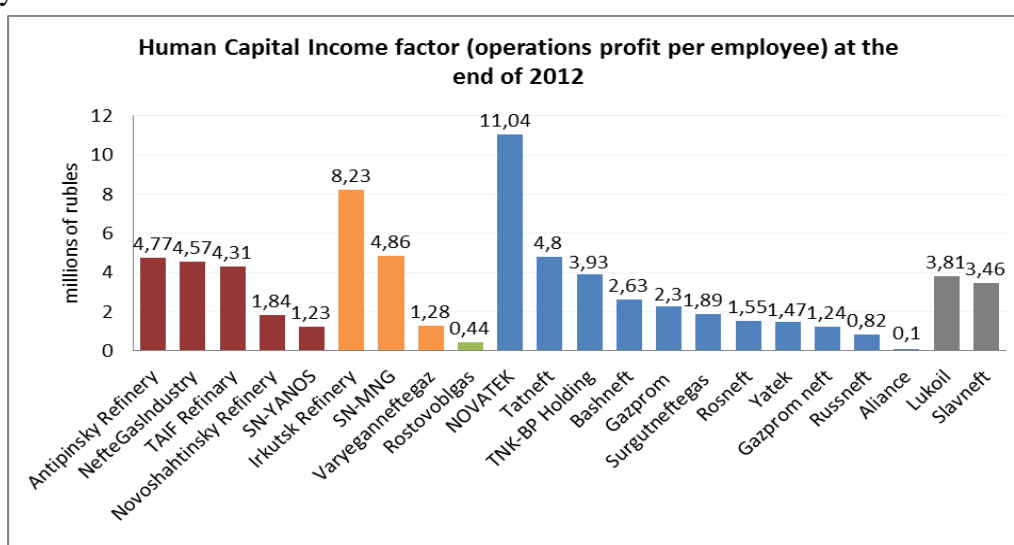


Fig. 3. Human Capital Income factor (operations profit per employee) at the end of 2012

In the case of the operational efficiency we have a more "peaceful" situation. Virtually, none of the organizations overcome the threshold of 5 million rubles per employee, except for leading by all factors Novatek and Irkutsk NK. Even Antipinsky refinery, which had a huge advantage in productivity, is now unlikely to somehow show off their superiority: high costs made it quite typical in oil refining

Key metrics

Human Capital Value Added shows the value created by an average worker.

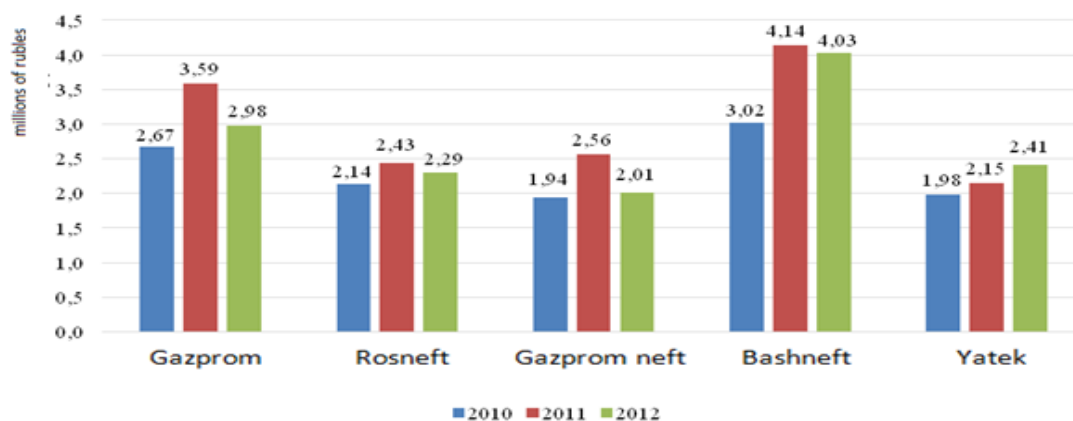


Fig. 4. Human Capital Value Added (thousands of rubles)

The graph shows the Human Capital Value Added for the period from 2010 to 2012 for the companies for which it is possible to collect information on personnel costs. All organizations are vertically integrated, that provides an opportunity for comparisons of the companies with each other. It is worth mentioning that Bashneft, Rosneft and YATEC belong to the second group of efficiency based on the results of the preliminary metrics, when Gazprom and its daughter Gazpromneft – belong to the third group. As can be seen, such comparison cannot be conducted based on the Human Capital Value Added factors. We can distinguish a confident leader (Bashneft) and the second result (Gazprom). The other three organizations have approximately the same results. Also, for all companies except for YATEC there can be observed an obvious decline in efficiency of Human Capital use in 2012. We can assume that this is because of, on the one hand, the exhaustion of oil and gas fields, on the other hand, the process of modernization of facilities (for example, technology of production of hard-to-reach oil). In other words, Human Capital Value Added in companies decreased because of the decrease of the significance of the market knowledge and experience. YATEC might have overcome this due to the small size of the company in comparison with the market.

Based on the information received about the Human Capital Value Added, we can conclude that one employee of Bashneft brings value to the company twice as much as the GazpromNeft employee does (4.03 million versus 2.01 million rubles). Due to limitations of this inquiry, it is difficult to say how well companies manage human capital in comparison with the industry (comparison with industry averages). However, this sample includes organizations occupying more than 25% of the oil market, and 75% of natural gas. Therefore, let assume that the results are "near" the average value for the oil and gas sector. In other words, there are no outlier-companies observed in the sample.

Return on investment in human capital shows how beneficial to the organization its human capital – what is the return on investments in employees (for the average employee).

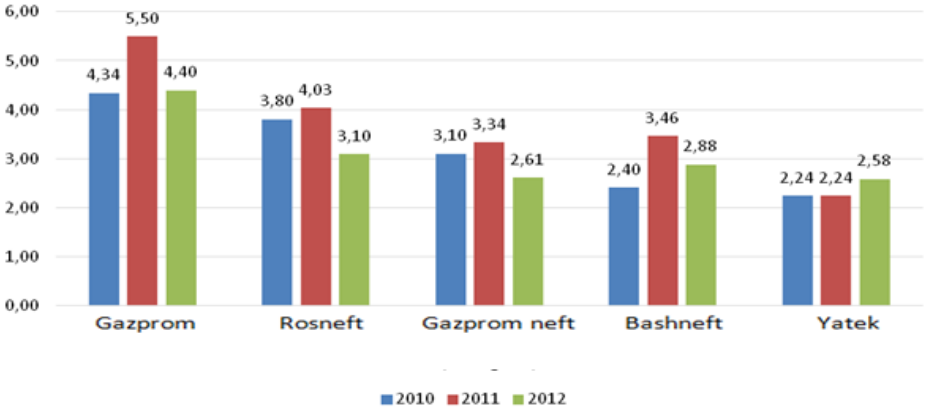


Fig. 5. Return on investment in human capital

According to the current figure we observe a new leader, Gazprom. Other organizations do not show significant differences in values. There is also the process of reducing the Return on investment in human capital in the year 2012, similar to Human Capital Value Added tendency. This may be the result of technology and knowledge aging. It is worth mentioning Gazprom result with this respect. Gazprom is included in the final, third efficiency group. However, according to the ROI of human capital it exceeds the second result (Rosneft) by an average of 30% over the past three years. This means that one ruble invested in employee results in benefits that exceed the nearest competitor by thirty per cent. Payback of other companies is of minor differentiation.

Having calculated preliminary and, most importantly, the key metrics, we are now able to check the validity of the preposition put forward in the current paper that companies most effectively used the human capital will have the greatest profit.

Evaluation of the effectiveness is made through: Human Capital Value Added and Return on investment in human capital.

It was assumed that information is available for all 22 observable units that will ensure statistical significance in the correlation and regression models for the industry (one for each year of the study). As a result, it is only possible to calculate the key metrics for only five companies, which is definitely not enough to confirm the assumption of validity of the preposition from the standpoint of mathematical language. Nevertheless, a certain amount of information allows us to find the general trends.

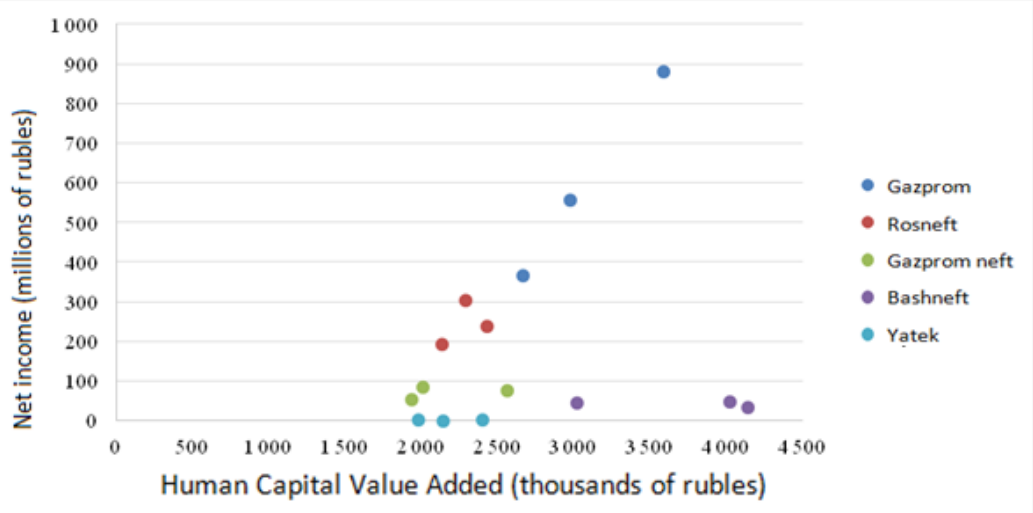


Fig. 6. The relationship between the net profit and Human Capital Value Added

As it is shown by the graph, there is a positive relationship between the net profit and Human Capital Value Added. Gazprom is the striking example of such relationship. Data from other companies are grouped and are not "mixed" with the others. However, the general positive trend can be traced. Bashneft stands out its "right inclination." It is worth mentioning that this company is a leader in terms of growth of oil produced during the study period. Perhaps if the preposition sounded not in terms of absolute values (the higher the human capital efficiency – the higher profits), but in relative terms (the higher the human capital efficiency – the higher the profit growth, for example), we would probably never have seen such effects. Nevertheless, within the framework of the chosen preposition we have such outliers.

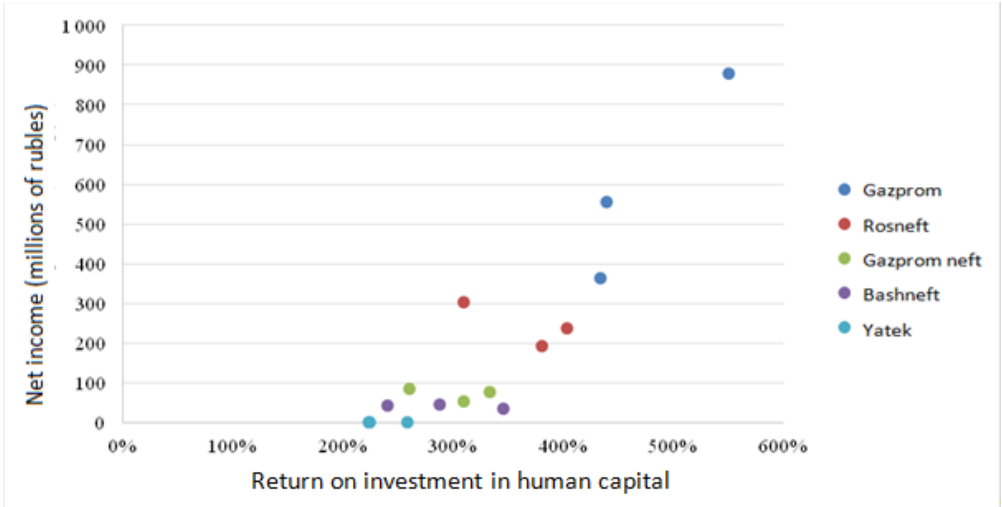


Fig. 7. The relationship between the net profit and Return on investment in human capital

The relationship between net profit and Return on investment in human capital is stronger than with the Human Capital Value Added, as it is shown in the figure 9. Bashneft shifts to

the left, positions of the companies are also grouped and not combined. The relationship is definitely positive. If we included in the chart only the average values of the net income and Return on investment in human capital in three years, the company with greater ROI in human capital would have strictly higher values of net profit. Moreover, all companies except YATEC would have these values located almost on the same line.

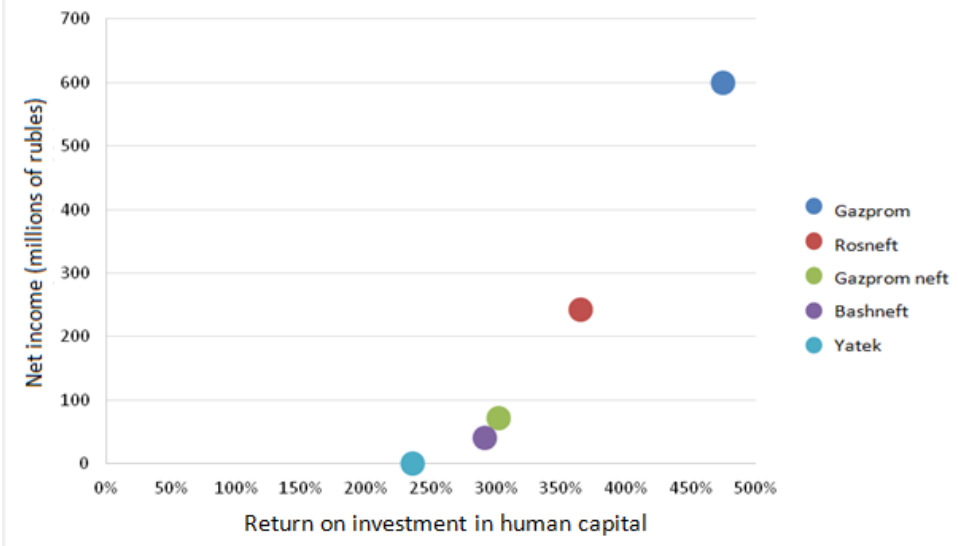


Fig. 8. The relationship between the net profit (average over 3 years) and Return on investment in human capital (average over 3 years)

Thus, using data on five companies for three-year period, we can conclude that at the level of trends the company with highest use of human capital is going to have the greatest net profit:

- in terms of Human Capital Value Added;
- in terms of Return on investment in human capital.

Moreover, the relationship between net profit and Return on investment is stronger than that of Human Capital Value Added and net profit.

Conclusion

Above is presented a study on evaluation the efficiency of the use of human capital in the companies from oil & gas sector. The primary data necessary to calculate estimates of the effectiveness of the use of human capital is collected. The information on 22 companies for period of 2010-2012 is collected to calculate the preliminary metrics. This information includes the following indicators: the average number of employees, revenue, operating costs (production costs, selling and administrative expenses). For the calculation of the basic metrics, the information on five Russian companies (Gazprom, Rosneft, Gazprom Neft, Bashneft and YATEC) is collected. It includes personnel costs as an addition to the previous list of indicators.

The preliminary metrics for 22 companies are analyzed. These companies are divided into three groups of efficiency based on the results of the metrics. Although this action does not have a specific analytical value, in comparison with the results of the key metrics it can bring more clarity to the understanding of how human capital functions in the industry.

After analyzing preliminary and key metrics, the authors evaluates the relationship between net income of the company and the relevant human capital performance indicators. The evaluation is based on an analysis of the graphical representation of data. Results of data analysis support the main preposition, thus, we can conclude that companies, using their human capital in a more efficient wat, have greater net profit.

The lack of information influences significantly the research design of the study. The information on key metrics is only available for five companies, which made impossible to obtain mathematical confirmation (or rejection) of the preposition and the effectiveness of the human capital in terms of Human Capital Value Added and Return on investment in human capital for the whole oil and gas sector.

It should be concluded that the culture of the use of information regarding human aspect in the Russian oil and gas sector is underdeveloped.

Also, due to the incompatibility of indicators calculated on the basis of Russian Accounting Standards and IFRS, it is also impossible to make a comparative analysis of the effectiveness of the human capital of Russian and international oil and gas sector.

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Zenkevich N.A.

**Graduate School of Management, Saint-Petersburg State University. Associate Professor.
zenkevich@gsom.pu.ru**

Yanauer B.V.

**Graduate School of Management, Saint-Petersburg State University. Student.
yanauer@gmail.com**

CEO compensation modeling for U.S. public companies

Abstract: The paper is aimed at improving the mechanism of forming the variable part of CEO compensation. The novelty of the given research paper is improving the methodology of evaluation the value of variable part of CEO compensation with the chosen model, so it can be applied on practice. The model is game theoretical interpretation of the principal-agent phenomenon whose objective is to model the variable part of CEO compensation to stimulate strategy implementation In detail, 10 company cases of the U.S. public companies in retail and technology industries were presented, the applicability of the model was proven and suggestions for methodology improvement were made.

Keywords: *corporate governance, agency problem, CEO compensation, game theory, theoretical modeling, U.S. public companies.*

Introduction

The paper deals with the problem of CEO compensation value modeling which is one of the core issues of corporate governance. In theory, contracts should be designed by boards of directors to maximize company value. Contracts should attract and retain talented CEOs, incentivize them to exert high level of efforts to implement the company's strategy and ensure its competitive advantage.

To begin with, CEO compensation structure usually consists of base salary and variable part. Base salary of CEO is less dependent on performance compared to variable part of compensation and is usually determined by the reputation of a manager, his experience at managing companies, size of a considered company, certain industry specifics and the level of CEO base salary across the chosen industry. Contrary, variable part of CEO compensation is directly dependent on performance of a company. According to Frydman and Saks (2010), a variable part of top management compensation in form of option grants and cash bonuses has been prevalent since 1950s in the U.S. public companies.

Traditionally, a variable part of executive compensation is considered as a tool for solving the agency problem, that is caused by the conflict of interests between an agent (CEO) and a principal (company owners). Principal owns capital and delegates responsibility to manage it in his/her interest to the agent, however, because of the conflict of interests in separation of profits gained by the company between two parties, temptation of ex post opportunistic behavior occurs for the agent. That is why the mechanism of determining the value of variable part of CEO compensation, which eliminates motivation for opportunistic behavior, should be worked out.

There are quite a lot of scientific studies on the topic of creation and solving models of «optimal contract». However, we still do not have any models, which are practically viable and tested for real companies. Thus, the goal of the research paper was to improve the mechanism of forming the variable part of CEO compensation based on the existing theoretical models and approaches, and test the applicability of this mechanism for the U.S. public companies.

The U.S. publicly traded companies (without a controlling shareholder) are in focus of our analysis. Confirmed by research and scandalous media examples, when ownership and management are separated (like in public companies), CEOs might abuse substantial power to enjoy individual benefits without putting additional efforts into the company management.

Even though ownership structure in U.S. and Russian public companies is different (scattered ownership in the U.S. vs. concentrated ownership in Russia) conclusions derived from the analysis of the U.S. compensation programs can be applied to some extent in the Russian environment.

CEO compensation modeling

Theoretical model

Current research studies on executives' compensation investigate dependencies compensation and other variables, including performance. The limitation of these research papers is that these models are used as purely theoretical, intended to get qualitative findings. As a result, there is lack of convincing explanations of compensation evolution starting from 1970s and explicit recommendations for construction of compensation packages, incentive plans in particular.

Under the requirements mentioned in theoretical background of the paper, a special theoretical model, developed by Casamatta and Guembel in 2007, was used in order to obtain quantitative results and practical recommendations for CEOs' incentive plan in 10 case studies. In their article «Managerial Legacies, Entrenchment and Strategic Inertia» Casamatta and

Guembel consider two models. The first model implies one strategy for both periods but allows the principal to change the agent after the first period if he is not satisfied with his performance. The second model assumes that after the first period the principal can change the strategy and/or the agent. We have chosen a modified model since it appears more realistic. Usually after the first phase of strategy implementation if performance goals are not attained, the board of directors can question the effectiveness of the strategy and implementation efforts of the CEO.

The model is a game theoretical interpretation of the principal-agent phenomenon whose objective is to model the incentive plan of CEO compensation (performance-based pay component) to stimulate strategy implementation. The principal (owner, shareholder, investor) hires the agent (CEO, manager) to choose a company strategy to implement in the subsequent time, followed by the principal's decision to terminate or not the contract with the current CEO. The underlying assumption for the model is that the company strategy can be amended in both periods. In order to design the model the following assumptions were considered:

1. There are two players in the game – principal (owner / investor / shareholder; Board of directors can be a proxy for the owner) and agent (CEO / manager); interaction is happening within the company scope.
2. Interaction between shareholder and top manager happens during 2 periods, $t \in \{1,2\}$.
3. At the beginning of the 1st period the principal hires the agent and signs a contract regarding his/her compensation, $w(R)$, where w is incentive plan of the agent's compensation and R is the Company performance during one period.
4. The agent can be of two types: H – high type and L – low type. The high type manager always chooses a successful strategy $S_0 = G$ whereas the low type manager chooses a poor, non-successful strategy $S_0 = B$. The probability that CEO is of high type H (before strategy implementation in the Company) is denoted as $q_0 \geq 0.5$ and called CEO's reputation. The type of CEO is not known to the principal or the agent him/herself. Reputation of the agent after the 2nd and the 1st period are denoted as follows: $q^{i,j} = \text{prob}(M = H | R_1 = R_i \text{ and } R_2 = R_j)$ and $q^i = \text{prob}(M = H | R_1 = R_i), i, j \in \{l, h\}$ respectively.
5. In order to execute the chosen strategy the agent has to choose whether to exert high or low efforts $e_1 \in \{\underline{e}_1, \overline{e}_1\}$; efforts are non-observable for the principal (which reflect the essence of the principal-agent problem). High level of efforts \overline{e}_1 means individual costs c for the manager. The difference between high and low levels of efforts is expressed by the following formula: $\Delta e_1 = \overline{e}_1 - \underline{e}_1$.
6. The nature also participates in the game. If CEO chooses the successful strategy $S_0 = G$, then the Company performance is high R_h with probability e_1 and low $R_l = 0$ with probability $(1 - e_1)$. If the chosen strategy is unsuccessful, $S_0 = B$, the Company performance is low $R_l = 0$ with probability equal to 1.
7. At the end of the 1st period the principal receives an information signal s_G regarding the needed strategy. We assumed that $p_G = \text{Prob}(s_G = G)$ is probability that the signal identifies the successful strategy.

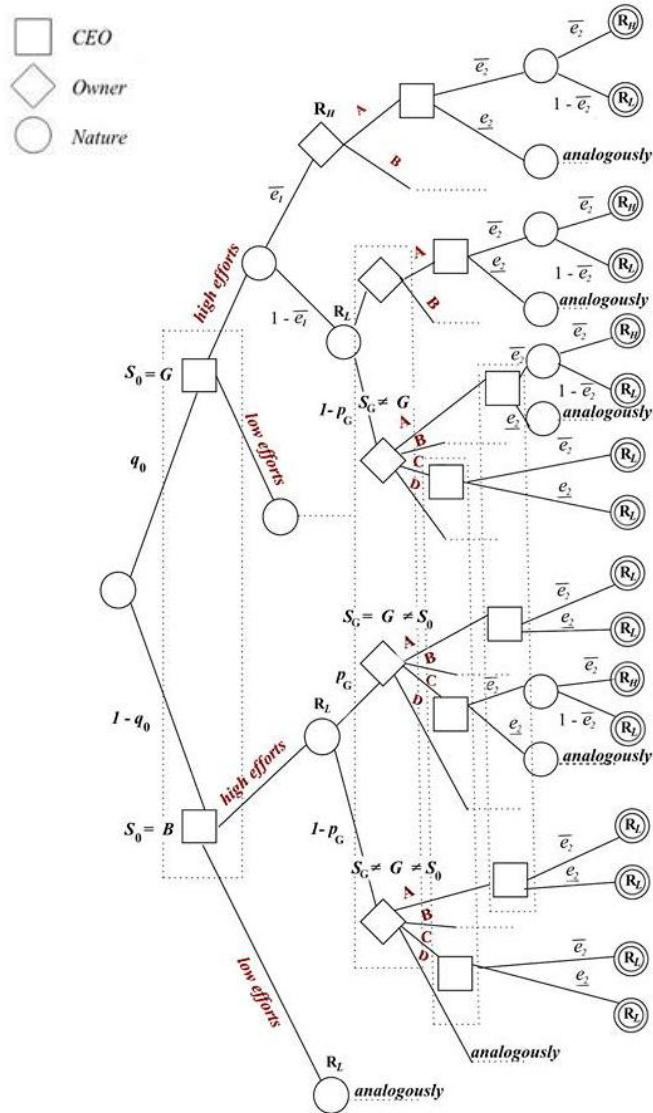


Figure 1. Game tree

8. The principal makes a decision related to the strategy choice for the 2nd period. If the Company performance after the 1st period is high R_h , there is no value in changing the strategy, thus $S_1 = S_0 = G$. However if the Company performance is low $R_l = 0$, the principal considers the signal s_G : s/he observes whether the signal confirms the choice of the strategy. If $s_G = S_0$, the strategy is not to be amended; otherwise $S_1 \in \{s_G, S_0\}$.

9. Afterwards the owner decides whether to leave the CEO or terminate the contract with him and hire a new CEO.

10. In the 2nd period the CEO (old or new) decides whether to exert high or low efforts $e_2 \in \{e_2, \bar{e}_2\}$; analogously efforts are non-observable for the owner. Again high efforts of the manager correspond to individual costs c for the manager. The difference between high and low levels of efforts is expressed by the analogous following formula: $\Delta e_2 = \bar{e}_2 - e_2$

11. If the applied strategy is successful $S_1 = G$, the Company performance is high R_h with probability e_2 and low R_l with probability $(1 - e_2)$. In case of the unsuccessful strategy $S_1 = B$ the Company performance is low R_l with probability equal to 1.

Interaction between the owner and CEO is represented in the form of a decision tree in Fig. 1. Dotted lines incorporate the same information sets, in other words the player with the move cannot differentiate between nodes within the information set. Several branches are not depicted in detail due to the fact that the outcome will never occur. Branches where CEO exerts low efforts are analogous to branches where s/he exerts high efforts; the only difference is in probabilities. Also. There are 4 alternatives for the owner: A – not change the strategy nor the CEO; B – not change the strategy, hire a «new» CEO; C – change the strategy and hire a «new» CEO; D – change the strategy, leave the «old» CEO.

Compensation contract is accounted for the solution of the model. Equilibrium strategies for the principal and the agent constitute the overall Nash equilibrium; the model is solved by backward induction. The game solution is demonstrated in Fig. 2. Due to this solution owner's alternatives are: not change strategy nor CEO or change strategy and CEO. In the brackets there are compensation values for each case for the first and second period accordingly.

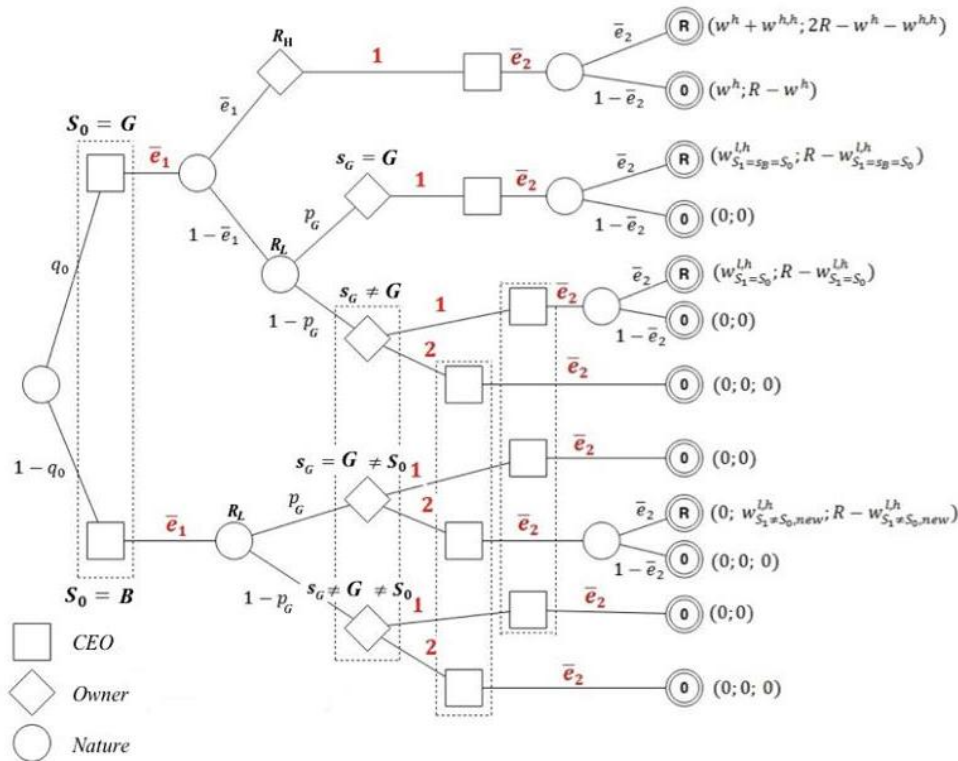


Figure 2. Game solution

Specification of parameters for U.S. public companies

In order to make corresponding computations using the model, we needed to obtain data for corresponding variables or develop methods to approximate some of the variables.

Principal role. In theoretical model we assumed that the principal can intervene and make a decision in regard to a strategy and CEO choice. U.S. public companies usually have scattered ownership and are, therefore, scarce for majority shareholders. Due to that reason operational

monitoring is delegated to the board of directors, so we approximate the role of the principal by the board of directors that is believed to execute actions in the shareholders' interest.

Agent role. CEO is assumed to be the agent in the model.

Strategy. There are different ways to categorize strategies described in strategic management academic resources. In a public company strategies can be divided into four layers (corresponding responsible managers are specified in the parentheses): corporate (CEO), division/ business (division president or executive vice president (VP)), functional (finance, marketing, manufacturing, R&D, HR, etc. manager) and operational (department, plant, etc. manager). Certainly, lower-level strategies should be in line with upper-level strategies. We focused on corporate strategies in public companies. Moreover, According to Michael Porter (1980), there are two generic business strategy types – cost leadership and differentiation, which can lead to a competitive advantage defending against market forces of the industry.

Financial performance. In a general case while assessing the company performance shareholders usually care for the following aspects: their earnings, risk of their investment. In order to measure these parameters, we can assess the company performance – either financial or non-financial performance. However, we assumed that non-financial metrics of company performance can be approximated by the financial ones. Targets can be set for any of these metrics, hereby at the end of the periods in the model performance is measured against these targets. Usually operational profitability performance metrics are set as targets for non-incentive equity plan.

In a specific situation, however, performance indicators are identified on the base of the strategy. Realized target values are the outcome of successfully implemented strategy. Since financial targets chosen for specific cases usually combine several metrics, in case analysis we calculate multiples based on weights and values of metrics chosen by the company to evaluate financial performance.

Compensation. Non-equity incentive plan is considered due to two reasons: it is a performance-based compensation component (can be short- and long-term); targets are usually rigorously described in the annual proxy statements.

Probability of successful strategy identification by the principal. This variable is computed based on analysis of the board of directors. The share of independent directors in the board should be used as approximation of successful strategy determination.

Reputation of CEO. We assessed the whole prior history of the CEO. Additional variables that needed to be calculated are the following: total number of years when the person in question was performing successfully as a CEO in all previous companies; total number of years when the person in question was serving as CEO in all previous companies. Quotient of these two variables is the required probability.

Efforts of CEO. We assumed that in order for the company to perform above industry average extra efforts from the CEO's side should be applied. We, therefore, find information on the following variables: number of years when the company was performing above the industry average during the CEO tenure, by company; number of years when the person was serving as CEO in the company, by company. We calculate corresponding quotients by company and choose the highest probability of high efforts and the lowest probability of low efforts.

Industries

In order to analyze the applicability of the considered theoretical approach it was necessary to narrow the research area to concentrate on several industries. Industry should have been representative that means companies should differentiate by size. That is, outcomes for the

considered industries can be probably extrapolated on other industries. Realistically the industry incorporates not only public but private companies which compete along. However, lack of data regarding private companies' performance measures and compensation packages are not available for the general public, so we considered only public companies. Moreover conflicts in corporate governance in private companies are not as acute since the ownership is more concentrated. Another requirement for the examined industries is low volatility in examined year, so the period between 2011 and 2013 was chosen.

All public companies in the U.S. can be divided into 14 different key industries. For the purpose of our research, retail and IT-industry were chosen. The choice of sectors is interesting due to the following reason: retail is a relatively mature sector whereas information is rapidly growing sector. Therefore, such elements as demand, competition and product itself would differ; therefore, key success factors and strategies adopted in these industries would also be different. IT-industry is particularly interesting because key success factors here are brand development, fast product development and realization on the market, innovations, but mature industries can benefit from cost and scale efficiency, and low input costs. However, we considered top performing U.S. sectors, therefore, large players in mature industries also try to innovate and disrupt the course of conventional business operations

Overall, there were 80 companies from retail and 82 companies from IT-industry in our research. The data on such parameters as base salary, cash bonuses, stock awards, stock options, non-equity incentive plan, other compensation, total compensation, market capitalization, CEO age and working experience in years was gathered. It was done in order to access industry average parameters included in the research, find companies for case studies and show in descriptive statistics that variable part of compensation package of CEO is very significant for those industries. So, for retail industry a variable part is 74,8% of total compensation of CEO in 2011-2013, and for IT-industry – 88,2%.

CA, Inc.: case study

Applied procedure for the theoretical model was tested on 10 case studies: 5 for companies of retail industry and 5 companies of IT-industry. We will considered an example of the application of our procedure for CA Technologies. It is one of the largest independent software corporations in the world. The company creates systems software (and previously applications software) that runs in mainframe, distributed computing, virtual machine and cloud computing environments.

First, we considered the data about situation in the company, its strategy and CEO. William E. McCracken became CEO in 2005 and in 2010 the company spent over \$500m for purchasing of three perspective companies (the most well-known one is 3Tera), which are focusing on cloud services. Thus, the company changed the course of large-scale development and sales of universal software to cloud services and virtualization services. It worth mentioning that the market had a negative reaction after chose changer and a share price of the company decreased by 20% during 2011.

New strategy in 2012 was developed with the appointment of new CEO, Michael P. Gregoire. CA returned to its core focus on internal development of software, so that, for example, 40 new departments for research and development were created within the company, program of attraction of talented engineers was launched. In addition, to adapt to the new business environment, CA started adopting its products from huge companies to medium-sized companies, as well as developing new products for both segments.

After the strategy, an ownership structure was considered. That is, currently 64% of equity is owned by institutional 35,8% by mutual funds and 0.2% by insiders (based on monetary value of equity). Due to the fact that ownership is so scattered: the largest owns only 3,91% of total shares, according to Morningstar, it is impossible to consider any of the shareholders as the principal in the model. Therefore, we approximate the principal's role by the Board of directors.

Then the board of directors itself was considered and, based on the assumption that independence of directors increases the quality of their responsibilities fulfillment (Gutierrez-Urriaga, 2000), we calculated the probability of successful strategy identification by the principal by finding the ratio of independent directors to the total number of directors in 2011 ($p_G = 0,91$).

After, we got the data on experience of CEO and assessed personal characteristics of CEO, such as initial reputation (q_0) and probability of applying high level ($\overline{e_1}, \overline{e_2}$) and low level ($\underline{e_1}, \underline{e_2}$) of efforts for both periods based on the methodology described earlier. The result is for the first period for William E. McCracken: $q_0 = 0,8$, $\overline{e_1} = 0,8$, $\underline{e_1} = 0,4$, and for the second period for Michael P. Gregoire: $\overline{e_2} = 0,857$, $\underline{e_2} = 0$.

Then, the data on the financial performance and achievement of target goals was gathered from DEF 14A report and we could see that in 2011 the target parameter for non-equity incentive plan of CEO was operational income, which was \$1,498b against the target goal of \$1,527b, so we can make a conclusion that the company didn't reach the goal and strategy failed. Opposite to the first period, in 2012 CA demonstrated 34,8% as operational margin (new target index) against the goal of 34,1%.

On the next step of the procedure, we inputted all variables assessed in the constructed mathematical model in Microsoft Excel and got the result for solution of the model. As the strategy failed in the first period, according to the model, CEO should be fired and the strategy should be changed. As for his compensation, the reputation risks are accounted for, and the possible compensation value of non-equity incentive plan should be \$0 for the first period against (\$1,27m is a real value). For the new CEO in the second period the possible compensation value of non-equity incentive plan should be \$1.79m (\$1,76m is a historical value).

Results

After the applied procedure was tested on 10 cases of U.S. public companies from retail and IT-industry, the following results were presented in Table 1.

As can be seen from the Table 1, our model showed good results for the sum of two periods for five of the considered companies (Fred's, Dollar Tree, Barnes & Noble, Lowe's Corporation, Blackbaud), but it has some deviations in certain periods and, on the whole, is working better for the retail industry.

More than that, it is worth mentioning that the model is working better in case of changing both strategy and CEO after the first period. It could be explained by the fact that the model supposes new CEO has no reputational risks and historical effects almost do not influence the incentive plan.

Also there is a practice of a partial payout of incentive packages in IT-companies even in case of failure to achieve the target performance goal set by the board of directors, but the model itself supposes for this case there is no incentive payout possible for a manager.

Company	q_0	Change of strategy		Compensation after 1st period, million \$		Compensation after 2nd period, million \$		Sum of compensation for two periods, million \$	
		Fact	Model	Fact	Model	Fact	Model	Fact	Model
Fred's, Inc.	0,75	No	No	1,345	1,300	0,000	0,000	1,345	1,300
Dollar Tree, Inc.	0,545	No	No	1,800	3,000	1,900	0,450	3,700	3,450
Kohl's Corporation	0,75	No	No	2,145	1,750	0,535	0,000	2,680	1,750
Barnes & Noble, Inc.	0,625	Yes	Yes	0,000	0,000	2,604	2,848	2,604	2,848
Lowe's Companies, Inc.	0,6	No	Yes	2,225	2,181	1,500	0,525	3,725	2,706
Yahoo, Inc	0,67	Yes	Yes	1,500	0,000	1,120	1,250	2,620	1,250
Blackbaud, Inc.	0,72	Yes	Yes	0,437	0,000	0,870	1,370	1,307	1,370
Blucora, Inc.	0,5	No	No	0,540	0,000	0,450	0,216	0,990	0,216
Linkedin Corporation	0,875	No	No	0,507	0,000	0,636	0,450	1,143	0,450
CA Technologies, Inc.	0,8	Yes	Yes	1,500	0,000	1,764	1,790	3,264	1,790

Table 1. Summary results

Moreover, there is a common tendency across 8 of 10 examined companies to overpay their CEO based on the results of theoretical modeling. Of course, some companies can save money and fire their CEO, but what happens in real practice is that this step would hurt the reputation of the company on the labor market of top-management. Also, companies do not limit their operation by one strategy only as considered in the model, but their business is rather diversified, so the board of directors often enough set a compensation package based on broader range of factors than those considered in the paper.

Besides, the model considers a game for two periods that sets huge reputational risks for those periods. In real business practice strategies are implementing for longer periods and it is possibly worth considering more periods in theoretical modeling as well to get more precise results, probabilities of outcomes and more smooth risks for players.

So, for the model to be more precise in cases of low business results it was suggested to introduce new coefficients ε и E . Those parameters set the percentage of the maximum incentive package in case of either failure to achieve a target performance goal or achieving better result than that expected. And it worth mentioning that those coefficients are subject for individual setting for each company and should be determined by each board of directors.

Conclusion

The research paper represents 10 case studies of modeling of incentive packages for CEO of U.S. public companies in retail and IT-industries. It was demonstrated in the paper that the theoretical instrument could be applied as an instrument of valuation of incentive compensation for the better motivation of high level of efforts from CEO for corporate strategies implementation.

Furthermore, the chosen mechanism introduced reputation as an important factor of influence on manager's efforts application. Therefore, the CEO cares not only for monetary reward but also considers reputational risks in case of low performance, which is in line with current executive compensation research and corresponding concepts of talent.

The applied procedure with minor amendments can be used as a secondary instrument in the U.S. public companies to evaluate incentive plans of CEO. Except for companies, some other researches like us could be interested in that methodology. And, finally, consulting companies could enrich their portfolio of instruments by introducing the considered model.

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Д.В.Артеменко

**Студентка 4 курса Экономических наук Казахстанско-Немецкого университета
dascha.artemenko@mail.ru**

Модель внедрения и управления инновациями

Цель данной статьи, показать модель управления инновациями и контроля их жизненного цикла. Применение инноваций способствует укреплению организации на рынке и дает ей преимущества по сравнению с конкурентами. Внедрение и контроль инноваций на государственном уровне позволяет улучшить общее функционирование системы.

Инновации, NPV, управление, модель, развитие.

1. Цель статьи

Извлечение прибыли в современных рыночных условиях, возможно только при наличии двух важнейших компетенций:

- Управление информацией;
- Управление человеческим ресурсом.

Все остальное является производной от этих двух составляющих. В более строгой форме даже вопросы менеджмента можно также рассматривать как некую производную от информации, которой мы располагаем...

Итак, в современных условиях, ключевым моментом, определяющим продуктивные и последовательные шаги любого субъекта финансово-экономической деятельности является управление информацией. Справедлив вопрос: Как этот фактор связан с инновациями и управлением ими?

Чтобы ответить на этот вопрос – необходимо разобраться с самим определением инноваций.

Инновации, управление инновациями это новое направление в научно-технической, производственно-технологической, финансово-экономической и административной сферах. Объектами управления являются направления инновационной деятельности, связанные с процессами создания, освоения производства и коммерциализации новых потребительских ценностей, их распространением и использованием в качестве готовых продуктов, прогрессивных технологий и услуг.

Рассмотрим, что представляют собой инновации и для чего необходимо их внедрение.

Данный термин ввел австрийский экономист Йозеф Шумпетер, объясняя разницу между экономическим ростом и экономическим развитием. Экономический рост – это интенсификация процессов на основе уже имеющихся базовых подходов и технологий. Инновации - это уже новое развитие товара, услуги или бизнес-процесса, новые рынки, другими словами, все то, что способствует качественному изменению в экономиках.

Довольно часто инновация – это использование результатов научных исследований и разработок, направленных на совершенствование процесса деятельности производства, экономических, правовых и социальных отношений в различных сферах деятельности.

Основные задачи, которые выполняют инновации это увеличение устойчивости и конкурентно способности организации. В том числе, увеличение темпов роста, рентабельности, создание благоприятного климата внутри организации.

Применение инноваций способствует укреплению организации на рынке и дает ей преимущества по сравнению с конкурентами. Внедрение инноваций на государственном уровне позволяет улучшить общее функционирование системы.

Цель управления инновациями – это контроль над новыми процессами, их инициирование, генерирование и получение ожидаемых результатов на соответствующем рынке. Сбалансированное взаимодействие всех частей организации один из факторов ее стабильности и развития. Для управления инновационными процессами должны быть использованы определенные механизмы.

Механизм управления инновациями состоит из нескольких частей:

- *прогноз инноваций* – позволяет составить обоснованный план внутреннего и внешнего развития организации, определить альтернативные пути ее преобразования и сроки исполнения проекта;
- *планирование инноваций* - создание целей направленных на результат;

- *анализ ситуации* - включает обработку данных о внутренних и внешних факторах влияющих на компанию;
- *идентификация потребности в инновации* – разработка мероприятий, показывающих необходимость внедрения инновации;
- *определение критериев выбора альтернативных инноваций* – выбор параметров для сравнения инноваций;
- *разработка альтернатив* – создание нескольких моделей;
- *установление наилучшей из моделей* – определение сильнейших инновации;
- *разработка и согласование управленческого решения* – внедрение инноваций и построение связей между исполнителями;
- *управление реализацией* – контроль над деятельностью инновации;
- *контроль и оценка результатов* – выявление эффективности внедрения.

Основная цель работы это составление простой и универсальной модели внедрения инноваций, которая будет использоваться для увеличения эффективности любого рода деятельности, в том числе и на государственном уровне.

В качестве первого шага для ее создания рассмотрим уже существующие концепции развития и методы управления инновациями.

На сегодняшний день самый популярный метод управления инновациями это сетевой график. Данная модель позволяет реализовать поставленную задачу с учетом анализа альтернативных путей достижения, внесения изменений в процессе работы.

Метод сетевого планирования включает в себя определенные приемы, результат которых возможно отобразить графически.

Возможности данного метода позволяют также графически представить схему управления инновациям, включая организационную и технологическую основу. Обеспечить своевременную последовательность каждой операции в системе. Оптимизировать денежные и материальные ресурсы.

Данный метод применяется организациями для создания непрерывных процессов, рационального использования ресурсов, для контроля выполнения предопределенных (запланированных) задач. Пример сетевого графика приведен на рис.1.

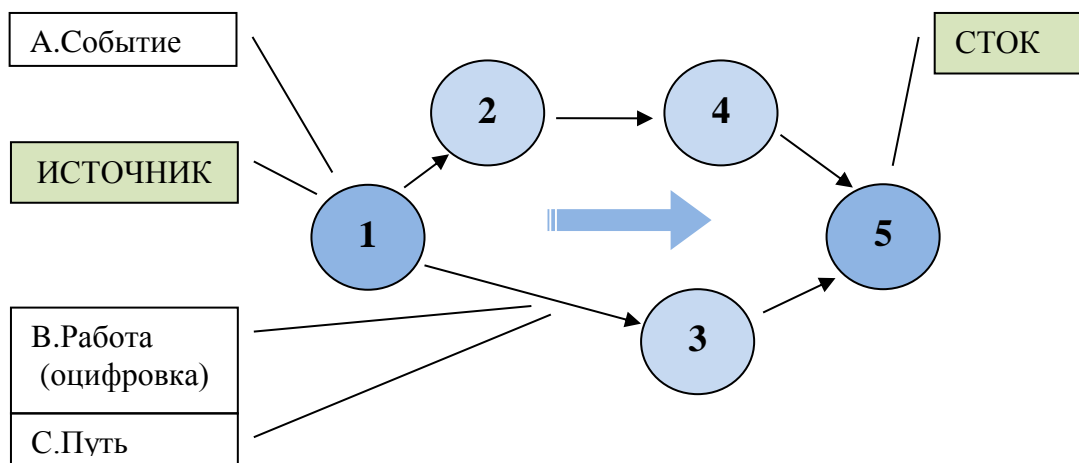


Рис.1. Простейший сетевой график (сетевой ГРАФ)

Сетевой график хорошо формализуется, посредством традиционно принятых обозначений.

Например, $W(2,4) = 6$, в данном конкретном случае будет означать работу, которая начинается из события 2, заканчивается событием 4, стоит 6 единиц

выбранного ресурса (например, время в часах, объем затрат в денежном выражении, и т.д.).

Далее, как правило, следует таблица, с оцифровкой сетевой модели, по которой можно выполнить прогноз не только минимальных и максимальных сроков исполнения всего проекта, но и определить его узкие (напряженные) по ресурсам зоны, а также вероятность срыва сроков исполнения отдельных работ или проекта в целом.

В рамках данной работы мы не будем повторять или детализировать уже известные и хорошо зарекомендовавшие себя модели управления инновациями, в том числе и приведенные выше сетевые модели, но обратим свое внимание на два не менее важных вопроса, которые и формулируют основную цель данной презентации:

1. Как понять, что необходимость внедрения инноваций у субъекта уже объективно назрела?
2. Какими должны быть предстоящие инновации?

2. Научный вклад

Итак, инновация — это целенаправленное внедрение изменений в экономической, финансовой и других сферах. Инновации применяются для создания новых возможностей и решения существующих проблем. Для внедрения инновации требуются определенные знания, опыт, изобретательность и целеустремленность.

Однако наиболее важным здесь является правило, согласно которому внедрение любых инноваций требует значительных ресурсов, поэтому необходимость этого внедрения должна быть всегда обоснована, в том числе и с точки зрения предстоящих изменений в балансе субъекта.

Здесь возможны два кейса (две ситуации).

Первый и традиционный вариант внедрения инноваций сопровождается ожиданиями большей эффективности хозяйствования субъекта и соответственно извлечения большей прибыли от его деятельности. Он же предполагает иногда планируемые, а чаще пассивные ожидания благоприятных возможностей для нового проекта внедрения, где-то в неопределенном будущем, в том числе при наличии возможностей финансовых.

Второй вариант и он встречается довольно часто, предполагает внедрение инноваций – как единственный путь спасения субъекта от банкротства и угрозы прекращения его деятельности. Он же направляет наши усилия на активный поиск необходимых ресурсов, для внедрения этих инноваций.

Понятие полезности внедрения и необходимости этого внедрения приводят к различной логике всех последующих действий.

Безусловно, второй вариант является более жестким и потому приоритетным, так как направлен на локализацию рисков прекращения непрерывной деятельности субъекта и его закономерного ухода с рынка.

Как спрогнозировать и определить временную точку деятельности субъекта, по прохождению которой он будет остро нуждаться в инновациях?

В указанных целях существует множество традиционных методов, сосредоточенных в основном вокруг оценок показателей финансовых составляющих объекта исследований, но они в большей своей части направлены на понимание структуры обязательств и покрытия этих обязательств перед внешними участниками рынка. Самый популярный из них – это NPV (net present value – чистая приведенная стоимость или чистый дисконтированный доход), вычисляемый следующим образом:

$$NPV = \sum_{t=1}^N \frac{CF_t}{(1+I)^t} - IC \quad (1)$$

Здесь:

- CF_t - денежный поток (Cash flow);
- IC - инвестированный капитал (Invested Capital);
- N - период проекта;
- I - ставка дисконтирования (при NPV = 0 она же указывает на *внутреннюю норму доходности* - IRR проекта или инноваций);
- t - индекс временного лага проекта.

При NPV > 0 проект считается финансово и экономически обоснованным, в противном случае инвестиции под данный проект будут, согласно данному же прогнозу - убыточными.

В таком подходе существует множество достоинств и недостатков, которые оставляем без комментариев, ограничившись лишь их перечислением:

Достоинства:

- Четкие денежные критерии принятия решений (да/нет);
- Учет дисконтирования стоимости денег;
- Вариации ставки дисконтирования позволяют оперативно рассмотреть альтернативные варианты исхода проекта.

Недостатки:

- Ставка дисконтирования очень сложна в достоверном определении и зависит от множества заведомо неизвестных факторов, в большинстве случаев выбирается либо интуитивно, либо банально приравнивается к текущей стоимости заемных средств банка;
- Данный подход оперирует с абсолютными показателями и не учитывает вероятность исхода события (проекта).

Указанные выше и многие другие методы, безусловно, являются полезными, но позволяют управлять знаниями о предмете на основании множества допущений и предположений, которые при, достаточно большом объеме вычислений могут приводить к ошибочным результирующим суждениям. Кроме того эти методы не отвечают на самый главный вопрос - о начале необходимых преобразований, начале внедрения инноваций.

Поскольку любая инновация априори является надстройкой над уже существующим процессом, обратимся к исходному понятию процесса в контексте его зарождения и развития.

На этот счет существует популярный подход на основе, так называемой «S – кривой», которая может характеризовать жизненный цикл большинства процессов, происходящих в нашем мире. В графическом виде это представляется следующим образом:

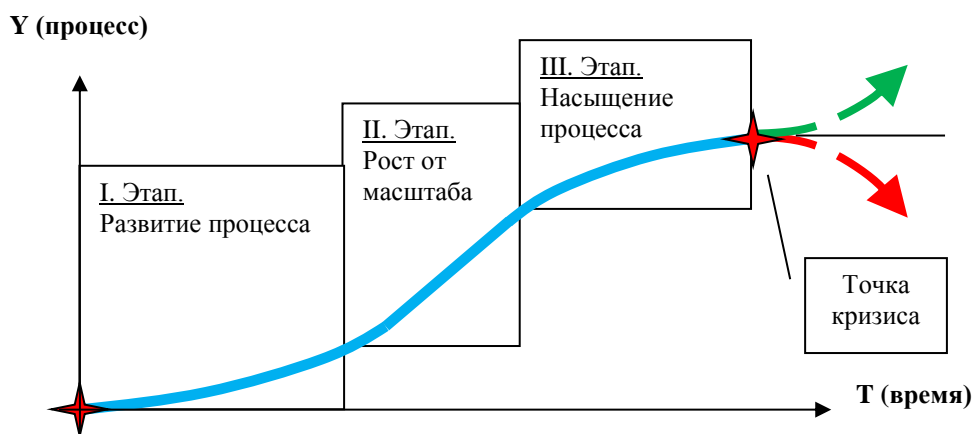


Рис.2. «S – кривая» развития процессов.

В разных процессах вид данной кривой м.б. различным, отличаясь по амплитудам и временным диапазонам, но качественно большинство процессов, окружающих нас, имеют схожие с представленным графиком характеристики.

Весьма характерной точкой на графике является конечная точка третьего этапа жизненного цикла объекта, которую довольно часто называют *точкой кризиса*. В этой точке возможно два основных варианта развития событий:

- Переход процесса на новый качественный уровень;
- «Сползание» процесса в область значимых потерь.

Существует и некий третий вариант, предполагающий какие-то осцилляции по линии насыщения, но он, как правило – непродолжителен.

Кстати у китайцев слово *кризис* обозначается двумя иероглифами, один из которых говорит о развитии, а второй о падении.

Самым интересным и желанным вариантом развития в рамках данной модели является исход, при котором процесс переходит на новый уровень. При этом мы получаем повторение предыдущей модели «**S-кривой**», но уже на новом качественном уровне. Последовательное и периодичное управление процессом по данной модели позволяют ему сохранить хорошую динамику развития, показанную на Рис.3.

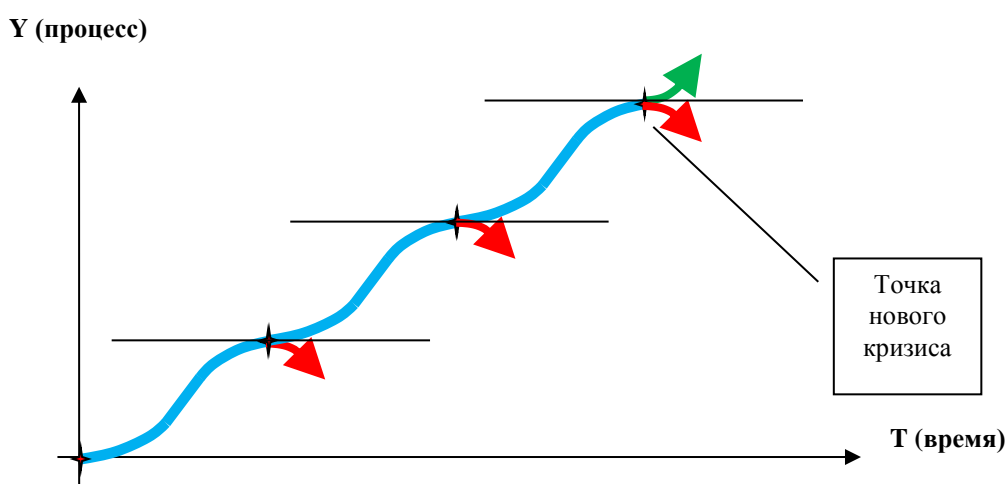


Рис.3. Поступательное развитие процесса на основе модели «S – кривая»

Данное графическое представление предлагает нам несколько идеализированный, но не лишенный смысла вариант управления инновациями, как в

реальном секторе экономики, так и в иных приложениях, при котором система будет сохранять должную динамику развития и преодолевать вполне ожидаемые и временные точки кризиса.

Здесь необходимо пояснить, что в рамках модели по «S-кривой» производная от исследуемого процесса сама по себе и является критерием оценки того или иного этапа развития объекта, постоянно изменяясь в следующих диапазонах:

- Этап 1: $(Y)' > 0$ - развитие процесса (рост производной);
- Этап 2: $(Y)' = \text{Const}$ - рост процесса от масштаба;
- Этап 3: $(Y)' > 0$ - насыщение процесса (уменьшение производной);
- $(Y)' = 0$ - точка кризиса;
- $(Y)' < 0$ - обвал процесса (падение производной).

Данная модель хороша еще и тем, что не исключает «сползание» процесса в область негативных исходов и потому является напоминанием о необходимости решительных управляющих действий.

Если перейти от идеальных моделей к реальным условиям, то возникает справедливый вопрос: «Как же найти эти точки кризиса в условиях практической деятельности хозяйствующего субъекта?»

Все очень просто.

Если это реальный сектор экономики, можно в любом хозяйствующем субъекте выделить область генерации прибыли с привязкой к продукту или к рынку и определить текущие параметры процесса на основе имеющихся исторических данных и настоящего момента. В качестве базового процесса можно выбрать, например, объем продаж в денежном или натуральном выражении.

Те реальные данные, которые отбираются для аналитики, в большинстве случаев будут носить дискретный характер, однако их легко перевести в сглаженную непрерывную функцию, с помощью методов широко используемых, например, в базовом пакете MS_OFFICE, или любых других средствах обработки информации. Вычислив производные от этого процесса и динамику их изменения, - определяем необходимые этапы его развития и делаем соответствующие выводы.

Если существующий потенциал не исчерпал своих возможностей (процесс находится во временном лаге этапа 1, 2), - инновации в большинстве случаев могут быть избыточными. В этом варианте необходимо искать внутренние возможности для поддержания процессов. В тоже время прохождение этапа 3 открывает нам новые и обоснованные возможности для будущих инноваций.

Если мы ставим задачу выполнить аналогичные оценки на уровне отдельных экономик государства или его регионов, то аналогичным образом определяем базовый параметр оценки, например, ВВП или что-то иное и далее повторяем все по указанной выше схеме.

Здесь важно понимать, что переход на третий этап (этап насыщения) должен быть связан исключительно с внешними причинами, воздействующими на субъект, в противном случае перед внедрением очередных инноваций необходимо рассмотреть те или иные возможности внутренних изменений в субъекте, которые позволят исправить ситуацию, исключая новые инвестиции.

Последнее в некоторой степени определяет вопрос: «Какими должны быть инновации?»

Контекст предыдущего изложения предполагает, что инновации должны быть своевременными, и направлены на смену морально и физически устаревшим подходам и технологиям. Они же не должны быть избыточными в том смысле, при котором их наличие и загрузка будет противоречить уже существующему и неиспользуемому

потенциалу субъекта, если при этом показатели их эффективности сопоставимы и отличаются незначимо.

Данная модель предполагает тиражирование подходов для различных приложений, в различных экономиках и новых рынках.

Простота подходов предполагает получение сравнительно «чистых» результатов, основанных на минимальном количестве допущений и предположений. Данная модель универсальна с т.з. контроля по развитию внедренных инноваций, а также в целях мониторинга уже ранее использованных инвестиций.

3. Методологическая основа

Традиционно для исследования инноваций используются следующие методы:

- Интегральная оценка нововведений (NPV, IRR, MIRR, PI, DPP);
- Финансовые коэффициенты (ликвидность, фин.устойчивость, капитал);
- Аналитические показатели (рентабельность, оборачиваемость, ресурсоемкость);
- Аналитические индикаторы (оценка рисков инноваций);
- Специальные показатели оценки инновационной деятельности включают:
 - Инновационный потенциал - мера готовности выполнить задачи, обеспечивающие достижение поставленной цели по внедрению инноваций,
 - Инновационный климат - внешняя среда субъекта, соответствующая или противодействующая достижению инновационной цели
 - Инновационная позиция - совместное рассмотрение внутренней и внешней среды, то есть инновационного потенциала и инновационного климата.

Предлагаемую в рамках данной работы модель можно отнести к последнему, 5-му разделу списка уже известных методов, к первой подгруппе с названием инновационный потенциал.

В применяемой в рамках данной работы методологии необходимо использовать достаточно надежные инструменты сглаживания базовых дискретных данных, отобранных для аналитики. К числу последних, - можно отнести экспоненциальную, степенную или логарифмическую функцию. Лучшее приближение из указанного, позволяет формализовать представление базовых данных (получить уравнение их сглаженного изменения), по которому можно вычислить необходимую для аналитики производную.

Изменение производной от положительных значений (развитие), к постоянной величине (рост от масштаба), а затем ее уменьшение (зона насыщения) до нуля (кризис) и переход ее в отрицательную область (обвал), - укажет на точку развития (жизненного цикла) исследуемого нами базового процесса.

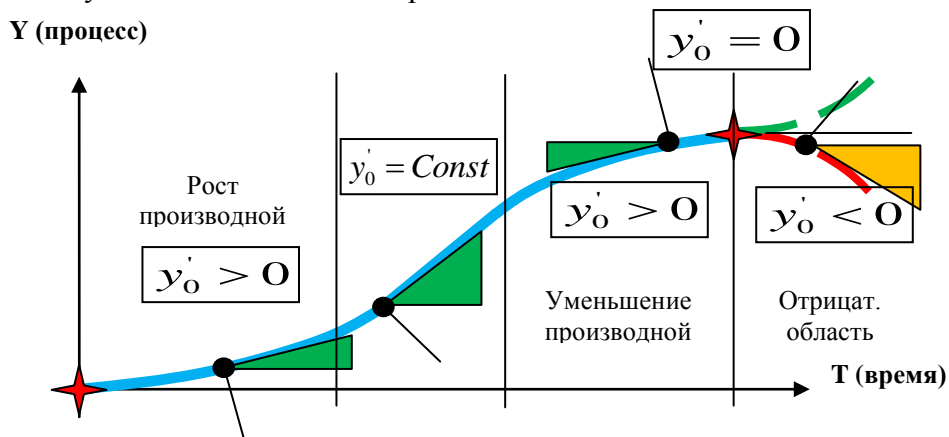


Рис.4. Развитие производной от процесса на основе модели «S – кривая»

4. Заключение

В качестве результатов работы рассматривается возможность прогноза своевременности внедрения инноваций, а также простой способ мониторинга ее жизненного цикла.

В последующей детализации предлагаемая модель позволяет определить итоговую эффективность внедрения инноваций, временные лаги ее жизненного цикла и соответствующие риски.

Точность предлагаемой модели зависит только от достоверности исторических данных.

В случае, если данные отобранные для аналитики представляют собой непрерывный характер, - оценки производных от процесса можно делать по двух или трех-точечным моделям численного анализа (см. формулы ниже). В противном случае оценку производной по процессу вычисляем по функции (экспоненциальная, степенная, логарифмическая), полученной от сглаживания изначально дискретных данных.

$$y'_0 = \frac{1}{h}(-y_0 + y_1) - \text{двухточечная модель производной} \quad (2)$$

$$y'_0 = \frac{1}{2h}(-3y_0 + 4y_1 - y_2) - \text{трехточечная модель производной} \quad (3)$$

В совокупности предлагаемая модель позволяет грамотно распорядиться ресурсами, выделяемыми под внедрение и, следовательно, создать эффективную их конверсию в окончательный и ожидаемый результат этого внедрения.

Учитывая уже существующие подходы по управлению инновациями, предлагаемая модель может послужить дополнительным инструментом, указывающим на:

1. Необходимость и своевременность внедрения инноваций;
2. Эффективность использования инноваций после их внедрения.

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Р.В. Беляев

Старший преподаватель кафедры финансов и учета института “Высшая школа менеджмента” СПбГУ

Управляющий филиалом АО КБ “Ситибанк” в Санкт-Петербурге

Член правления АО КБ “Ситибанк”

belyaev@gsom.spbpu.ru

Использование ковенантов в качестве инструмента управления кредитным риском. Практические аспекты, требующие дальнейшего изучения.

Актуальность исследований выбора ковенантов растет в связи с увеличением внимания банков и регуляторов к пониманию факторов, обуславливающих кредитный риск и путей его снижения ввиду значительных потерь банков в периоды экономического спада. В данном докладе мы даем обзор классификаций ковенантов, понятия их жесткости, теоретических подходов, обосновывающих использование ковенантов в качестве инструмента управления кредитным риском и недостаточно изученных практических проблем: влияния институциональной среды на действенность ковенантов, субоптимального использования ковенантов, выбора оптимальной жесткости ковенантов. Предлагаются подходы к решению обозначенных проблем.

Ключевые слова: *кредитный риск, агентская проблема, ковенанты, жесткость ковенантов, выбор оптимальной жесткости ковенантов*

1. Понятие и классификация ковенантов

Ковенанты являются дополнительными требованиями к заемщику, закрепляемыми в кредитном договоре и направленными на снижение кредитного риска. Исследователи и практики сходятся во мнении, что ковенанты являются важным инструментом управления кредитным риском, связанным с информационной асимметрией в кредитных отношениях [Bolton 1990; Aghion, Dewatripont, Rey, 1994], неполнотой кредитных контрактов [Tirole, 2009], агентской проблемой и риском недобросовестного поведения заемщика [Bradley, Roberts, 2004; Chava, Roberts, 2008; Chava, Kumar, Warga, 2010; Achleitner, Bock, Tappeiner, 2012]. Ковенанты регламентируют деятельность заемщика и в случае их нарушения дают кредитору право дополнительного контроля – возможность изменить условия договора или потребовать досрочного возврата кредита [Aghion, Bolton, 1992; Berlin, Mester, 1992; Dewatripont, Tirole, 1994; Gorton, Kahn, 2000; Garleanu, Zwiebel, 2009].

Гринбаум и Такор разделяют ковенанты на четыре группы: положительные ковенанты (*affirmative covenants*), ограничивающие условия (*restrictive clauses*), отрицательные ковенанты (*negative covenants*) и условия нарушения обязательств (*default provisions*) [Greenbaum, Thakor, 2007, p. 213–214].

Несколько иначе подходит к классификации ковенантов П. Лансетт, который выстраивает ее с точки зрения сферы их действия: финансовые ковенанты (*financial covenants*), ковенанты, касающиеся менеджмента, контроля и собственности (*management, control and ownership covenants*) и ковенанты, содержащие требования по предоставлению заемщиком кредитору отчетности и раскрытия им прочей информации (*reporting and disclosure covenants*) [Lancett, 2014]. На наш взгляд, такая классификация лучше подходит для формулирования процедур по установлению ковенантов банками.

Д. Сааведра подразделяет финансовые ковенанты на две группы: ковенанты, снижающие гибкость решений заемщика (*Flexibility-Reducing Covenants*) и ковенанты, рассчитываемые на основании показателей из счета прибылей и убытков (*income statement covenants*) [Saavedra, 2014].

2. Жесткость ковенантов

Понятие жесткости ковенантов играет важную роль для понимания механизма их действия. Как видно из определения и классификации ковенантов, ковенанты сужают область принятия решений заемщиком. При этом ограничения могут быть установлены дальше или ближе к текущим и/или прогнозным показателям (для финансовых ковенантов) или требовать от заемщика больших или меньших действий, предоставления большего или меньшего количества информации и т. д. Более жесткими ковенантами будут те, которые в большей степени ограничивают заемщика или требуют от него более подробного раскрытия информации.

В таблице 1 приведены подходы к оценке жесткости ковенантов. Следует отметить, что часть авторов (Джейнс, Дайренг, Дракер и Пьюри, Демироглу и Джеймс, Беляев) ставит задачу оценить жесткость отдельного ковенанта. Подходы других авторов (Биллет, Кинг и Мауэр, Мерфин) позволяют рассматривать жесткость совокупности всех ковенантов в отдельном кредитном договоре. Существует также точка зрения, что при прочих равных жесткость совокупности ковенантов увеличивается с их количеством (Биллетт, Кинг и Мауэр).

Таблица 1. Подходы к оценке жесткости ковенантов

ИССЛЕДОВАТЕЛИ	КРИТЕРИЙ	ПОДХОД К ОЦЕНКЕ ЖЕСТКОСТИ
Billett, King, Mauer [Billett, King, Mauer, 2007]	Число ковенантов в кредитном договоре	Индекс жесткости ковенантов (Covenant index) представляет из себя число от 0 до 13, которое увеличивается на 1, если использован хотя бы 1 ковенант в одной из 13 групп, выделенных авторами
Janes [Janes, 2011]	Разность между текущим и пороговым значением	Слабина (Slack) равна разности между текущим и пороговым значением, деленной на пороговое значение финансового показателя
Dyreng [Dyreng, 2007]	Разность между текущим и пороговым значением	Слабина (Slack) равна разности между текущим и пороговым значением, деленной на Среднее Квадратичное Отклонение финансового показателя.
Drucker, Puri [Drucker, Puri, 2009]	Разность между текущим и пороговым значением	Слабина (Slack) равна разности между текущим и пороговым значением, деленной на совокупные активы компании должника. ¹
Demiroglu, James [Demiroglu, James, 2010]	Отклонение порогового значения от среднего	Ковенант считается жестким, если его пороговое значение хуже для заемщика, чем в среднем у аналогичных компаний.
Беляев Р.В. [Беляев, 2015]	Ограничение действий / Пороговое значение	Ковенант считается жестче другого, если его пороговое значение сильнее ограничивает свободу действий заемщика.
Murfin [Murfin, 2012]	Вероятность нарушения ковенанта	Если рассматривать значение ковенанта как случайную величину, распределенную по MND, то жесткость — это вероятность того, что с.в. примет значение выше (ниже) порогового.

3. Теории, обосновывающие действенность ковенантов

Действенность ковенантов в качестве инструментов управления кредитным риском можно обосновать, опираясь на следующие области теоретических исследований: неоинституциональную экономическую теорию, исследования взаимосвязи показателей финансовой отчетности и риска банкротств компаний, ресурсную концепцию стратегического менеджмента.

Обоснование действенности ковенантов, выражающееся в их влиянии на поведение как заемщиков, так и кредиторов, можно найти в исследованиях, базирующихся на неоинституциональной экономической теории. Теория контрактов содержит следующие возможные сценарии развития событий, которые могут привести к увеличению риска кредитора: оппортунистическое поведение заемщика, его ненаблюдаемые кредитором действия и неполнота контрактов, заключающаяся в том, что в контракте невозможно предусмотреть все возможные ситуации и сценарии развития событий, которые могут привести к ухудшению состояния заемщика. Ковенанты, предписывающие,

¹ Исследователи применяют такой подход только для оценки жесткости ковенанта на минимальный размер чистых активов.

ограничивающие или запрещающие определенные действия, финансовые ковенанты, включаемые в договор, призваны ограничить данные риски [Беляев, 2015].

Аналізу многообразных факторов кредитного риска предшествовали исследования взаимосвязи риска банкротств компаний и динамики их финансовых показателей. Основополагающее исследование и обобщение предыдущих взглядов в этой области было проведено Э. Альтманом еще в 1968 г. Альтман построил модель предсказания банкротств на временном горизонте до двух лет, основываясь на показателях пяти прошедших лет, причем он наблюдал явное ухудшение показателей у обанкротившихся фирм уже за два-три года до их банкротства. Альтман пришел к выводу, что, используя финансовые ковенанты, кредиторы снижают свои риски, требуя от заемщика не превышать или не опускаться ниже определенных значений бухгалтерских показателей или коэффициентов, рассчитанных на их основе [Altman, 1968].

В современной экономике, построенной на знаниях, сфера воздействия ковенантов приобретает дополнительную область применения в свете выводов ресурсной концепции стратегического менеджмента. Мы не ставим выводы ресурсной концепции стратегического менеджмента в один ряд с двумя другими сформулированными подходами к обоснованию использования ковенантов. Взгляды ресурсной концепции стратегического менеджмента интересны для выявления дальнейших путей совершенствования использования ковенантов в целях более точного отражения ключевых активов компаний, определяющих ее будущий успех [Беляев, 2015].

4. Практические аспекты применения ковенантов, требующие дальнейшего изучения

В условиях увеличивающегося внимания банков к эффективности использования ковенантов в качестве инструментов управления кредитным риском: их выбора, действенности и оптимального уровня жесткости, дальнейшего изучения требуют следующие аспекты:

- влияние институциональной среды на действенность ковенантов,
- проблемы субоптимального выбора ковенантов,
- инструменты выбора оптимальной жесткости ковенантов.

Остановимся подробнее на этих проблемах и возможных путях их решения.

4.1 Влияние институциональной среды на действенность ковенантов

Эффективность использования ковенантов зависит от сформировавшейся институциональной среды:

- Развитости практики применения ковенантов. В частности, играет роль отношение заемщика к самой возможности ограничения его деятельности путем установления ковенантов и отношения заемщика к риску санкций со стороны банка в случае нарушения ковенантов;
- Ценностей, сформировавшихся в бизнес-сообществе: важности деловой репутации, соблюдения взятых на себя обязательств, стремления заемщиков к повышению качества их кредитных историй,
- Практики судебной защиты прав, предоставляемых кредитору ковенантами. Об ограничениях законодательной базы и судебной практики защиты прав кредиторов по ковенантам на российском рынке подробно пишут [Карапетов, 2011; Туткаров, Берковская 2011].

Вышеперечисленные факторы, отражающие развитие институциональной среды, определяют ограничения эффективности использования ковенантов в условиях

развивающихся экономик и наоборот, сильные институты на развитых рынках обуславливают более эффективное применение ковенантов. В. М. Полтерович называет неэффективные, но устойчивые институты, или нормы поведения, удерживающие экономику в неэффективном равновесии «институциональными ловушками» [Полтерович, 2004]. Изучение особенностей институциональной среды и тех ограничений, которые они накладывают на эффективность действия ковенантов, должно привести к формулированию выводов об особенностях выбора ковенантов и их жесткости в условиях конкретного рынка.

4.2 Проблема субоптимального использования ковенантов

Субоптимальное использование ковенантов связано с формальным подходом в следовании банковским процедурам и политикам, а также с недостаточным опытом кредитных специалистов. Можно выделить несколько основных сценариев субоптимального использования ковенантов с точки зрения банков:

1) Слишком жесткие и многочисленные ковенанты могут вести к потере банком части сделок. Заемщик выбирает другой банк или другой источник финансирования. В результате банк несет потери в связи с затраченными на анализ и одобрение сделки ресурсами и теряет возможность получения дохода от потенциальной сделки.

2) В случае, если заемщик согласился на слишком жесткие и многочисленные ковенанты, это ведет к частому их нарушению, затруднениям в реализации проекта и упущению выгоды и недополучению запланированного дохода заемщиком. При наихудшем сценарии, состояние заемщика в результате такого развития событий значительно ухудшится, банк потребует досрочного возврата кредита, компания обанкротится и банк может недополучить часть предоставленных средств.

3) При планировании и одобрении сделки банком не рассматриваются сценарии нарушения ковенантов и пересмотра условий договора в будущем. При чрезмерно консервативном отношении банка к риску, любое нарушение ковенанта воспринимается банком как увеличение риска выше допустимого уровня и банк начинает реализовывать сценарий досрочного погашения кредита. В результате банк лишается возможного дохода от продолжения кредитования и части прибыли, заложенной в расчет кредитной сделки при ее одобрении.

4) Ковенанты используются как механизм контроля за наступившими событиями. Банком уделяется недостаточно внимания оценке возможного развития ситуации в будущем. Это ведет к позднему признанию проблем и увеличению риска.

5) Банк поздно реагирует на нарушение ковенантов и/или прощает нарушения без изменения условий договора. В результате банк не пользуется правом установить дополнительный контроль за заемщиком в случае увеличения риска, о котором сигнализирует нарушение ковенанта.

Как мы видим, субоптимальное использование ковенантов может привести к недополучению банком дохода и увеличению кредитного риска. На практике об этих проблемах сигнализирует динамика следующих показателей кредитного портфеля:

- уменьшении возврата на активы, взвешенные по рискам,
- рост доли проблемных кредитов в кредитном портфеле банка,
- падение дохода от кредитования в совокупном доходе банка,
- снижение сроков кредитования.

Изменения данных показателей могут происходить и по ряду других причин. В связи с этим, при выявлении вышеперечисленных показателей ухудшения состояния

кредитного портфеля, следует оценить действие данных сценариев в целях выявления возможного субоптимального использования ковенантов и корректировки подхода к работе с ковенантами.

4.3 Проблема выбора оптимальной жесткости ковенантов

На практике выбор ковенантов и их жесткости происходит экспертным путем. На рисунке 1 более подробно представлена совокупность факторов, которые риск-менеджеры учитывают при выборе ковенантов и их жесткости, опираясь на свой опыт кредитной работы, кредитную политику банка и его процедуры. Принимаются во внимание факторы, обуславливающие кредитный риск, а также оценка доступности информации, способности банка проводить кредитный мониторинг и потери по другим ссудам. При этом банку необходимо учитывать предложения конкурентов и возможность потенциального заемщика прибегнуть к альтернативному способу финансирования.

Рисунок 1: Факторы, влияющие на выбор ковенантов и их жесткости



В связи с этим в поисках оптимального значения ковенантов, перед риск-менеджером встают следующие проблемы:

- Сравнения жесткости различных значений ковенантов,
- Измерения совокупной жесткости комбинации ковенантов.

В таблице 1 нами были описаны существующие подходы к определению жесткости ковенантов. Мы остановимся на подходе, предложенном Мерфином [Murfin, 2012] и опишем возможность его использования на практике для уточнения значения ковенантов при их выборе. Мерфин использует вероятность нарушения ковенантов в качестве измерителя их жесткости. Действительно, чем больше вероятность того, что ковенант будет нарушен, тем больше возможностей у банка даже при незначительном изменении условий в сторону увеличения кредитного риска, воспользоваться правом контроля и

потребовать досрочного возврата кредита или изменения условий кредитного договора. Располагая оценкой вероятности нарушения ковенанта при его различных значениях, риск-менеджер может сделать выбор значения ковенанта более точным.

Нами была проведена апробация данного метода. Использовался гипотетический заемщик и кредит. Финансовые показатели были получены для будущих периодов путем имитационного моделирования и определены вероятности нарушения нескольких пар значений финансовых ковенантов Net Debt/ EBITDA и Debt/ Equity. Риск менеджеру одного из банков было предложено обычно используемым экспертным путем определить несколько пар значений данных ковенантов, которые с его точки зрения обладали бы одинаковой защитой для банка. В результате моделирования для каждой пары значений ковенантов была получена вероятность их нарушения. Также была получена функция взаимосвязи значения ковенантов и вероятности их нарушения. Были сделаны выводы о том, вероятность нарушения которого из пары ковенантов выше, иными словами, который из пары ковенантов будет в большей степени оказывать ограничивающее воздействие на заемщика.

Сравнив полученные вероятности нарушения различных пар значений ковенантов, риск-менеджером банка было принято решение о более точном выборе пары ковенантов. Риск-менеджер посчитал оптимальной вероятностью нарушения ковенантов, обеспечивающую относительно высокую финансовую гибкость заемщика, но в то же время дающую определенный “запас” для банка объявить нарушение ковенантов до достижения уровня финансовых показателей, ведущего к значительному ухудшению финансового состояния заемщика. У банка должна быть возможность получить контроль за заемщиком в случае нарушения ковенантов ранее, чем изменение его финансового состояния достигнет критического уровня. Таким образом, выбор значений ковенантов, проведенный экспертным путем был далее уточнен по результатам сравнения вероятности их нарушения. Это показало возможность использования данного метода для выбора оптимального значения ковенантов в дополнение к экспертной оценке.

5. Выводы

Использование ковенантов как инструмента управления кредитным риском может быть усовершенствовано путем внедрения в банковскую практику ряда подходов: учета специфики институциональной среды при выборе ковенантов, избегания сценариев субоптимального использования ковенантов и применения оценки вероятности нарушения ковенантов для выбора их оптимального значения.

Банку необходимо учитывать, что эффективно используемые на развитых рынках ковенанты могут иметь ограниченную действенность на развивающихся рынках в силу слабой мотивации заемщика такими аспектами, как риском потери деловой репутации, важности качественной кредитной истории, имеющими неоспоримую ценность на развитых рынках. Санкции со стороны банка в случае нарушения ковенантов могут иметь ограниченный характер в силу недостаточной судебной защиты прав банка, определяемых кредитным договором, что необходимо иметь в виду при выборе ковенантов и оценки их действенности как инструмента управления кредитным риском.

Риск субоптимального использования ковенантов требует от банка постоянной оценки подходов его сотрудников в данной области. Банку следует избегать формального подхода к установлению и мониторингу ковенантов. Ковенанты, основывающиеся на финансовых показателях, отражающих прошедшие периоды не могут заменить собой кредитный мониторинг и построение сценариев развития событий, направленные на

раннее выявление проблемного развития ситуации. Банку следует вовремя реагировать на нарушение ковенантов и не пренебрегать своим правом вносить в договор изменения, направленные на снижение кредитного риска.

При установлении ковенантов банку следует учитывать, что чрезмерная жесткость ковенантов не ведет к снижению кредитного риска, а может повлечь за собой слишком частое нарушение ковенантов и ограничить финансовую гибкость заемщика, затрудняя реализацию его проекта и увеличивая кредитный риск. В целях избегания установления слишком жестких финансовых ковенантов, а также чрезмерно мягких ковенантов, не дающих банку “запаса” в реагировании на ухудшение финансового состояния заемщика, банк может прибегнуть к использованию оценки вероятности нарушения ковенантов. Данный показатель поможет оценить, какой из ковенантов будет оказывать наиболее ограничивающее воздействие на заемщика и оценить жесткость совокупности нескольких ковенантов.

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Васильева Ольга Геннадьевна
Института Экономических Исследований ДВО РАН
ogvasilyeva@gmail.com

Ковшун Юлия Анатольевна
Дальневосточный Аграрный Университет
uakovshun@gmail.com

Доступ к кредиту и экономический рост в регионах России

Аннотация: Является ли развитая финансовая система необходимым условием экономического роста на субнациональном уровне в условиях сокращения технологических и институциональных барьеров для движения капитала и роста интегрированности финансовых рынков? Или достаточно, чтобы экономические агенты имели доступ к финансовым услугам, предоставляемым резидентами других регионов и стран? Мы пытаемся ответить на эти вопросы, используя подход, предложенный в (Rajan and Zingales 1998), и данные по отраслям обрабатывающей промышленности в российских регионах в 2004 - 2012 гг. Полученные результаты говорят о том, что уровень развития местных финансовых посредников не оказывал статистически значимого влияния на темпы роста отраслей обрабатывающей промышленности в регионах России.

Ключевые слова: *экономически рост, финансовое развитие, регионы России*

Введение

Является ли развитая финансовая система необходимым условием экономического роста в стране, регионе? Или достаточно, чтобы экономические агенты имели доступ к финансовым услугам, предоставляемым резидентами других регионов и стран? Ответ на этот вопрос неочевиден. С одной стороны, в многочисленных работах (как теоретических, так и эмпирических) было показано, что существует тесная связь между уровнем развития финансового сектора экономики и темпами ее роста. Одними из первых это показали (King and Levine 1993). Впоследствии существование этой связи было подтверждено в исследованиях, использующих как данные, агрегированные на национальном уровне¹, так и субнациональные (отраслевые и региональные) данные², и данные на уровне отдельных фирм³.

С другой стороны, развитие современных информационно-коммуникационных технологий и либерализация регулирования финансового сектора приводят к сокращению технологических и институциональных барьеров движения капитала и росту интегрированности финансовых рынков как на национальном, так и на субнациональном уровне. Так, в ряде работ было показано, что развитие коммуникационных технологий, новых методов сбора и обработки информации, позволяет существенно снизить расходы на финансовые операции, как клиентам, так и финансовым посредникам, упрощая доступ к кредиту и увеличивая географическое расстояние, на котором могут находиться друг от друга банк и его клиент.⁴

В современной литературе также накоплено множество свидетельств положительного влияния либерализации регулирования финансовой деятельности, снятия ограничений на перемещение капитала между регионами и странами на экономический рост.⁵

Таким образом, уменьшение роли географического расстояния между финансовыми посредниками и их клиентами, как по технологическим, так и институциональным причинам, ставит вопрос о снижении значимости местной финансовой системы как необходимом условии экономического роста. Этот вопрос становится еще более сложным, когда в фокусе исследования находятся субнациональные единицы в рамках национальных экономик. Финансовые рынки регионов, как правило, полностью интегрированы, их функционирование регулируется одним и тем же законодательством, унифицированным в рамках страны, перемещение капитала из одного региона в другой не встречает барьеров на своем пути. Нужны ли в этих условиях развитые финансовые системы и финансовые посредники в каждом регионе, или достаточно, чтобы такие институты существовали лишь в некоторых из них? Оценка влияния уровня развития финансового сектора на темпы экономического на субнациональном уровне может дать ответ на этот вопрос.

¹ Например, (Levine and Zervos 1998), (Beck and Levine 2004) и др.

² См., например, использование региональных данных в (Guiso, Sapienza, and Zingales 2004), отраслевых данных в (Rajan and Zingales 1998).

³ Например, (Beck, Demirgüç-Kunt, and Maksimovic 2005), (Aghion, Fally, and Scarpetta 2007) и др.

⁴ В (Petersen and Rajan 2002) показано, что в США среднее географическое расстояние между местом, в котором расположена фирма-заемщик и местном расположении банка-кредитора выросло с 51 миль в 1970-х гг. до 161 миль в 1990-х годах. Кроме того, (Cole, Goldberg, and White 2004) нашли, что расстояние между заемщиком и кредитором не имеет значения для одобрения банком займа. Авторы в (Degryse and Ongena 2005) и (Agarwal and Hauswald 2010) показали (для Бельгии и США соответственно), что ставка по кредиту снижается по мере роста расстояния между заемщиком и банком-кредитором.

⁵ см., например, (Levine 2001), (Bekaert, Harvey, and Lundblad 2005) и (Levchenko, Rancière, and Thoenig 2009).

В нашей работе, используя подход, предложенный в (Rajan and Zingales 1998), мы тестируем гипотезу о том, что развитие региональной финансовой системы содействует экономическому росту в российских регионах за счет снижения стоимости внешнего финансирования. Тест состоит в следующем. Если стоимость внешнего финансирования (включая прямые и косвенные издержки) действительно ниже в тех регионах, где более развит финансовый сектор, то мы также должны наблюдать в этих регионах более высокие темпы роста отраслей, зависящих от внешних источников финансирования.

Проблема этого теста, состоит в том, что на объем привлекаемых отраслями финансовых ресурсов в разных странах оказывают влияние как используемые технологии (обуславливающие минимально эффективный размер предприятия, объем инвестиций, длительность финансового цикла), так и уровень развития финансового рынка, возможность привлечения финансирования в той или иной форме, его стоимость. Для оценки влияния на экономический рост именно финансового сектора, нужно изолировать его эффект, отделить от воздействия технологических факторов. Авторы, в (Rajan and Zingales 1998) предложили решить эту задачу следующим образом. Они приняли допущение о схожести применяемых во всех странах на отраслевом уровне технологий, а значит и близких уровнях потребностей во внешнем финансировании, обусловленных технологическими факторами. Тогда для получения оценки потребности во внешнем финансировании, максимально приближенную к технологической, (Rajan and Zingales 1998) воспользовались данными по отраслям обрабатывающей промышленности в США, как страны с наиболее развитыми финансовыми рынками и минимальными барьерами на движение капитала. В то же время, данные, рассчитанные для США, по своей природе экзогенны для других стран, что исключает влияние на них национальных финансовых рынков.

Для идентификации влияния уровня развития региональных финансовых систем на динамику производства в российских регионах мы, вслед за (Rajan and Zingales 1998) используем данные по США об уровне потребности тех или иных отраслей обрабатывающей промышленности во внешнем финансировании. Также мы используем фиксированные эффекты, как для отраслей, так и для регионов, что позволяет проконтролировать ненаблюдаемые факторы, оказывающие влияние на зависимость отраслей от внешнего финансирования и/или уровень финансового развития регионов.

В результате в работе мы не нашли свидетельств в пользу того, что более развитая региональная финансовая система способствует более высоким темпам роста отраслей, по технологическим причинам зависящие от внешнего финансирования. Другими словами, в условиях высоко интегрированных национальных рынков развитие региональных финансовых, банковских систем не является фактором, определяющим экономический рост и структуру экономики.

Наши результаты, в целом согласуются с результатами, полученными для развивающихся рынков. Так, (Koivu and Pankki 2002), используя данные агрегированные на национальном уровне по 25 странам с переходными экономиками 1993 - 2000 гг., нашли, что развитие банковского кредитования не приводит к ускорению темпов экономического роста исследования стран с переходной экономикой. В (Hasan, Wachtel, and Zhou 2009)

авторы показали, что более высокая доля кредитов, выданных банковским сектором, ассоциируются с более низкими темпами роста в провинциях КНР⁶.

Таким образом, наша работа вносит вклад в обсуждение следующих вопросов. Во-первых, полученные результаты могут быть интересны для общей дискуссии о взаимосвязи уровня развития финансовой системы и экономической динамики.

Также, наши результаты вносят вклад в обсуждение роли финансового сектора в странах с переходной экономикой и на развивающихся рынках в целом, т.е. стран, для которых характерны высокая асимметрия информации, слабые институты защиты прав собственности и высокие риски, в т.ч. политические.

Кроме того, нам не известно исследований, целью которых являлась бы оценка влияния развития региональных финансовых систем на темпы экономического роста в российских регионах, и настоящая работа призвана заполнить этот пробел. Наша работа тем более важна, что именно доступность финансирования наиболее часто упоминается как ключевой барьер ведения бизнеса в регионах России⁷.

Работа построена следующим образом. Во *втором разделе* мы обсуждаем данные, которые используются для ответа на вопрос о влиянии финансового сектора на динамику производства на отраслевом уровне в российских регионах. *Третий раздел* посвящен описанию подходов к оцениванию выдвинутых гипотез. В *четвертом разделе* обсуждаются полученные результаты, а в *Заключении* предложены дальнейшие направления исследований.

2. Данные

В работе мы оцениваем значение местных финансовых посредников для динамики производства отраслей обрабатывающей промышленности, а именно мы пытаемся ответить на следующий вопрос: растут ли отрасли, технологически зависимые от внешнего финансирования, более высокими темпами в регионах с более развитым финансовым сектором? Для ответа на этот вопрос мы используем данные по 79 российским регионам и 14 отраслям обрабатывающей промышленности (соответствующим 14 подразделам ОКВЭД) за период с 2004 по 2012 годы. Поскольку не во всех регионах есть все отрасли обрабатывающей промышленности, то мы получаем несбалансированную панель (отрасль x регион).

Зависимые переменные. В качестве *зависимой переменной*, отражающей темпы экономического роста на отраслевом уровне, чаще всего используется темпы роста добавленной стоимости. Однако для российских регионов данные о темпах роста добавленной стоимости доступны только на уровне разделов ОКВЭД. Поэтому, в качестве показателя, отражающего темпы экономического отраслей на уровне регионов, был использован индекс производства для соответствующих отраслей обрабатывающей промышленности за 2005 - 2012 годы. Кроме того, для проверки устойчивости полученных результатов к изменению периода, за который рассчитывается темпы роста, нами рассматривается также индекс промышленного производства за 2007 - 2012 годы. Источник данных – Росстат.

⁶ Полученные результаты авторы объясняют тем, что основная часть кредитов выдавалась государственными банками неэффективным государственным предприятиям. В тоже время небанковский сегмент финансового рынка оказывает положительное влияние на экономический рост в провинциях КНР.

⁷ По данным опроса предприятий в российских регионах (“Измерение Условий Ведения Бизнеса В Российских Регионах” n.d.)

Объясняющие переменные. Вслед за (Rajan and Zingales 1998), в качестве объясняющих переменных, мы рассматриваем показатели уровня развития финансового сектора региона и зависимости отрасли от внешнего финансирования.

В качестве меры уровня *развития финансового сектора* региона нами используется четыре показателя, а именно: соотношение выданных в регионе кредитов к ВРП в 2004 году⁸; объема кредитов нефинансовым организациям к ВРП⁹; доля финансового сектора в ВРП¹⁰ в 2004 году и объем выданных кредитов на душу населения¹¹ в 2003 году.

Для оценки уровня *зависимости отраслей от внешнего финансирования*, нами используется подход, аналогичный предложенному в (Rajan and Zingales 1998). Их идея состоит в следующем. Отрасли имеют разную потребность во внешнем финансировании, что обусловлено разным оптимальным размером предприятия при заданных технологиях, а значит разным объемом инвестиций, разной длительностью финансового цикла и др. Однако фактическая структура финансирования отраслей определяется (помимо технологических факторов) развитостью финансовых институтов, наличием тех или иных ограничений для получения финансирования. Другими словами, фактическая структура финансирования отраслей является эндогенной к уровню развития страны и финансовых рынков, что затрудняет идентификацию влияния развития финансовых рынков на темпы роста. Для решения проблемы идентификации, (Rajan and Zingales 1998) предложили использовать данные США для оценки зависимости отраслей от внешнего финансирования в других странах. Они предположили, что институциональные ограничения для перемещения капитала на финансовом рынке США (как наиболее развитом национальном финансовом рынке) сведены к минимуму, поэтому фирмы имеют возможность выбирать любую структуру капитала и не ограничены в привлечении внешнего финансирования в той или иной его форме. Поэтому структура финансирования отраслей в США, их потребность во внешнем финансировании, в большей степени отражает именно технологическую потребность отраслей. В то же время потребность во внешнем финансировании предприятий в США является фактором, экзогенным по своей природе для предприятий, расположенных в других странах, что и позволяет решить проблему идентификации.

Для оценки финансовой зависимости отраслей в США от внешнего финансирования в (Rajan and Zingales 1998) был использован следующий показатель (часто называемый в литературе индексом финансовой зависимости Раджана-Зингалеса): отношение разности инвестиционных расходов и денежного потока от операционной деятельности к инвестиционным расходам. При этом денежный поток от операционной деятельности определяется как сумма операционного дохода, сокращения запасов и дебиторской задолженности и прироста кредиторской задолженности.

В этой работе мы используем индекс финансовой зависимости, рассчитанный в (Kroszner, Laeven, and Klingebiel 2007) для отраслей обрабатывающей промышленности США за период с 1980 по 1999 годы. Преимущество использования именно этого источника по сравнению с оригинальной работой (Rajan and Zingales 1998) состоит в том, что данные в

⁸ Объем кредитов в рублях и иностранной валюте по выданных кредитов оценивался на основе публикуемого ЦБ РФ показателя объем головным офисам кредитных организаций и филиалам, расположенным на территории региона. Источник: ЦБ РФ.

⁹ Объем кредитов нефинансовым организациям оценивался как общий объем кредитов за вычетом кредитов и прочих размещенных средств, предоставленных нефинансовым организациям. Источник: ЦБ РФ.

¹⁰ Показатель доли финансового сектора в ВРП оценивался как отношение добавленной стоимости финансовой деятельности (Раздел J) к валовому региональному продукту. Источник: Росстат.

¹¹ Источник: статья (Berkowitz, Hoekstra, and Schoors 2014)

(Kroszner, Laeven, and Klingebiel 2007) значительно более приближены к рассматриваемому нами периоду и более точно отражают технологические потребности отраслей во внешнем финансировании в начале 2000-х годов.

Контрольные переменные. В качестве основных контрольных переменных используются ВРП на душу населения в 2004 г. и доля подраздела ОКВЭД в выручке (нетто) от реализации товаров, работ и услуг обрабатывающей промышленности региона в 2006 г.

Включение доли отрасли в валовом выпуске обрабатывающей промышленности региона позволяет проконтролировать на эффект конвергенции: отрасли с большой долей могут расти значительно медленнее. Отметим, что в работе (Rajan and Zingales 1998) и ряде последовавших за ней, в качестве контрольной переменной использована доля отраслей в добавленной стоимости, а не в выручке. Однако данные по структуре добавленной стоимости для российских регионов в разрезе подразделов ОКВЭД не доступны, поэтому мы воспользовались показателями структуры выручки от реализации. Кроме того, данные о структуре выручки обрабатывающей промышленности в разрезе российских регионов доступны только с 2006 года. Источник данных – Росстат.

3. Методика оценивания

Вслед за (Rajan and Zingales 1998), в данной работе мы оцениваем следующую спецификацию:

$$Growth_{i,k} = const + \mu_i + \gamma_k + \alpha(External_k \cdot FD_i) + \beta'X_{i,k} + \varepsilon_{i,k}$$

где: $Growth_{i,k}$ – темп роста (индекс промышленного производства) k -ой отрасли в i -м регионе; μ_i – фиксированный эффект на регион i ; γ_k – фиксированный эффект на отрасль k ; $X_{i,k}$ – вектор наблюдаемых контрольных переменных; $External_k$ – зависимость k -ой отрасли от внешнего финансирования (индекс финансовой зависимости); FD_i – уровень развития финансовой системы в i -м регионе; $\varepsilon_{i,k}$ – ошибка.

Если доступ к внешнему финансированию действительно оказывает существенное влияние на динамику производства в отраслевом разрезе, то мы рассчитываем получить положительное статистически значимое значение для коэффициента α . Это значит, что отрасли, испытывающие большую потребность во внешнем финансировании, растут быстрее в регионах с более развитым финансовым сектором. При оценивании использованы процедуры оценки робастных ошибок, устойчивых к гетероскедастичности.

4. Результаты оценивания

Основные полученные результаты, приведены в Таблице 2. В качестве зависимых переменных в моделях (1) - (4) использованы индексов производства отраслей обрабатывающей промышленности по российским регионам за период с 2005 по 2012 годы, а в моделях (5) - (8) – темпы роста в 2007-2012 годы. В качестве показателя, отражающего уровень развития финансовой системы региона, для моделей (1) и (5) используется отношение общего объема кредитов, выданных на территории региона, к ВРП; для моделей (2) и (6) – объем кредитов, выданных только нефинансовым организациям, к ВРП; для моделей (3) и (7) – доля финансового сектора в ВРП, а для моделей (4) и (8) – объем выданных кредитов на душу населения.

На первый взгляд, полученные оценки не позволяют дать однозначный ответ на вопрос о том, наблюдается ли в российских регионах связь между динамикой роста производства в обрабатывающей промышленности и уровнем развития финансовых посредников в регионе. Использование, для оценки уровня развития финансовой системы, показателей объема выданных кредитов к ВРП и кредитов, выданных только нефинансовым

организациям, к ВРП, дает положительную, значимую на 5% уровне оценки интересующего нас коэффициента α (модели 1, 2, 5 и 6). В то время как использование других показателей, отражающих уровень развития финансовой системы, свидетельствует о том, что коэффициент α статистически незначим.

Дальнейший анализ результатов, представленных в Таблице 2, показал, что оценки, полученные в моделях 1, 2, 5 и 6, возможно обусловлены влиянием наблюдений с экстремальными значениями (см. Рисунки 1, 2, 3 и 4).

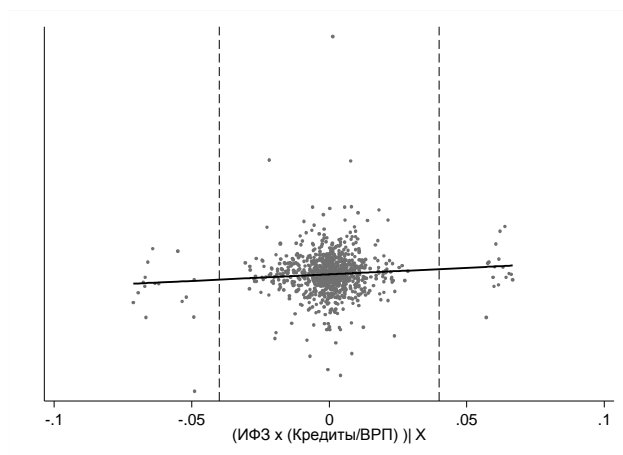


Рисунок 1. Уровень развития финансового сектора (измеренный как объем выданных в регионе кредитов к ВРП) и динамика производства в отраслях добывающей промышленности российских регионов в 2005 - 2012 годах.

Таблица 2. Оценка связи между уровнем развития финансового сектора в российских регионах и динамикой производства в отраслях обрабатывающей промышленности

Наименование переменной	Логарифм индекса производства за 2005 -2012 гг.				Логарифм индекса производства за 2007 -2012 гг.			
	Модель 1	Модель 2	Модель 3	Модель 4	Модель 5	Модель 6	Модель 7	Модель 8
ИФЗ х (Кредиты/ВРП)	5.05** (2.191)				4.40** (2.157)			
ИФЗ х (Кредиты небанковским организациям/ВРП)		5.37** (2.244)				4.73** (2.200)		
ИФЗ х (Доля финансового сектора в ВРП)			0.02 (0.267)				-0.07 (0.230)	
ИФЗ х (Кредиты на душу населения)				0.10 (0.182)				0.10 (0.148)
Доля отрасли в выручке обрабатывающей промышленности региона в 2006 г.	-0.00* (0.002)	-0.00* (0.002)	-0.00 (0.002)	-0.00 (0.002)	-0.00 (0.002)	-0.00 (0.002)	-0.00 (0.001)	-0.00 (0.002)
Логарифм ВРП на душу населения в 2004 г.	-1.92*** (0.685)	-1.92*** (0.686)	-1.88*** (0.696)	-1.86*** (0.701)	-1.61** (0.654)	-1.61** (0.655)	-1.58** (0.666)	-1.56** (0.666)
Отраслевые фиксированные эффекты	Да	Да	Да	Да	Да	Да	Да	Да
Региональные фиксированные эффекты	Да	Да	Да	Да	Да	Да	Да	Да
Количество наблюдений	915	915	912	900	918	918	915	903
R ²	0.24	0.24	0.25	0.23	0.20	0.20	0.19	0.20

*В скобках приведены робастные стандартные ошибки; *** p<0.01, ** p<0.05, * p<0.1*

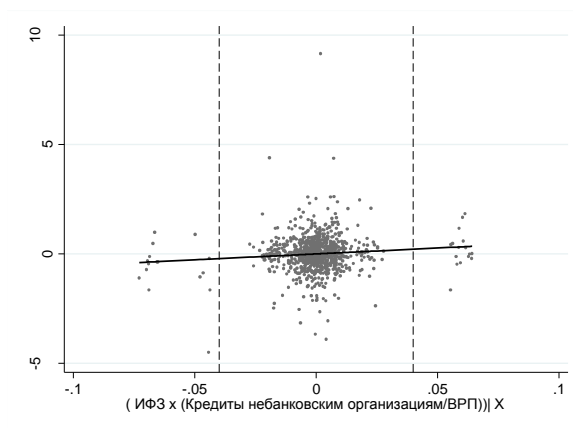


Рисунок 2. Уровень развития финансового сектора (измеренный как объем выданных в регионе кредитов небанковским организациям к ВРП) и динамика производства в отраслях добывающей промышленности российских регионов в 2005 - 2012 годах.

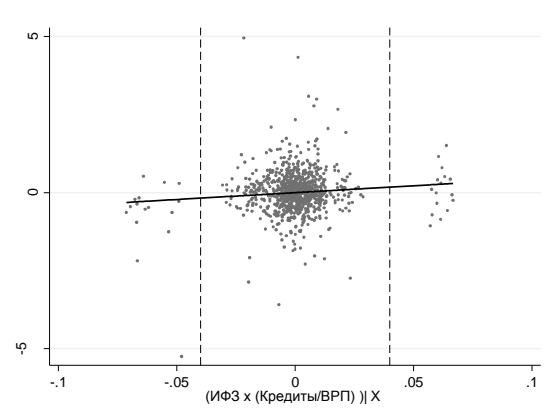


Рисунок 3. Уровень развития финансового сектора (измеренный как объем выданных в регионе кредитов к ВРП) и динамика производства в отраслях добывающей промышленности российских регионов в 2005 - 2012 годах.

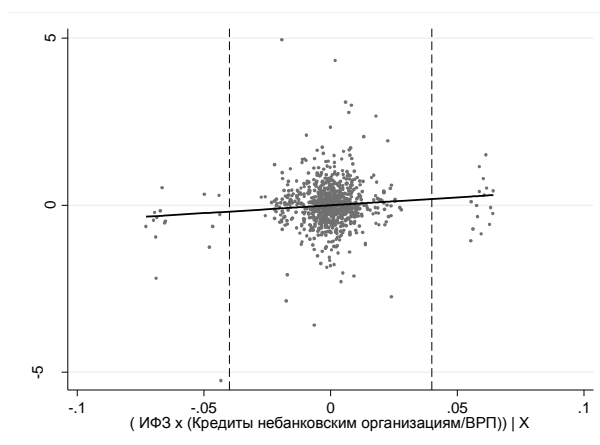


Рисунок 4. Уровень развития финансового сектора (измеренный как объем выданных в регионе кредитов небанковским организациям к ВРП) и динамика производства в отраслях добывающей промышленности российских регионов в 2007 - 2012 годах.

Для проверки влияния выбросов на значение и статистическую значимость коэффициента α , нами были оценены спецификации, аналогичные приведенным в моделях 1, 2, 5 и 6 в Таблице 2, но из рассмотрения были исключены наблюдения с экстремальными значениями. Результаты представлены в Таблице 3.

Таблица 3. Оценка связи между уровнем развития финансового сектора в российских регионах и динамикой производства в отраслях обрабатывающей промышленности (выбросы исключены)

Наименование переменной	Логарифм индекса производства за 2005 - 2012 гг.		Логарифм индекса производства за 2007 - 2012 гг.	
	Модель 1	Модель 2	Модель 3	Модель 4
ИФЗ х (Кредиты/ВРП)	2.60 (2.945)		1.80 (2.725)	
ИФЗ х (Кредиты небанковским организациям/ВРП)		3.24 (3.309)		2.16 (3.097)
Доля отрасли в выручке обрабатывающей промышленности региона в 2006 г.	-0.00 (0.002)	-0.00 (0.002)	-0.00 (0.001)	-0.00 (0.001)
Логарифм ВРП на душу населения в 2004 г.	-1.90*** (0.692)	-1.90*** (0.692)	-1.59** (0.661)	-1.59** (0.661)
Отраслевые фиксированные эффекты	Да	Да	Да	Да
Региональные фиксированные эффекты	Да	Да	Да	Да
Количество наблюдений	880	880	883	883
R ²	0.27	0.27	0.23	0.23

*В скобках приведены робастные стандартные ошибки; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$*

После исключения экстремальных значений, коэффициент α стал статистически незначимым, что согласуется с результатами, ранее полученными в моделях 3, 4, 7 и 8 в Таблице 3. Таким образом, нами не найдено робастных свидетельств в пользу того, что отрасли обрабатывающей промышленности, в большей степени зависящие от внешнего финансирования, имеют более высокие темпы роста в тех российских регионах, где более развит финансовый сектор. Другими словами, в рассматриваемый период темпы экономического роста российских регионов не были связаны с уровнем развития местных финансовых посредников, а доступ к кредиту не являлся ключевым фактором, определяющим деловую активность.

Заключение

В работе на основе данных на отраслевом уровне для российских регионов получены результаты, свидетельствующие о том, что развитие местных финансов, региональной банковской системы не имеет статистически значимого влияния на динамику и структуру экономического роста. Полученные нами результаты в целом согласуются с оценками, полученными в других работах для развивающихся рынков.

Однако за рамками данного исследования остался вопрос о том, одинаково ли незначим доступ к кредиту на территории региона для всех фирм вне зависимости от их размера или развитие региональной банковской системы все же имеет значения для малого бизнеса? Поиск ответа на этот вопрос задает направление дальнейшей работы.

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Г.А. Власова
Россия, гор. Челябинск, ФГБОУ ВПО «Южно-Уральский государственный
университет» (НИУ)
galina-v89@mail.ru

Формирование мотивационных инструментов при управлении работниками творческо-интеллектуального труда на современных предприятиях

Целью исследования является разработка мотивационных инструментов при управлении работниками творческо-интеллектуального труда на современных предприятиях, исходя из сущности и основных отличительных характеристик данного вида труда. Для конкурентоспособности на рынке руководству предприятия необходимо внедрять такую систему заработной платы, которая в полной мере удовлетворяла бы все потребности и способствовала развитию творческого и интеллектуального потенциала работников. По результатам исследования существующие системы данную функцию в полном объеме не выполняют, поэтому предлагается формирование страхового фонда, являющегося одним из дополнительных механизмов материальной мотивации работников.

Ключевые слова: *творческо-интеллектуальный труд, материальная мотивация, система заработной платы, страховой фонд.*

В современных экономических условиях изучение проблем экономики труда основано на фундаментально новых представлениях о функционировании и эффективности труда, формировании и регулировании трудового потенциала, а также на анализе реальных экономических и социальных процессов, происходящих в сфере труда в условиях развития рыночных отношений в российской экономике.

Принципы рыночной экономики активно проявляются в процессе привлечения и использования рабочей силы, внедряются в системы организации и оплаты труда, формирования и использования доходов работников, повышения уровня и качества жизни населения. (Остапенко, 2007)

На сегодняшний день выделяют большое количество различных видов труда, поскольку труд является сложным и многоаспектным социально-экономическим явлением.

Уровень экономического развития общества является определяющим фактором для появления новых видов трудовой деятельности и исчезновения старых. Тем не менее, классификация трудовой деятельности в основном имеет достаточно устоявшийся вид: труд физический; труд умственный; труд смешанной формы (физический и умственный) в различной пропорции.

На сегодняшний день в современном обществе колоссально увеличился объем умственного труда во всех сферах деятельности. Его преобладание предполагает раскрытие интеллектуальной природы человека. Ведь любой человек обладает определенным потенциалом, который можно рассматривать через биологическую, социальную и интеллектуальную составляющие.

Если рассмотреть все многообразие видов умственного труда, можно сделать вывод о том, что часть из них имеют общие характеристики друг с другом. Визуально это можно представить в виде матрицы, осями которой будут выступать следующие признаки, проявляющиеся в большей или меньшей степени:

1. Уровень персонифицированности (зависимость результата от конкретного человека).
2. Полученный доход (рента).
3. Физиологическая обусловленность.
4. Степень значимости, получаемого продукта труда (или уровень новизны продукта труда).

Полученная матрица представлена на рисунке 1.

		Уровень персонифицированности (зависимость результата от конкретного человека)									
		Низкий уровень		Средний уровень		Высокий уровень		Абсолютная персонифицированность			
Рента (доход)	Получение академической ренты (общественное признание)	атлетический							творческий	Высокий уровень значимости (разработка инновационной идеи)	Степень значимости, получаемого продукта труда (или уровень новизны продукта труда)
								интеллектуальный	творческо-интеллектуальный		
	Получение эмоциональной и этической ренты				управленческий		инновационный	креативный		Средний уровень значимости (разработка новых методов, подходов, приемов)	
			рутинный	воспроизводственный		предпринимательский					
	Получение только материальной ренты (в виде з/пл)	шаблонный	механический	операторский	исполнительский	спекуляционный				Отсутствие значимого результата (получение стандартного результата)	
		диструктивный							инстинктивный		
		Механические способности человека		Сознательные способности человека		Познавательные способности человека		Интуитивные подсознательные способности человека			
		<u>Физиологическая обусловленность</u>									

Рисунок 1 – Виды умственного труда

Из полученной матрицы видно, что некоторые виды умственного труда имеют общие свойства и характеристики, и при этом могут рассматриваться как обособленный вид. Из всего этого многообразия особый интерес представляет творческо-интеллектуальный труд, свойства которого характерны определенной категории сотрудников на различных предприятиях.

Одной из основных предпосылок исследования данного вида труда работников является переход от индустриальной к постиндустриальной экономике, где ключевую роль начинает играть человек с его способностями к труду и его творческим потенциалом. Что касается нашей страны, то на сегодняшний день российская экономика переходит на инновационный путь развития, что также способствует активному использованию творческих и интеллектуальных способностей работников.

Данный вид труда имеет высокую степень персонифицированности как труд высокого качества и эффективности; является информационно емким и высокопроизводительным по своему характеру и содержанию, где человек проявляет все свои природные и социальные возможности. Продукт творческо-интеллектуального труда может быть интерпретирован в виде мысли (идеи) или в чем-либо воплощен.

Результаты творческо-интеллектуального труда находят объективную форму выражения, «материализуются» в объектах интеллектуальной собственности и авторском праве. Также отличительной особенностью является высокая доля использования результатов так называемого прошлого труда, информации. Именно поэтому в процессах творческо-интеллектуального труда, в его продуктивности такую важную роль играют обучение, уровень и качество образования, квалификация, а также их природные и приобретенные способности.

Таким образом, творческо-интеллектуальный труд – это труд, в котором преобладают творческие способности и затраты умственной энергии автора в виде интеллектуальных и внутренних возможностей человека с определенным уровнем образования и квалификации, основанный на переработке информации с целью создания нового, оригинального продукта или идеи, характеризующиеся высокой степенью значимости и индивидуальности.

После рассмотрения сущности и основных характеристик творческо-интеллектуального труда, возникает вопрос о том, как и сколько платить данной категории работников.

Чтобы правильно оплатить труд обычного работника, его сначала необходимо правильно оценить. Оценка труда производится в соответствии с относительной ценностью выполняемых работ. Она включает в себя формальное и систематическое сравнение различных видов труда для определения ценности одного вида труда по сравнению с другим. Основа оценки труда состоит в том, чтобы сравнить содержание различных видов труда, например, по требуемым физическим усилиям, ответственности, навыкам.

Что касается оценки деятельности работников творческо-интеллектуального труда и определение их заработной платы, то существующие формы и системы оплаты труда, имеют определенные недостатки и не учитывают в полном объеме все особенности и всю специфику данной категории работников. Чем выше удельный вес творческого и интеллектуального труда в общих затратах рабочего времени, тем сложнее определять необходимые размеры ставок и нормативов. Это объясняется тем, что данный труд характеризуется отсутствием многократной повторяемости работ и операций, в отличие от содержания трудовых процессов, где преобладают физические усилия или использование различной техники.

Творческо-интеллектуальный труд не поддается нормированию, так как результаты, полученные от данного вида труда, могут использоваться и приносить

эффект через определенный период времени. Поэтому необходимо в имеющиеся и разработанные на сегодняшний день методы формирования заработной платой, внести такой элемент, который бы учитывал эти особенности.

На сегодняшний день основным способом поддержания высокого уровня конкурентоспособности предприятия на рынке является грамотное использование творческого и интеллектуального потенциала работников для производства новых знаний, выступающих в качестве основного продукта предприятия.

Согласно статистическим данным, работник задействует только 20-30% своих способностей, действуя в рамках должностных инструкций и выполняя все указания. При этом творческий и интеллектуальный потенциал сотрудника никак не активизируется. Но если грамотно организовать систему мотивации и стимулирования персонала, то работник может задействовать 80-90% своих способностей, так как будет заинтересован в конечном результате труда (Молодчик, 2005).

На многих предприятиях потенциал работников творческо-интеллектуального труда используется незначительно, связано это с тем, что на практике руководство вознаграждает работников за творческую и интеллектуальную активность только в виде дополнительной премии к определенному периоду времени (чаще всего к концу года).

Для того чтобы эффективно использовать данный потенциал, да еще в интересах предприятия, необходимо разработать и ввести систему стимулирования персонала, учитывающую все особенности и характеристики работников творческо-интеллектуального труда.

Большинство работников творческо-интеллектуального труда на различных предприятиях не стремятся к использованию в полном объеме всех своих знаний и способностей. И чтобы как-то изменить ситуацию, предприятие должно обеспечить, как материальными, так и нематериальными благами, за творческую и интеллектуальную активность. Только в этом случае у персонала будут определенные гарантии и мотивы.

Следовательно, необходимо организовать такую систему, чтобы:

- работнику было экономически выгодно заниматься творчеством;
- творческо-интеллектуальный труд стал внутренней потребностью персонала предприятия;
- работникам творческо-интеллектуального труда были созданы благоприятные условия для проявления творческого и интеллектуального потенциала (доверие и сотрудничество на всех уровнях; демократический стиль управления; организация обучения и профессионального общения).

На сегодняшний день существует огромное количество теорий мотивации персонала: теория мотивации по А. Маслоу, теория мотивации доктора Шейка, двухфакторная теория мотивации Герцберга и многие другие. Однако в основе этих теорий лежит классическая теория мотивации, в соответствии с которой, мотивация разделяется на нематериальную (моральную) и материальную (Евплова, 2013).

В рамках данного исследования была рассмотрена только материальную мотивацию, которая основывается прежде всего на построении эффективной системы заработной платы, учитывающую всю специфику деятельности работников творческо-интеллектуального труда. Ведь материальная мотивация возникает в связи с удовлетворением базового уровня потребностей существования (рисунок 2). Поэтому размер заработной платы работников творческо-интеллектуального труда должен напрямую зависеть от полученного результата. Тогда данная категория сотрудников будет заинтересована не только в своих целях, но и в целях всего предприятия.



Рисунок 2 – Материальная мотивация

Рассмотрев и изучив существующие системы заработной платы на предприятиях, можно сделать вывод о том, что они в полной мере не учитывают особенности и свойства творческо-интеллектуального труда. Размер заработной платы данной категории работников может колебаться из-за непостоянного объема выполняемой работы, ограниченного объема финансирования разрабатываемого проекта, отсутствия заказов на предприятии и т.д. И нет никого дополнительного механизма, способствующего страховать от подобных ситуаций и стимулирующего использовать творческий и интеллектуальный потенциал в полном объеме без боязни быть недооцененным.

Исходя из потребностей сотрудников и долгосрочных целей, предприятие должно сформулировать такую систему заработной платы, которая в полной мере удовлетворяла бы все потребности и способствовала развитию творческого и интеллектуального потенциала работников на предприятии, что является основным фактором повышения конкурентоспособности.

Поэтому основная задача в формировании системы заработной платы работников творческо-интеллектуального труда является, во-первых, соответствие результата деятельности размеру получаемой им зарплаты, во-вторых, чтобы работники были застрахованы от изменяющегося размера переменной части заработной платы.

В результате исследования с помощью когнитивного моделирования выявлено, что система трудовых отношений на предприятии устойчива в том случае, если будет сформирован страховой фонд (резервный фонд).

Целью создания такого фонда является, во-первых, минимизация риска потери (обесценивания) временно свободных остатков денежных средств, во-вторых, возможность получения дополнительного дохода от каждого вложенного рубля в различные финансовые инструменты, а в-третьих, использование полученных средств в качестве материальной мотивации работников творческо-интеллектуального труда, а также для нормального функционирования предприятия в случае возникновения непредвиденных ситуаций (например, отсутствие заказов или объемов работ).

На сегодняшний день предприятие может использовать различные финансовые инструменты при его управлении. Финансовый инструмент - это «квазиденьги», финансовый документ (валюта, ценная бумага, денежное обязательство, фьючерс, опцион и т. п.), продажа или передача которого обеспечивает получение денежных средств.

В последние годы финансовых институтов возникло так много, а линейка тех инструментов и продуктов, которые они предлагают, настолько велика, что впору растеряться и физическому, и юридическому лицу. А ведь новые возможности появляются буквально каждый день, и знающая организация вполне может «заставить работать» свои деньги, даже если они свободны всего несколько месяцев, и в итоге сохранить и приумножить свои средства, вместо того чтобы наблюдать, как они обесцениваются вследствие инфляции.

На рисунке 3 представлен перечень объектов, в которых могут быть размещены денежные средства страхового фонда.

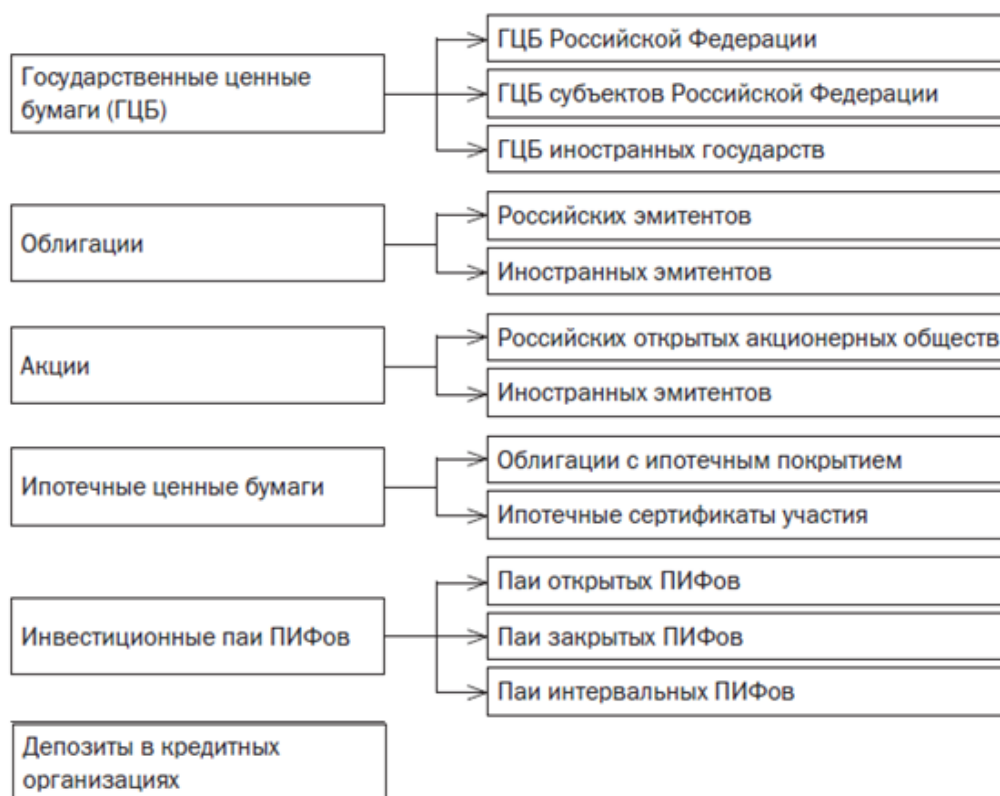


Рисунок 3 – Перечень объектов для размещения средств страхового фонда

Отличительная особенность страхового фонда заключается в его долговременном использовании, полученные средства аккумулируются и приумножаются за счет инвестиционных операций для будущих выплат. Решения, принятые по вопросам управления страховым фондом сегодня, окажут влияние на размер выплат персоналу предприятия в будущем.

Также особое внимание следует уделить – расчету нормы расходования страхового фонда. Руководство предприятия должно найти такую «золотую середину» между достаточным объемом выплат за счет страхового фонда и задачей его сохранения и приумножения для будущего.

Размер ежегодных расходов находится в прямой зависимости от величины дохода, полученного от управления страховым фондом. Можно предположить, что, чем больше доход, тем больше руководство предприятия может потратить. Вместе с тем, очевидно, что полностью расходовать полученный доход от управления средствами фонда не осмотрительно, поскольку в случае возникновения неблагоприятных обстоятельств в будущем (падения фондового рынка, роста инфляции, увеличения стоимости услуг управляющей компании в случае ее привлечения и других возможных расходов) придется тратить средства страхового фонда.

Таким образом, для того чтобы сохранить в прежнем объеме сформированный страховой фонд, нельзя полностью расходовать полученный доход. Следует разделить доход на две части:

1. Расходуемый в текущем году.
2. Реинвестируемый, который предназначен для защиты страхового фонда от обесценивания вследствие инфляции, с учетом оценок его будущей доходности, развития ситуации на фондовом рынке и т.д.

Естественно ожидать, что размер получаемого дохода в разные периоды будет отличаться в зависимости от сложившейся ситуации на фондовом рынке. Таким образом, доходность инвестиционных операций должна:

- превышать существующий уровень инфляции;
- обеспечивать возможность бесперебойного финансирования;
- быть достаточной для того, чтобы из полученного дохода можно было выплатить необходимые расходы.

Учитывая современную действительность развития хозяйственной деятельности предприятий, перед руководством стоит задача активизации творческого и интеллектуального потенциала работников и не допущение утечки кадров. Одним из решений данной задачи является создание и управление страховым фондом. На сегодняшний день данный вопрос рассмотрен только в теоретическом аспекте и не имеет практических приемов реализации в реальном секторе экономики современной России.

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Гиленко Евгений Валерьевич
Санкт-Петербургский государственный университет, Высшая Школа Менеджмента
e.gilenko@gsom.spbu.ru

Половников Илья Николаевич
Московский государственный университет, Факультет государственного управления
iliya.polovnikov@gmail.com

Стратегии фармацевтических компаний на современном российском фармацевтическом рынке: перспективы развития бизнеса

Аннотация: Российский фармацевтический рынок, с одной стороны, является одним из самых быстро растущих в мире, что обуславливает широкий потенциал для развития бизнеса. С другой стороны, в современных условиях имеется целый ряд угроз успешному функционированию российского фармацевтического бизнеса. Это требует детального анализа внешней среды, в которой функционируют компании, с применением современных аналитических инструментов. Результатом настоящего исследования является выявление конкурентных стратегий, которые используют участники российского фармацевтического рынка, а также перечень ключевых факторов успеха, которые могут быть использованы при разработке и оптимизации стратегий отдельных компаний отрасли.

Ключевые слова: *российский фармацевтический рынок; конкурентные стратегии; факторный анализ; кластерный анализ; логит-регрессия*

1. Введение

Фармацевтическая промышленность во всем мире является одной из социально-значимых отраслей, от успешного развития которой зависит качество жизни и здоровье миллионов людей. По данным International Federation of Pharmaceutical Manufacturers & Associations (IFPMA), производство лекарственных препаратов и вакцин только за 2013 г. предотвратило более 3 млн. смертей от малярии и спасло более 750 тыс. детей от инвалидности (см. IFPMA (2013)).

По информации DSM Group, российский фармацевтический рынок уже в 2013 г. по своему объему превысил отметку в 1 трлн руб., а годовой темп роста составил 10%, благодаря чему российский рынок вошел в тройку наиболее быстрорастущих (см. DSM Group (2013)). По прогнозам IMS Health, составленным еще в середине 2014 г., высокий темп роста рынка должен сохраниться и в ближайшие годы, а к 2017 г. его объем должен превысить 1,5 трлн руб. (см. IMS Health (2014)).

За последние годы в России был принят ряд нормативных документов, касающихся введения контрактной системы государственных закупок, допуска частых медицинских учреждений к системе ОМС, введения ограничений на посещение врачей медицинскими представителями. В связи с тем, что российская система здравоохранения в значительной степени зависит от импорта лекарственных средств, Министерством промышленности и торговли была подготовлена государственная программа «Развитие фармацевтики и медицинской промышленности», которая должна быть реализована к 2020 г. Целью данного документа является создание в России конкурентоспособного производства лекарственных средств, которые не уступали бы по своему качеству зарубежным аналогам (см. Постановление Правительства РФ от 17.02.2011 № 91).

Институциональные изменения в фармацевтической отрасли и системе здравоохранения не могут не оказать влияния на деятельность активно развивающихся фармацевтических компаний. Принятые меры могут являться как благоприятными возможностями для фармацевтических компаний, так и угрозами, что в любом случае влечет за собой необходимость пересмотра стратегий компаний в целях развития бизнеса.

Исходя из этого, основными задачами настоящего исследования современного российского фармацевтического рынка являются (1) оценка факторов внешней среды; (2) определение стратегических групп и конкурентных стратегий на рынке; (3) выявление ключевых факторов успеха (КФУ).

Конечной целью исследования является оценка необходимости оптимизации стратегии и перспектив развития фармацевтического бизнеса в современных условиях. В исследовании используются количественные модели и методы, при помощи которых определяется чувствительность результатов деятельности компаний к изменениям макросреды.

2. Состояние современного российского фармацевтического рынка

2.1. Структура рынка

По итогам 2013 г. фармацевтический рынок в Россия занял 7 место в мире по объему и составил 1 045 млрд руб. (с учетом НДС) в ценах конечного потребления, что на 14% больше, чем показатель 2012 г. (см. DSM Group (2013)). Важно отметить, что основная часть лекарственных средств, реализуемых в России представлена импортными препаратами, объем продаж которых в 2013 г. составил 75% от общего объема в стоимостном выражении.

Отечественные лекарственные препараты представлены в основном дешевыми, не превышающими по стоимости 150-200 руб. за упаковку лекарствами, состоящими, как правило, из простых и легко синтезируемых соединений. Именно этим можно объяснить высокую долю отечественных производителей в совокупном объеме продаж, рассчитанном в натуральном выражении.

Российский рынок лекарственных средств на два крупных сегмента:

- коммерческий сегмент (аптечные продажи);
- государственный сегмент (продажи в лечебно-профилактических учреждениях и продажи по программе дополнительного лекарственного обеспечения).

Данные рыночные сегменты отличаются по объемам (609 млрд руб. в коммерческом сегменте против 267 млрд. руб. в государственном, за 2013 г.), структуре и составу реализуемых лекарственных препаратов. Существенным отличием между двумя сегментами рынка является влияние государственного регулирования на объемы продаж. Так, например, финансирование закупок медикаментов зависит от наполнения фондов ОМС, утвержденных стандартов оказания медицинских услуг, политических решений, связанных с поддержкой отечественных производителей.

В коммерческом сегменте (далее В2С), по данным за 2013 г., суммарная доля рынка трех крупнейших компаний не превышала 16,2%, а индекс Херфиндаля-Хиршмана не превышал 400 единиц, что позволяет называть коммерческий сегмент рынка низкоконцентрированным. Конкуренция между производителями проявляется в агрессивной маркетинговой политике компаний. При этом фармацевтические компании выводят на российский рынок более эффективные и безопасные препараты, а также оптимизируют затраты и риски для снижения цен на ЛС (см. DSM Group (2013)).

Сегмент ЛПУ по итогам 2013 г. также является низкоконцентрированным (CR3 = 14,9%; HHI < 500), однако рыночная доля компаний подвержена постоянным изменениям. Наибольший объем продаж наблюдался у компаний, обладающих широким спектром противомикробных и сердечно-сосудистых препаратов (51,2% стоимостного объема продаж в ЛПУ) (см. DSM Group (2013)).

В сегменте ДЛО (дополнительное лекарственное обеспечение) наблюдалась высокая волатильность рыночных долей ведущих компаний. Сегмент ДЛО также является низкоконцентрированным (CR3 = 31,6%; HHI < 610), но существуют компании с высокой рыночной долей, что обусловлено специфическими требованиями к производителям лекарственных средств (см. DSM Group (2013)).

Из предварительного анализа российского рынка лекарственных средств можно сформулировать следующие выводы.

- Основными игроками на российском рынке лекарственных средств являются крупные международные компании, которые импортируют лекарственные средства на территорию России.
- Рынок ЛС можно разделить на три отдельных сегмента (ДЛО, ЛПУ, В2С), которые отличаются по составу игроков, уровню конкуренции и степени государственного вмешательства. Каждый из представленных сегментов требует отдельного рассмотрения с точки зрения анализа факторов внешней среды при разработке стратегии развития компании.

2.2. Основные тенденции развития фармацевтической отрасли

Исходя из результатов опросов экспертов, проведенных компаниями Deloitte, MarketLine, а также анализа периодических отчетов компании DSM Group и IMS Health, можно выделить несколько ключевых тенденций, которые отражают изменения в отрасли со стороны спроса и предложения за 2013–2014 гг.

- Российский рынок с каждым годом приближается к насыщению.
- Происходит последовательное изменение структуры спроса на рынке.
- Растёт конкуренция среди аптечных сетей.
- Сокращается доля импортных лекарственных средств в объеме продаж отрасли, что подтверждается предварительными данными за 2014 г. и первое полугодие 2015 г.
- Сокращаются объемы продаж оригинальных препаратов.

Таким образом, тенденции, которые за 2013–2014 гг. прослеживались в отдельных сегментах рынка могут оказать влияние на развитие отрасли в целом. Наиболее ожидаемые результаты таких изменений могут проявиться в увеличении доли рынка российских компаний, а также в череде поглощений отечественных производителей международными корпорациями.

Кроме того, на ближайшие несколько лет можно прогнозировать следующие изменения в отрасли:

- временное сокращение темпов роста рынка в натуральном выражении и их стабилизация в 2015 г. на уровне 8-10%;
- рост доли рынка отечественных производителей вследствие обесценения национальной валюты и ограничений участия в торгах для иностранных компаний;
- увеличение числа совместных предприятий и покупка ряда перспективных российских производителей иностранными компаниями.

3. Результаты исследования

3.1. Гипотезы исследования

В исследовании были выдвинуты две принципиальные гипотезы.

Гипотеза 1: Стратегии участников российского рынка ЛС укладываются в классическую схему конкурентных стратегий М. Портера:

- стратегия «лидерство по издержкам»;
- стратегия дифференциации;
- стратегия фокусирования на рыночном сегменте.

Гипотеза 2: Во всех трех сегментах рынка существуют схожие ключевые факторы успеха, которые обеспечивают рост доли рынка компаний отрасли.

3.2. Описание данных

Для проведения анализа факторов макросреды, а также конкурентных позиций лидирующих игроков рынка были собраны пространственные данные из различных открытых источников. Собранный набор данных содержит сведения об используемых конкурентных стратегиях двадцати лидирующих компаний в трех рыночных сегментах за 2013 г. Собранные пространственные данные используются в работе для идентификации основных стратегических групп (компаний, которые придерживаются схожих стратегий), а также для определения ключевых факторов успеха.

3.3. Сегментирование компаний (кластерный анализ)

На наборе полученных пространственных данных в целях понимания структуры выборки был проведен кластерный анализ данных. В сегменте В2С при помощи метода кластерного анализа удалось идентифицировать три крупные стратегические группы компаний. Группы различаются между собой как по объему продаж компаний, так и по структуре портфеля препаратов. В сегменте ЛПУ можно выделить две группы компаний, сформированные в зависимости от выбранной конкурентной стратегии. В сегменте ДЛО при помощи метода кластерного анализа удалось идентифицировать две крупные группы компаний, которые обладают схожими стратегиями.

3.4. Определение стратегий компаний (факторный анализ)

В сегменте ДЛО при помощи метода факторного анализа удалось идентифицировать стратегии, которые укладываются в классическую концепцию конкурентных стратегий М. Портера. В сегменте ЛПУ были получены схожие результаты. Компании отрасли также группируются в три стратегические группы, для которых характерны свои конкурентные стратегии. Компании в сегменте В2С компании также придерживаются трех типовых конкурентных стратегий.

Важно отметить, что каждая конкурентная стратегия участников рынка во всех трех сегментах сформирована одинаковыми векторами (каждый вектор отражает определенные стратегические решения компаний). **Полученные результаты факторного анализа позволили принять Гипотезу 1.**

3.5. Выделение ключевых факторов успеха (логит-регрессия)

Для сегмента ДЛО при помощи регрессионного анализа были получены оценки коэффициентов логит-модели, которые позволили идентифицировать ключевые факторы успеха данном сегменте фармацевтического рынка. Исходя из оценивания модели можно сформулировать следующие выводы.

- Компании, обладающие дифференцированным портфелем препаратов увеличивали долю рынка быстрее, чем конкуренты (коэффициент перед переменной *brands* имеет положительный знак).
- Производители дженериков (воспроизведенных препаратов) демонстрировали более высокие темпы роста, чем производители оригинальных препаратов (коэффициент перед переменной *original* имеет отрицательный знак).
- По причине ограниченного перечня ЛС в программе ДЛО и относительно меньшего объема рынка, активы на территории РФ не являются КФУ (коэффициент перед переменной *local* имеет отрицательный знак).

Для сегмента ЛПУ результаты оценивания регрессионной логит-модели существенно отличаются как по статистической значимости коэффициентов, так и по составу ключевых факторов успеха. Исходя из оценивания модели можно сформулировать следующие выводы.

- Компании, обладающие широким портфелем безрецептурных препаратов за последние 3 года увеличивали долю рынка более высокими темпами (коэффициент перед переменной *brands* имеет положительный знак, а коэффициент перед *recipe* имеет отрицательный знак).

- Наличие в портфеле компаний большого количества воспроизведенных препаратов также позволяет наращивать долю рынка быстрее конкурентов (коэффициент перед переменной *original* имеет отрицательный знак).
- Инструменты продвижения препаратов, свойственные для сегмента В2С могут применяться и в сегменте ЛПУ. Специалистам, как правило, хорошо известны препараты, которые занимают лидирующие позиции в коммерческом сегменте (коэффициент перед переменной *В2С* имеет положительный знак).

Для сегмента В2С также была построена логит-модель, позволяющая идентифицировать ключевые факторы успеха на рынке. Исходя из оценивания модели можно сформулировать следующие выводы.

- Компании с дифференцированным портфелем безрецептурных препаратов наращивали долю рынка более высокими темпами (коэффициент перед переменной *brands* имеет положительный знак). Наличие "ОТС-препаратов" в портфеле позволяет проводить рекламу своих брендов в СМИ, что является основным способом продвижения ЛС в коммерческом сегменте рынка.
- Производители дженериков в коммерческом сегменте рынка показывали более высокие темпы роста (коэффициент перед переменной *original* имеет отрицательный знак). В России среднедушевые расходы на лекарственные средства за 2012 г. составили 140 дол. в год, что примерно в 4,5 раза меньше аналогичного показателя в США и Великобритании (см. DSM Group (2013)).

Таким образом, мы можем *опровергнуть Гипотезу 2 о том, что для всех сегментов рынка ключевыми факторами успеха будут являться одни и те же компоненты стратегий*. Например, наличие в портфеле компании оригинальных препаратов повышает вероятность попадания в группу с более высокими темпами роста только в сегменте ЛПУ. Тем не менее, для всех сегментов рынка характерной особенностью является зависимость от воспроизведенных препаратов, которые по всей видимости и обеспечивают ускоренный рост компаний.

4. Заключение и выводы

Проведенный анализ дал возможность идентифицировать основные стратегические группы и конкурентные стратегии участников российского фармацевтического рынка. Кроме того, были определены ключевые факторы успеха для каждого рыночного сегмента. В итоге можно сформулировать следующие выводы.

- ✓ Участники рынка придерживаются трех типовых конкурентных стратегий (лидерство по издержкам, дифференциация, фокусирование) **во всех сегментах**.
- ✓ В государственных сегментах рынка (ДЛО и ЛПУ) компании чаще используют стратегию фокусирования и лидерства по издержкам, однако в сегменте В2С фирмы чаще используют стратегию дифференциации.
- ✓ Для каждого сегмента рынка выделяются разные ключевые факторы успеха. В государственных сегментах рынка (ДЛО и ЛПУ) наличие производственных мощностей на территории России и ориентация компании на производство воспроизведенных препаратов позволяют наращивать долю рынка быстрее конкурентов.

- ✓ Для коммерческого сегмента (B2C) более важным ресурсом является широкий портфель брендов, развитые компетенции в сфере маркетинга и разработке новых лекарственных средств.

Результатом исследования внешней среды фармацевтических компаний является выявление конкурентных стратегий, которые используют участники рынка, а также перечень ключевых факторов успеха, которые могут быть использованы при разработке стратегий отдельных компаний отрасли.

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М.А. Гильтман
ФГБОУ ВПО «Тюменский государственный университет»
giltman@rambler.ru

А.А. Вотякова
ФГБОУ ВПО «Тюменский государственный университет»
a.a.votyakova@gmail.com

Эластичность занятости в субъектах РФ¹

Целью работы является выявление факторов, в наибольшей степени влияющих на изменение численности занятых в субъектах РФ. Исследование, проведенное на основе статистических и эконометрических методов, показало, что эластичность занятости по ВРП в субъектах РФ в период 1995-2012 гг. была невысока, но в ряде случаев значения этого показателя были выше, чем в РФ в целом. Наибольшее влияние на динамику численности занятых в регионах оказывали изменения в структуре региональной занятости.

Ключевые слова: *региональные рынки труда, занятость, эластичность занятости.*

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1. Обзор литературы и постановка проблемы

Эластичность занятости считается одним из важнейших индикаторов адаптации рынка труда к рыночным условиям для всех стран, переживших переход от командно-административной к рыночной экономике. Объясняется это тем, что в плановой экономике открытая безработица отсутствовала, также как и многие институты рынка труда. Главной функциональной особенностью российской модели рынка труда (Капелюшников, 2009), считается слабая чувствительность занятости к любым встряскам в экономике. Такие зарубежные исследователи как Basu (1995, 1997), Grosfeld и Nivet (1997), Köllö (1997), Korosi (1997), Singer (1996), Brauer (1995), Commander и Dhar (1998) оценили коэффициенты эластичности занятости по выпуску в большинстве стран ЦВЕ в диапазоне 0,3-0,9, тогда как в России этот показатель во всех исследованиях оказался статистически незначимым – около 0 [11]. Общее объяснение таких результатов таково, что в России переход к рыночной экономике происходил медленнее, чем в остальных странах ЦВЕ. Р.И. Капелюшников (2009), в свою очередь, объясняет стабильность занятости и ее слабую чувствительность к динамике ВВП следующими факторами: гибкой занятостью, гибкой заработной платой и слабым инфорсментом [19]. При этом анализ, проведенный за достаточно длительный период времени, позволил Р.И. Капелюшникову говорить об устойчивости российской модели рынка труда, что объясняется в основном ее институциональными особенностями (Kapeliushnikov, Kuznetsov, Kuznetsova, 2011) [3].

Однако, огромная территория страны и существенные различия в экономическом развитии регионов заставляют задуматься о единых закономерностях проявления этой модели, ее региональных особенностях. В настоящее время такими учеными как Гимпельсон и Зудина (2014) [12], Лукьянова (2011) [21], Кобзарь (2009) [20], Капелюк (2014) [17], Commander, Nikoloski, Plekhanov (2013) [1], Гимпельсон, Жихарева, Капелюшников (2015) [14], Ощепков (2011, 2013) [23, 24], Мироненко (2010) [22], Muravyev, Oshchepkov (2013) [9] и др. исследованы отдельные аспекты межрегиональных различий функционирования российского рынка труда, но исследований эластичности занятости в регионах РФ и факторов, на нее влияющих, пока не проводились [14]. В то же время, многие исследователи отмечают, что разница в экономическом развитии российских регионов более существенна, чем в большинстве не только развитых, но и развивающихся стран (Oshchepkov A.Y., Kholodilin K., Siliverstovs B. (2009) [10], Guriev и Vakulenko (2012) [2], Lehmann и Silvagni (2013) [5]). Это дает основания предполагать, что основная функциональная особенность российского рынка труда – низкая эластичность занятости по выпуску - может проявляться в регионах по-разному.

Последнее предположение согласуется также с моделью равновесия на локальных рынках труда Rosen-Roback (1979, 1982), согласно которой внутри страны труд в гораздо большей степени более мобилен, чем между странами, что делает предложение труда на рынках труда отдельных территорий абсолютно эластичным [7; 1254-1255]. Е. Moretti (2010, 2011) дополнил эту модель тем, что индивидуальные предпочтения относительно места проживания и возможность пользоваться преимуществами конкретной территории снижают эластичность труда между местными рынками, но высокая мобильность рабочей силы между отдельными территориями страны все-таки остается одной из ключевых предпосылок этой модели [7, 8]. В целом, согласно модели Е. Moretti, работники тяготеют к территориям с наибольшей производительностью, поскольку это приводит к увеличению спроса на труд со стороны фирм, они повышают заработную плату, что привлекает новых работников из других территорий страны, в результате занятость на данной территории

растет. В модели подчеркивается (и подтверждается рядом эмпирических исследований), что более квалифицированные работники более склонны к трудовой миграции, что приводит к еще большему росту производительности на территориях уже имевших такое преимущество. Помимо этого Е. Moretti [7, 8] анализирует ряд эмпирических исследований и теоретически обосновывает причины, по которым производительность отличается между отдельными территориями страны, что фактически приводит к локализации спроса на труд. В частности, он выделяет три такие группы причин:

- производимый продукт может продаваться как внутри страны, так и экспортироваться, т.е. он не привязан к той территории, где находится фирма (исходная предпосылка модели Rosen-Roback (1979, 1982) [8; 1255], т.е. цены на производимые товары и заработная плата не зависят от доходов потребителей данной конкретной территории [8; 1262];

- кластеризация, основанная на том, что фирмы одной отрасли концентрируются на определенной территории из-за отраслевой специфики и внешних эффектов [8; 1282-1284];

- сильные или слабые рынки труда отдельных территорий (thick/ thin labor markets). Если рынок труда данной территории «сильный» (thick), то это создает ряд преимуществ для фирм и работников. Фирмам легче найти квалифицированных работников для определенной отрасли (чем более специализированная рабочая сила требуется, тем больше преимуществ для фирм и работников). У работников повышается вероятность найти рабочее место, соответствующее индивидуальным навыкам и предпочтениям и меньше риск безработицы даже в период спада. Концентрация работников на «сильных» рынках труда повышает отдачу на человеческий капитал также и в фирмах, оказывающих услуги (non-tradable goods), что стимулирует еще большие инвестиции в человеческий капитал на территориях с сильными рынками труда. В результате повышается производительность труда, заработная плата и занятость и различия между «сильными» и «слабыми» рынками труда сохраняются [8; 1287-1295]. Таким образом, занятость на территориальных рынках труда зависит от уровня экономического развития и структуры экономики территории.

Основываясь на положении российской модели рынка труда Р.И. Капелюшника о низкой эластичности занятости по выпуску, результатах эмпирических исследований эластичности занятости в переходных экономиках стран ЦВЕ и модели равновесия на локальных рынках труда Rosen-Roback и Moretti, а также принимая во внимание результаты исследований о различиях региональных рынках труда, нами были сформулированы цель и гипотеза исследования.

Цель исследования – выявление факторов, в наибольшей степени влияющих на изменение численности занятых в субъектах РФ.

Гипотеза: если ВРП растет, то численность занятых в регионе увеличивается.

2. Статистический анализ эластичности занятости в регионах России

Исследование включало в себя два этапа – анализ эластичности занятости в субъектах РФ на основе медианных показателей факторов, влияющих на динамику занятости, и, второй этап, – построение эконометрической модели с учетом результатов, полученных на первом этапе. Сначала на основе данных Росстата были построены динамические ряды за 1995 – 2012 гг., показывающие прирост показателей

ВРП и занятости относительно предыдущего года. Нестандартная ситуация наблюдалась преимущественно в регионах Северо-Кавказского федерального округа.

$$\mathcal{E}_z = \frac{\Delta \text{Численность занятых (\%)}}{\Delta \text{ВРП (\%)}} \quad (1)$$

Анализ эластичности занятости по ВРП (в текущих и постоянных ценах), определенной по формуле (1), показал, что в большинстве регионов эластичность в период «до подъема» была отрицательной, в период «подъема» ряд регионов сохранили отрицательные значения, а период «кризиса и восстановления» регионы переживали по-разному. Кроме того, значения эластичности во многих случаях были выше 0 (рис. 1, 2), и в некоторых случаях колебались в пределах -0,5 до 0,4, что выше общероссийских показателей, как правило, не превышавших за этот же период 0,1 (расчеты авторов по той же формуле). Период с 1995 по 2011 год, так же, как это принято в современной литературе, мы разделили на подпериоды: до подъема российской экономики – 1995-1998 гг., подъем – 1999-2008 гг., кризис (2008-2009 гг.) и последующее восстановление – 2008-2012 гг. В целом, в исследованиях западных коллег и Р.И. Капелюшникова [19] эластичность занятости по выпуску была выше в период кризиса и ниже на стадии подъема, как в странах ЦВЕ, так и в России, хотя в России колебания были значительно ниже.

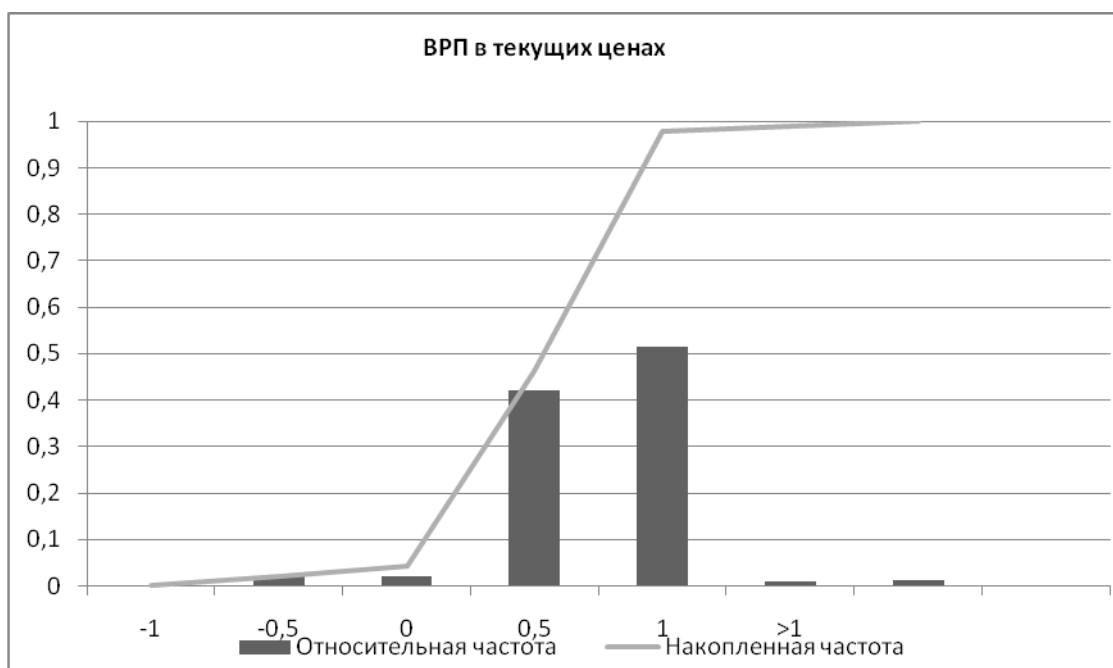


Рис. 1 Значения эластичности занятости в субъектах РФ в 1996-2012 гг. по ВРП в текущих ценах

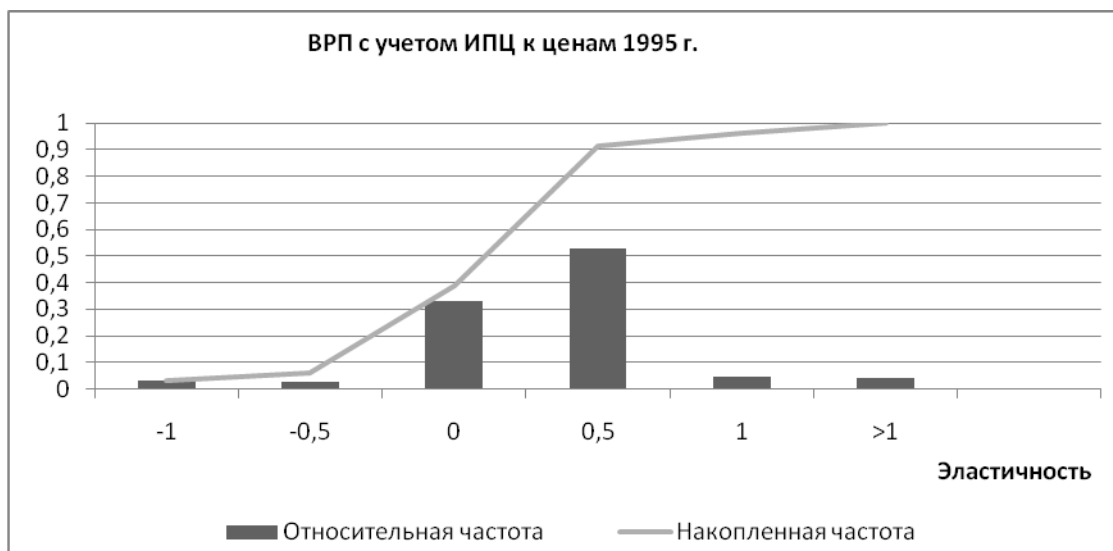


Рис. 2 Значения эластичности занятости в субъектах РФ в 1996-2012 гг. по ВРП, дефлированного по ИПЦ к ценам 1995 г.

В итоге удалось выделить пять основных групп регионов в зависимости от полученных значений эластичности (таблица 1). Как показывают данные таблицы 1, различия в группах были следующие:

- первая группа: эластичность занятости по ВРП преимущественно больше нуля на протяжении двух и более периодов
- вторая группа: значения эластичности преимущественно меньше нуля на протяжении двух и более периодов
- третья группа: эластичность преимущественно больше нуля в 1999-2008 гг., меньше нуля в 1996-1998 гг. и близка нулю в 2009-2012 гг.
- четвертая группа: эластичность преимущественно меньше нуля в 1996-1998 гг. и близка нулю в остальные периоды (более трети субъектов РФ)
- пятая группа: значения эластичности незначительны на протяжении всех периодов

Таблица 1.

Группы регионов в зависимости от показателей эластичности занятости по ВРП

	Эластичность (медианные значения)		
	1996-1998	1999-2008	2009-2012
<i>ВРП в текущих ценах, Занятость - БТР</i>			
РФ	-0,11	0,03	0,01
Субъекты РФ (все)	-0,09	0,02	0,00
1 группа	0,02	0,05	0,07
2 группа	-0,22	0,00	-0,07
3 группа	-0,08	0,06	-0,01
4 группа	-0,13	0,01	0,00
5 группа	-0,02	0,02	-0,01
<i>ВРП в постоянных ценах (1995), Занятость - БТР</i>			
РФ	-0,04	0,06	0,02
Субъекты РФ (все)	0,08	0,03	0,01
1 группа	0,03	0,09	0,09
2 группа	0,08	0,01	-0,08
3 группа	0,10	0,09	-0,01
4 группа	0,06	0,01	0,00
5 группа	0,02	0,03	0,02
<i>ВРП в постоянных ценах (1995), Занятость - ОНПЗ²</i>			

² Средний период – 2007-2008

РФ (среднее)	н/д	0,16	0,07
Субъекты РФ (все)	н/д	0,09	0,08
1 группа	н/д	0,37	0,14
2 группа	н/д	-0,12	-0,02
3 группа	н/д	0,00	0,14
4 группа	н/д	0,10	0,07
5 группа	н/д	0,09	0,11

Для объяснения полученных результатов были выделены факторы, которые, с нашей точки зрения, были способны повлиять на различия в реакции занятости на изменение ВРП, и определены их медианные значения по группам регионов по выделенным периодам. Проведенный анализ позволил сделать следующие выводы относительно выделенных по значениям эластичности группам регионов. В первой группе наблюдались наиболее высокие показатели миграционного прироста, номинальной заработной платы и ее роста, количества отработанных человеко-часов и значения коэффициента замещения рабочей силы. Вторая группа характеризовалась максимальными значениями миграционной убыли населения, самыми низкими значениями медианных показателей ожидаемой продолжительности жизни, наиболее высокой средней заработной платой (номинальная и в ценах 1995 года), максимальным ростом реальной заработной платы, минимальным количеством отработанных человеко-часов (с тенденцией к снижению), средней продолжительности поиска работы и доли сельского хозяйства в отраслевой структуре валовой добавленной стоимости, при максимальной доле добычи полезных ископаемых. В третьей группе динамика многих показателей (как и эластичность занятости) была разнонаправленной, при этом наблюдался высокий темп роста реальной и номинальной заработной платы, максимально высокие доли сельского хозяйства и бюджетных секторов экономики в отраслевой структуре валовой добавленной стоимости (последняя демонстрировала также максимально высокий рост), минимальная – доля обрабатывающих производств, наиболее высокая доля неформальной занятости, максимальное отношение безвозмездных перечислений в бюджеты субъектов РФ к доходам региональных бюджетов и уровень общей безработицы. В четвертой и пятой группах большинство показателей было достаточно стабильным, особенно в пятой группе, за исключением тенденции к увеличению миграционной убыли населения; минимальный из всех групп регионов рост реальной заработной платы за все рассматриваемые периоды, высокий показатель количества отработанных человеко-часов.

3. Эконометрическое моделирование влияния факторов на динамику занятости в субъектах РФ

Для количественной оценки факторов, влияющих на динамику занятости в субъектах РФ, была построена и оценена эконометрическая модель с фиксированными эффектами, учитывающими специфические устойчивые региональные особенности, с добавлением лагов. Решение о добавлении лагов было принято на основе изучения эмпирических исследований эластичности занятости в странах ЦВЕ [11; 2817], которые в основном проводились на панельных данных за два года на уровне фирм с помощью авторегрессионной модели распределенных лагов. Общая спецификация модели приведена в уравнении (2) [11; 2817].

$$\log L_t = \alpha_0 + \alpha_1 \log(W)_t + \alpha_2 \log(W)_{t-1} + \alpha_3 \log Q_t + \alpha_4 \log Q_{t-1} + \alpha_5 \log X_t + \alpha_6 \log X_{t-1} + \alpha_7 \log L_{t-1} \quad (2),$$

где L – количество работников,

W – заработная плата (в постоянных ценах),
Q – выпуск продукции (в постоянных ценах),
X – прочие факторы, способные оказывать влияние на занятость,
t – период времени.

По результатам оценок в странах ЦВЕ из прочих факторов значимыми оказались форма собственности и возраст фирмы (наибольшая эластичность занятости была в приватизированных компаниях Basu (1995, 1997), Grosfeld and Nivet (1997)). Поскольку мы проводили исследование на агрегированных региональных данных, то несколько изменили спецификацию модели, включив в нее переменные, описывающие структуру региональной экономики, в частности, долю занятых в обрабатывающей промышленности и сельском хозяйстве, что вполне соотносится с факторами, влияющими на занятость в модели равновесия на локальных рынках E. Moretti [7, 8]. Помимо этого, в пользу включения в уравнение переменных, отражающих структуру региональной экономики, говорят следующие соображения:

- разные отрасли технически задействуют разное количество работников. Поскольку мы оцениваем численность занятых, то этот факт может существенно влиять на ее численность в регионе;

- квалификационные характеристики и индивидуальные предпочтения работников в разных отраслях формируют у них разную склонность к мобильности, в том числе между состояниями занятости, безработицы и неактивности. Например, Гимпельсон и Шарунина (2014) [16] пришли к выводу, что наибольшей стабильностью занятости отличаются работники бюджетного сектора, а наибольшей мобильностью между состояниями занятости, безработицы и неактивности – работники со средним образованием. При этом достаточно логично предположить, что и бюджетные организации и работники со средним образованием имеют определенную отраслевую концентрацию;

- при проведении статистического анализа методом группировки мы пришли к выводу, что наибольшая эластичность занятости наблюдалась в регионах, где в отраслевой структуре экономики преобладало сельское хозяйство;

- в ряде эмпирических исследований при оценке различных аспектов занятости и безработицы в регионах РФ в уравнения регрессии в качестве переменных включается отраслевая структура занятости, как правило, как *proxу* для региональной структуры экономики, причем эта переменная оказывается значимой. Например, Konings, Lehmann (2001) [4], Кобзарь (2009) [20], Lehmann, Zaiceva (2013) [6].

Также пришлось отказаться от авторегрессии в связи с невыполнением ряда формальных тестов, в частности, теста на адекватную спецификацию модели. В качестве зависимой переменной была выбрана численность занятых (логарифм) по балансу трудовых ресурсов (сборник Росстата «Регионы России. Социально-экономические показатели»), независимыми переменными стали ВРП в ценах 2006 года (логарифм), заработная плата в ценах 2006 года (логарифм), структурные составляющие с лагами в 5 лет. Количество лагов определялось на основании формальных критериев Акаике и Шварца, а также теста на нормальное распределение остатков. В итоге уравнение было оценено на панельных данных за 2006-2012 год для 79 субъектов РФ, исключая автономные округа и Чеченскую республику. Оценивание проводилось с помощью эконометрического пакета Gretl, результаты оценивания приведены в таблице 2.

Таблица 2.

Результаты оценивания влияния факторов на численность занятых в субъектах РФ в 2006-2012 гг.

Переменная	Коэффициент (ст. ошибка)	Переменная	Коэффициент (ст. ошибка)
const	6,04 (0,86)***	Доля занятых в обраб. пром-ти (%)t	-0,005 (0,004)
ВРП (log)t	0,05 (0,02)*	Доля занятых в обраб. пром-ти (%)t-1	-0,0005 (0,004)
ВРП (log)t-1	0,01 (0,03)	Доля занятых в обраб. пром-ти (%)t-2	0,0009 (0,003)
ВРП (log)t-2	0,01 (0,03)	Доля занятых в обраб. пром-ти (%)t-3	0,001 (0,002)
ВРП (log)t-3	-0,02 (0,02)	Доля занятых в обраб. пром-ти (%)t-4	-0,001 (0,003)
ВРП (log)t-4	-0,01 (0,02)	Доля занятых в обраб. пром-ти (%)t-5	-0,0004 (0,003)
ВРП (log)t-5	0,03 (0,01)*	Доля занятых в с/х (%)t	-0,005 (0,004)
Заработная плата (log)t	-0,03 (0,05)	Доля занятых в с/х (%)t-1	0,008 (0,003)**
Заработная плата (log)t-1	-0,02 (0,08)	Доля занятых в с/х (%)t-2	0,005 (0,004)
Заработная плата (log)t-2	-0,01 (0,06)	Доля занятых в с/х (%)t-3	0,003 (0,002)
Заработная плата (log)t-3	0,04 (0,04)	Доля занятых в с/х (%)t-4	0,004 (0,003)
Заработная плата (log)t-4	-0,08 (0,06)	Доля занятых в с/х (%)t-5	0,0006 (0,004)
Заработная плата (log)t-5	0,05 (0,05)		
Количество наблюдений 158			
Стандартная ошибка регрессии 0,009			
R ² (within) 0,292			
*** однопроцентный уровень значимости, ** пятипроцентный уровень значимости, * десятипроцентный уровень значимости			

Таблица 2 показывает, что увеличение ВРП на 1% увеличивает занятость в регионе в том же периоде на 0,05%. Эластичность эта невелика, однако, показатель значим на десятипроцентном уровне значимости. При этом долгосрочный эффект проявляется с лагом в 5 лет и составляет 0,08%. Из других оцененных переменных значимой оказалась только доля занятых в сельском хозяйстве с лагом в один год. Коэффициент при данной переменной показывает, что увеличение этого показателя в регионе на 1% приводит к росту занятости в следующем периоде на 0,8%. Полученные результаты говорят о том, что в регионах с более высокими темпами прироста ВРП и большим удельным весом занятых в сельском хозяйстве эластичность занятости в 2006-2012 гг. была выше.

4. Основные выводы

Таким образом, несмотря на не очень высокие региональные значения эластичности занятости, результаты нашего исследования показывают, что в ряде регионов значения эластичности занятости по ВРП были несколько выше, чем в среднем по РФ, что позволяет принять сформулированную гипотезу. В целом можно сделать следующие выводы:

- эластичность занятости по ВРП в субъектах РФ в период 1995-2012 гг. была невысока, но в ряде случаев значения этого показателя были выше, чем в РФ в целом;
- как правило, более высокая эластичность занятости наблюдалась в регионах в период «подъема» 1999 – 2008 гг.;
- наиболее высокие показатели эластичности занятости были в регионах с более высокой миграционной активностью населения и высокими темпами роста номинальной заработной платы; наименее эластичной занятость была преимущественно в добывающих регионах с наиболее высокой реальной заработной платой;
- оценки влияния ВРП на численность занятых в регионах в 2006-2012 гг. оказались статистически значимыми, хотя показатели были невысоки и действовали с запаздыванием (лагами);
- изменения в структуре региональной занятости, а именно динамика доли занятых в сельском хозяйстве, оказывали на динамику численности занятых в регионах большее влияние, чем изменения ВРП и заработной платы.

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Горлина Юлия Петровна,
Студентка 1 курса магистратуры ВШМ СПбГУ
Профиль - Корпоративные финансы
gorlina.yup@gmail.com

Моделирование структуры капитала российских акционерных обществ

Цель данной работы заключается в проведении эмпирического исследования, направленного на то, чтобы установить, руководствуются ли компании телекоммуникационной отрасли целевой структурой капитала при принятии решений по финансированию. Исследование показало, что для компании телекоммуникационной отрасли не свойственно стремление к целевому значению структуры капитала. Знание об отсутствии стремления к целевой структуре капитала компании телекоммуникационной отрасли снизит асимметрию информации и поможет потенциальным инвесторам, ориентированным на долгосрочные вложения, принять решение о том, стоит ли инвестировать в развитие данной компании или нет.

Ключевые слова: *моделирование структуры капитала, целевая структура капитала*

1. Постановка проблемы.

Существует ряд теорий по структуре капитала и финансовой политике организаций, которые говорят о том, чем руководствуются компании при принятии решений о выборе инструментов для привлечения финансирования и какое значение имеет асимметрия информации для принятия данных решений. Понятие структуры капитала изучается более сорока лет, однако однозначных ответов на фундаментальные вопросы о структуре капитала пока нет (как правильно оценить структуру капитала компании, существует ли оптимальная и целевая структуры капитала и другие). Все эти вопросы и противоречия говорят о проблематике и важности исследований в области структуры капитала.

Цель исследования заключается в проведении эмпирического исследования, направленного на то, чтобы установить, руководствуются ли компании телекоммуникационной отрасли целевой структурой капитала при принятии решений по финансированию.

Актуальность исследования: моделирование структуры капитала методом Монте-Карло позволит создать ряд эконометрических моделей, которые будут отражать подход менеджеров компании при принятии решений по структуре капитала. Знание о наличии целевой структуры капитала у компании снизит асимметрию информации и поможет потенциальным инвесторам, ориентированным на долгосрочные вложения, принять решение, стоит ли инвестировать в развитие данной компании или нет.

1.1. Причины уникальности работы с данными по структуре капитала.

1. Структура капитала компаний является относительной величиной, на основании которой нельзя делать выводы о количественном изменении доли числителя без фиксации значения знаменателя, который также может меняться, в связи с чем возникают сложности с интерпретацией полученных результатов по структуре капитала.^{1 2 3} Моделирование структуры капитала методом Монте-Карло в работах [Shyam-Sunder, Myers, 2000; Leary, Roberts, 2010; Chang, Dasgupta, 2009] показало, что так как зависимая переменная есть относительная величина, то стремление структуры капитала к среднему значению будет выполняться, даже если генерирование структуры капитала проходило с предположением об отсутствии целевой структуры капитала.

2. Сложность изучения причин, из-за которых компании меняют свою структуру капитала, и степень взаимосвязи структуры капитала компаний с внутренними характеристиками фирмы с учетом разных подходов к финансовой политике компаний.

Моделирование структуры капитала методом Монте-Карло было применено Chang X. и Dasgupta S. в работе Monte Carlo Simulations and Capital Structure, опубликованной в 2011 году в International Review of Finance.⁴

Преимущество метода Монте-Карло состоит в том, что он позволяет сгенерировать значение переменной, используя различные предположения при генерации.

2. Моделирование структуры капитала методом статистического моделирования.

¹ Shyam-Sunder L., Myers S. C. Testing static tradeoff against pecking order models of capital structure //Journal of financial economics. – 1999. – Т. 51. – №. 2. – С. 219-244.

² Leary M. T., Roberts M. R. The pecking order, debt capacity, and information asymmetry //Journal of Financial Economics. – 2010. – Т. 95. – №. 3. – С. 332-355.

³ Chang X., Dasgupta S. Target behavior and financing: how conclusive is the evidence? //The Journal of Finance. – 2009. – Т. 64. – №. 4. – С. 1767-1796.

⁴ Chang X., Dasgupta S. Monte Carlo Simulations and Capital Structure Research //International Review of Finance. – 2011. – Т. 11. – №. 1. – С. 19-55.

В ходе выполнения исследования была проанализирована телекоммуникационная отрасль в Российской Федерации. В открытых источниках был осуществлен поиск информации по отрасли и ее особенностям в области формирования структуры капитала. На данном этапе исследования были проанализированы различия по величине структуры капитала, по доле краткосрочного долга в общей сумме долга и по доле долга, выраженного в валюте, для торгуемых и не торгуемых на бирже компаний.

2.1 Анализ переменных модели.

После проведения анализа компаний телекоммуникационной отрасли были изучены особенности формирования структуры капитала ОАО «МТС» с 2002 по 2012 год. В кейсе по ОАО «МТС» были сделаны предположения по детерминантам структуры капитала, отвечающим за инвестиционные и финансовые решения, для компаний телекоммуникационной отрасли:

- EBITDA / A – отношение EBITDA компании к активам.
- D / A – структура капитала компании, где в качестве долга учитывались все долговые обязательства компании. Данное решение было принято в связи с тем, что, в среднем, для компаний телекоммуникационной отрасли долговые обязательства на 70% состоят из краткосрочных обязательств.
- Size – размер фирмы (log от балансового значения всех активов).
- PPE / A – отношение величины основных средств к активам.
- R&D / S – отношение затрат на исследования и разработки к величине продаж.
- RDD = 1, если данные по R&D компания указывает в финансовой отчетности, RDD = 0, если компания не указывает данные в финансовой отчетности.
- $\Delta RE / A$ – отношение изменения нераспределенной прибыли к активам компании.
- DEF / A – отношение потребности в финансировании к активам компании.

Анализ кейса по компании ОАО «МТС» показал необходимость учета потребности в финансировании в качестве одной из детерминант структуры капитала.

Пусть DEF – потребность в финансировании, или финансовый дефицит. $DEF = \Delta A - \Delta RE$. Если $DEF > 0$, то компания инвестирует больше, чем ей позволяют внутренние источники. В связи с этим, недостаток внутренних средств компания компенсирует за счет внешних источников: выпуска акций и привлечения долгового финансирования (выпуск облигаций и привлечение кредитов). Если $DEF < 0$, то у компании есть больше внутренних средств, чем требуется компанией для финансирования ее потребностей, поэтому часть своих внутренних средств компания направляет на погашение обязательств по долгу и на выкуп акций.

$$DEF = Ne_i + Ndi, \quad DEF = \Delta A - \Delta RE \quad (1)$$

где Ne_i – чистый выпуск акций.

$$Ne_i = \Delta E - \Delta RE \quad (2)$$

где Ndi – чистый выпуск обязательств.

После расчета для каждой компании указанных выше показателей происходит вычисление и анализ доли краткосрочного долга в общей сумме долговых обязательств, рассчитывается средний процент финансового дефицита, финансируемого за счет привлечения долговых обязательств, когда $DEF > 0$, и средний процент финансового дефицита, используемый для сокращения долговых обязательств для случаев, когда $DEF < 0$. Данные показатели рассчитываются как Ndi / DEF .

Ndi / DEF отражает долю чистого выпуска долговых обязательств в потребности в финансировании. Ndi / DEF отражает долю чистого выпуска акций в потребности в финансировании. Так как $DEF = Nei + Ndi$, то $(Ndi / DEF) + (Nei / DEF) = 1$.

После расчета Ndi / DEF определяется усредненное значение по компаниям – годам. Данное значение будет использовано в качестве эмпирической частоты при моделировании выборок с различными предположениями о политике формирования структуры капитала.

2.2 Принципы формирования выборки исследования.

1) Компании телекоммуникационной отрасли, существующие более 5 лет. Компании отбирались из базы данных СПАРК.

2) Компании, имеющие пропуски в данных по бухгалтерской отчетности, не учитывались.

В ходе исследования была проведена проверка на выбросы, по результатам которой из дальнейшего анализа были исключены 8 компаний. В итоге, исследование проводилось на данных по 41 компании (организационная форма: открытое акционерное общество) ОКВЭД 64.20.11 (основной) – деятельность в области телефонной связи.

Все данные по компаниям, не представленные в долях или %, представлены в российских рублях. Среди компаний, которые были отобраны из базы данных СПАРК, часть компаний торгуется на бирже (6 компаний), остальные 35 компаний на бирже не торгуются. Были отобраны данные по компаниям с 2009 по 2013 год. Компании с пропуском данных не включались в выборку. В итоге, были собраны показатели по 205 компаниям-годам.

3. Эконометрическое исследование структуры капитала компаний.

По результатам описательной статистики, выборочное арифметическое среднее DEF / A положительное и составляет 0,042. Средняя компания телекоммуникационной отрасли испытывает недостаток внутренних источников для финансирования деятельности компании.

Таблица 1

Описательная статистика переменных:

Переменная	Выборочное арифм. среднее	Выборочное СКО	Мин. значение	Макс. значение
A, тыс. руб.	33300000	1090000	8011	515000000
D / A	0,69	0,37	0,001	0,99
EBITDA / A	0,04	0,29	-1,47	1,13
PPE / A	0,48	0,44	0	3,67
R&D / S	0,00001	0,0001	0	0,001
DEF / A	0,042	0,37	-1,72	1,31
$\Delta RE / A$	-0,036	0,32	-1,47	0,97

Затраты на R&D, в среднем, составляют 0,00001 от величины продаж. Выборочное арифметическое среднее составляет 0,69 для D / A и -0,036 для $\Delta RE / A$. Следовательно, для компании телекоммуникационной отрасли характерно сокращение нераспределенной прибыли относительно предыдущего периода.

3.1 Моделирование выборок.

Сгенерированные выборки основаны на действительных данных по компаниям.

Правила моделирования:

1. Все компании в сгенерированной выборке имеют те же значения структуры капитала, что и в реальных данных, и во всех случаях, кроме одного, который будет описан ниже, DEF и ΔRE имеют те же значения, как и в реальных данных по компаниям для каждого года. Все остальные переменные такие же, как и в actual data, за исключением комбинации долга и капитала.⁵

2. Фиксируется значение первого года по структуре капитала для каждой компании. Начиная со второго года и далее, происходит обновление значения в соответствии с финансовым правилом, которому следуют компании.⁶

- S (actual DEF): выборка смоделирована, используя фактическое значение финансового дефицита и изменения нераспределенной прибыли.

- S ($p=0,5$, actual DEF): если финансовый дефицит принимает положительное значение, предполагается, что компания с 50% вероятностью принимает решение о том, чтобы выпустить акции или привлечь долговое финансирование.⁷ Аналогично, при отрицательном значении финансового дефицита компании принимают решение о выкупе акций или погашении обязательств согласно 50% вероятности.^{8,9}

- S ($p=\text{empirical frequency}$, actual DEF): в зависимости от того, каким является финансовый дефицит, положительным или отрицательным, компания принимает решение о выпуске акций или привлечении долгового финансирования при $DEF > 0$, о выкупе акций или выплате по долговым обязательствам при $DEF < 0$, согласно эмпирическим частотам.

- S ($p=\text{empirical frequency}$, random DEF): выборка смоделирована с целью сокращения вероятности зависимости структуры капитала от эндогенных характеристик финансового дефицита. В данной выборке DEF / A и $\Delta RE / A$ имеют нормальное распределение с математическим ожиданием и среднеквадратическим отклонением, соответствующим эмпирическим данным.^{10 11}

3.2 Работа с панельными данными по компаниям.

После генерации выборок, анализируются следующие выборки: S (actual data), S ($p=0,5$; actual DEF), S ($p=\text{empirical frequency}$; actual DEF), S ($p=\text{empirical frequency}$; random DEF). Происходит построение восьми регрессионных моделей, основанных на

⁵ Chang X., Dasgupta S. Monte Carlo Simulations and Capital Structure Research* //International Review of Finance. – 2011. – Т. 11. – №. 1. – С. 19-55.

⁶ Для каждой смоделированной выборки, смоделированный капитал на конец периода равен капиталу на начало периода плюс чистый выпуск капитала и плюс изменение нераспределенной прибыли. Смоделированный долг на конец периода равен долгу на начало года плюс чистое привлечение долговых обязательств.

⁷ P – Вероятность привлечения / погашения долговых обязательств.

⁸ Chang X., Dasgupta S. Monte Carlo Simulations and Capital Structure Research* //International Review of Finance. – 2011. – Т. 11. – №. 1. – С. 19-55.

⁹ Данная выборка сгенерирована, так как этот способ отражает принцип «рандомного» финансирования, когда компания с равной вероятностью решает выпустить акции или привлечь долговое финансирование, не принимая во внимание текущее значение структуры капитала, целевое значение структуры капитала либо другие возможные факторы.

¹⁰ Математическое ожидание и среднеквадратическое отклонение равны данным из описательной статистики по компаниям

¹¹ Компании принимают решение о выпуске акций, привлечении долговых обязательств, выкупе акций и погашении долговых обязательств согласно эмпирическим частотам, как и в S ($p=\text{empirical frequency}$, actual deficit).¹¹ Для моделируемых выборок производится 500 итераций.

указанных выше выборках с учетом анализа моделей с переменными DEF / A и $\Delta RE / A$ и без них. По каждой из восьми моделей по панельным данным был произведен выбор между моделью сквозной регрессии, моделями с фиксированными и со случайными эффектами. Был проведен анализ на отсутствие корреляции между переменными модели и остатками при помощи теста Саргана. При помощи теста Арреллано – Бонда был проведен анализ адекватности оцененной модели через проверку гипотезы о наличии автокорреляции первого порядка в остатках и отсутствии автокорреляции второго порядка в конечных разностях первого порядка.

Построение моделей дает возможность анализа стремления структуры капитала компаний к целевому значению. Следующие уравнения показывают, почему построенные модели могут объяснить существование целевой структуры капитала.¹²

$$\left(\frac{D}{A}\right)_{t-1} - (T)_t \quad (3)$$

где T_t – целевое значение структуры капитала компаний

Уравнение (4) отражает отклонение от целевого значения структуры капитала

$$\left(\frac{D}{E+D}\right)_t - \left(\frac{D}{E+D}\right)_{t-1} = -\lambda \left(\left(\frac{D}{E+D}\right)_{t-1} - T_t\right) + \varepsilon_t \quad (4)$$

где D_t / A_t – структура капитала компаний, а T_t – целевое значение структуры капитала компаний. $\left(\left(\frac{D}{E+D}\right)_{t-1} - T_t\right)$ – отклонение от целевого значения структуры капитала.

В данном исследовании сделано предположение, что целевое значение структуры капитала компании существует, если есть такое значение структуры капитала, к которому стремится фактическое значение структуры капитала компании. Если изменение значения структуры капитала прямо пропорционально приращению предыдущего значения структуры капитала к некоторому потенциальному будущему значению, то целевое значение структуры капитала существует. Некоторое потенциальное будущее значение структуры капитала, к которому стремится значение структуры капитала предыдущего периода, и будет являться целевым значением структуры капитала.

Через уравнение по формуле (4) оценивается скорость приближения значения структуры капитала компании к ее целевому значению. Таким образом, если значение $\lambda > 0$, то значение структуры капитала анализируемых компаний стремится к целевому значению. Если $\lambda < 1$, то для компаний существуют издержки стремления к целевому значению структуры капитала. Согласно формуле (5) целевое значение структуры капитала есть результат оптимизационных действий со стороны компаний, которые имеют отношение к эндогенным характеристикам.

$$\left(\frac{D}{A}\right)_{i,t} = a_0 + a_1 \left(\frac{D}{A}\right)_{i,t-1} + a_2 (EBITDA/A)_{i,t-1} + a_3 Size_{i,t-1} + a_4 (PPE/A)_{i,t-1} + a_5 (R\&D/S)_{i,t-1} + a_6 (RDD)_{i,t-1} + f_t + v_t + e_{i,t} \quad (5)$$

где f_i – характеристики компаний, которые не изменяются во времени, v_t – временные эффекты.

¹² Chang X., Dasgupta S. Monte Carlo Simulations and Capital Structure Research* //International Review of Finance. – 2011. – Т. 11. – №. 1. – С. 19-55.

Если $a_1 < 1$, компания стремится к целевому значению структуры капитала. Если $a_1 > 1$, компания не стремится к целевому значению структуры капитала.

3.3 Выводы по моделированию структуры капитала компаний телекоммуникационной отрасли.

При реализации эмпирического исследования автор отмечает сложность интерпретации коэффициентов перед переменными в регрессиях. Некоторые из переменных модели взаимосвязаны с финансовым дефицитом и нераспределенной прибылью, которые, в свою очередь, взаимосвязаны со структурой капитала, даже если компания не стремится к целевому значению структуры капитала. Автор исследования предположил, что добавление в модель DEF / A и $\Delta RE / A$ будет способно решить данную проблему. Анализ полученной регрессионной модели, анализ коэффициентов перед переменными модели позволяет сделать следующие эконометрические и финансовые выводы.

3.3.1 Эконометрические выводы.

Предварительный анализ качества построенной модели показал, что, скорее всего, для следующих выборок - S (actual data), S (p=empirical frequency; random deficit), S (actual data) и S (p=empirical frequency; random deficit) - есть основания для использования регрессионной модели при анализе поведения переменной y . Тем не менее, окончательный вывод будет сделан после тестирования модели на значимость.

Согласно проведенному анализу, представленному в приложении №1, все построенные модели являются значимыми. Коэффициенты перед переменными по отношению $EBITDA / A$ в выборках S (actual data), S (p=empirical frequency; actual deficit) и S (p=empirical frequency, random deficit) являются отрицательными.¹³ В каждой из восьми моделей переменная $(D / A)_{t-1}$ является значимой. Для S (actual data), S (p=empirical frequency; random DEF) и S (p=empirical frequency; actual DEF) без учета переменных $\Delta RE / A$ и DEF / A , переменная $EBITDA / A$ является значимой и отрицательно взаимосвязанной с $(D / A)_t$. Добавление $\Delta RE / A$ и DEF / A в модели исследования привело к значимости данных переменных для S (actual data) и S (p=empirical frequency; actual DEF). Переменная DEF / A положительно взаимосвязана с $(D/A)_t$. Переменная $\Delta RE / A$ отрицательно взаимосвязана с $(D / A)_t$. Номинальная переменная RDD в моделях исследования является незначимой. Коэффициент перед $(D / A)_{t-1}$ больше единицы для моделей S (actual data), S (p=empirical frequency; actual DEF). Коэффициент перед $(D / A)_{t-1}$ меньше единицы для моделей S (p=0,5; actual DEF) и S (p=empirical frequency; actual DEF).

3.3.2 Финансовые выводы.

Интерпретация отрицательного значения коэффициента перед $EBITDA$ вызывает спор у многих исследователей структуры капитала. В своей работе [Sunder, Mayers, 1999] считают, что отрицательная взаимосвязь между показателем прибыльности и структурой капитала в модели говорит об иерархической структуре капитала, но не о

¹³ Эконометрические результаты исследования по торгуемым и не торгуемым компаниям показали, что для модели S (actual data) и S (p=empirical frequency; random DEF) была выбрана регрессия со случайными эффектами. Для моделей S (p=empirical frequency; actual DEF) и S (p=0,5; actual DEF) были выбраны модели с фиксированными эффектами. Данные модели, о которых было написано выше, не учитывали показатели $\Delta RE / A$ и DEF / A . Добавление данных показателей привело к тому, что среди моделей сквозной регрессии, моделей с фиксированными и со случайными эффектами были выбраны модели сквозной регрессии.

теории компромисса (trade-off). В исследовании [Fama, French, 2002] авторы считают, что отрицательная взаимосвязь между данными показателями модели говорит об иерархической теории структуры капитала. В своей работе [Hovakimian, Opler, Titman, 2001] утверждают, что, несмотря на высокое значение прибыльности, которое ассоциируется с низким значением структуры капитала, отрицательная взаимосвязь между показателем прибыльности и структурой капитала модели в большей степени связана с привлечением долговых обязательств, но не с выпуском акций, что свидетельствует о теории компромисса.¹⁴

Моделирование структуры капитала S (p =empirical frequency; actual DEF) дало схожие с S (actual data) коэффициенты перед переменными модели. Использование подхода к моделированию S (p =empirical frequency; actual DEF) позволяет достичь схожих с реальными данными результатов.

Анализ компаний телекоммуникационной отрасли показал, что средняя компания по отрасли не имеет целевого значения структуры капитала, так как коэффициент перед $(D/A)_{t-1}$ больше единицы. Потенциальным внешним инвесторам, ориентированным на долгосрочное вложение инвестиций в компанию телекоммуникационной отрасли, следует учесть отсутствие целевой структуры капитала для средней компании телекоммуникационной отрасли.

Заключение

Данное исследование направлено на изучение структуры капитала компаний телекоммуникационной отрасли. В качестве инструмента исследования был предложен способ имитационного моделирования структуры капитала. Также была рассмотрена модель, результаты эмпирического исследования которой позволяют ответить на вопрос, существует ли целевое значение структуры капитала для компаний телекоммуникационной отрасли. Вклад данной работы состоит в констатировании факта об отсутствии целевой структуры капитала для компаний телекоммуникационной отрасли. Если потенциальным инвесторам не все равно, имеет ли компания целевое значение структуры капитала или она формирует структуру капитала случайным образом, то отсутствие целевой структуры капитала приведет к нежеланию инвестировать в компанию телекоммуникационной отрасли.

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ПРИЛОЖЕНИЕ 1. Анализ моделей по торгуемым и не торгуемым на бирже компаниям

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(D/(E+D))t	S (фактические данные)	S (фактические данные)	S (p=эмпирическая частота; фактический DEF)	S (p=эмпирическая частота; фактический DEF)	S (p=0,5; фактический DEF)	S (p=0,5; фактический DEF)	S (p=эмпирическая частота; моделируемый DEF)	S (p=эмпирическая частота; моделируемый DEF)
(D/(E+D))t-1	1.15***	1.13***	1.12***	1.3***	-0.31***	0.17***	0.60***	0.57***
EBITDA/(E+D)	-0.58***	-0.015	-0.44***	-0.02	0.32	-4.44	-1.61***	0.07
Size	0.04	0.019	0.05	0.019	-4.17	-0.161	-0.02	-0.061
PPE/(E+D)	0.06	-0.0004	-0.13	0.01	-1.12	-0.94	-0.18	-0.29
R&D/S	-110.7	-251.48	-64.09	-250.37	-2890.9	-326.5	-692.5	-965.33
RDD	-0.04	-0.07	-0.03	-0.07	-0.11	0.84	-0.29	-0.31
(DEF/(E+D))t		0.28***		0.28***		-1.09		0.71
(ΔRE/(E+D))t		-0.56***		-0.55***		3.71		-1.41
P-value	0.00	0.00	0.00	0.00	0.017	0.023	0.00	0.00

Рисунок 1 Анализ моделей по торгуемым и не торгуемым компаниям

Дончевский Григорий Никифорович
Центр технологизации региональной и муниципальной деятельности Высшей школы бизнеса Южного федерального университета
gndonchevsky@sfedu.ru

Клименко Людмила Владиславовна
Центр технологизации региональной и муниципальной деятельности Высшей школы бизнеса Южного федерального университета
lvklimenko@sfedu.ru

Ермишина Анна Вениамивновна
Центр технологизации региональной и муниципальной деятельности Высшей школы бизнеса Южного федерального университета
avermishina@sfedu.ru

Постурбанистическое развитие России: формы жизнеустройства

Статья посвящена концептуальной проработке и эмпирической верификации гипотезы о существовании и развитии в российском обществе новых постурбанистических форм жизнедеятельности, которые формируются на базе индустриально-городского уклада, но пытаются преодолеть ограничения урбанизма. Авторы дифференцируют представителей постурбанизма на дауншифтеров и апшифтеров, отличающихся, соответственно, ориентацией на социальный побег или же на преобразование связей с городом, на отказ от достижений цивилизации или же на продуктивное использование современных технологий.

Материалы проведенного эмпирического исследования показали, что деятельностно-технологическая основа апшифтинга как перспективного направления постурбанистического развития России характеризуется ориентацией постурбанистов на самостоятельную организацию труда (фриланс, предпринимательство). Важное место в моделях их социально-экономической активности занимают новейшие технологические решения. Эмпирические замеры позволили зафиксировать, что у большинства опрошенных апшифтеров доля доходов от работы с использованием современных технологий составляет основу семейного бюджета. Выявляется рост производительности используемых технологий, а также эволюция постурбанистов на новый технологический уровень. Кроме того, постурбанистические ценности стимулируют спрос на автономные и экологичные системы жизнеобеспечения жилища.

Ключевые слова: урбанизм, постурбанизм, апшифтинг, дауншифтинг, технологический уклад.

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Grigory N. Donchevsky
Technology Centre of Regional & Municipal Activities, Higher School of Business at
Southern Federal University, Rostov-on-Don, Russia
gndonchevsky@sfedu.ru

Lyudmila V. Klimenko
Technology Centre of Regional & Municipal Activities, Higher School of Business at
Southern Federal University, Rostov-on-Don, Russia
lvklimenko@sfedu.ru

Anna V. Ermishina
Technology Centre of Regional & Municipal Activities, Higher School of Business at
Southern Federal University, Rostov-on-Don, Russia
avermishina@sfedu.ru

Post-urban Development in Russia: Forms of Lifestyles

The article is devoted to the conceptual development and empirical verification of the following hypothesis: new post-urban lifestyles, which are formed on the basis of industrial and urban lifestyle, but trying to overcome the urban limitations, exist and develop in the modern Russian society. The authors distinguish post-urban representatives between down-shifters and up-shifters. Down-shifters are focused on the escape from society and the rejection of the civilization achievements. At the same time up-shifters transform relations with the city and are trying to use modern technologies efficiently. Empirical studies have shown that the activity-technological up-shifting basis, as a promising direction development of Russia, is characterized by post-urban representatives' preference for self-organized labor (freelance, entrepreneurship). The latest technological solutions take an important place in their models of socio-economic activities. Empirical evidences allowed to establish that for the majority of up-shifter respondents the income share, which is generated by using modern technologies, is the basis of the family budget. The growth in productivity level of technologies as well as the evolution of post-urban representatives to a new technological level are detected in the study. In addition, post-urban values stimulate the demand for eco-friendly and self-contained life support systems for houses.

Key words: urbanism, post-urbanism, upshifting, downshifting, techno-economic paradigm

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1. Введение

Достигнутый уровень урбанизации (городское население планеты превысило 50% от всего числа жителей Земли), сопровождаемый быстрым нарастанием проблем жизнедеятельности в крупных и сверхкрупных городских агломерациях, первые факты банкротства этих агломераций, явления деградации неурбанизированной «периферии» поставили в научную повестку дня вопрос о выявлении новых моделей жизнеустройства. В современной России ежегодно из крупных городов (в особенности, из т.н. мегаполисов) во внутрь страны уезжают, по разным оценкам, от 100 до 200 тысяч жителей. По данным социологических опросов, около 5-7% жителей мегаполисов хотят уехать в деревню (Деревня-online.Ru). По данным некоторых исследований, массовую миграцию из города в село сдерживают только два фактора: 1) отсутствие в селе доступной и качественной медицинской помощи; 2) отсутствие в селе досуга в зимнее время. Даже такой фактор, как работа, оказывается вторичным (Фигуровская, 2011, с. 67) Приведенные цифры – достаточно крупны, чтобы обратить на себя внимание исследователей.

Вместе с тем, в современной науке процессы, которые объективно располагаются на поле постурбанистической проблематики, трактуются, как правило, в контексте взаимоотношения города и села и «схватываются», в конечном итоге, категориальной парой «урбанизация-дезурбанизация».

2. Концептуальные контуры

Урбанизационно-дезурбанизационные «качели» по своей сути являются метафорой, восходящей к теоретическим моделям «двойных экономик» У.А.Льюиса (Lewis, 1954) и «двухсекторного анализа» М.Тодаро (Harris & Todaro, 1970). В обеих этих моделях речь идет о «естественных» перетоках труда из города в деревню и обратно, которые осуществляются под действием конъюнктуры спроса на труд со стороны индустриализированных секторов городской экономики.

В последние десятилетия исследователи обратили внимание на совершенно новый поток населения, исходящий из города. В основе этого потока лежит отторжение, отказ, протест растущей массы населения от тех ценностей, правил и условий жизни, которые навязываются индустриализированным городом. К колебаниям спроса и предложения на труд данный поток не имеет никакого отношения. Как отмечают исследователи, «дауншифтинг, буквально «движение вниз», представляет собой добровольный отказ от движения по карьерной лестнице, зачастую связанный с понижением социального статуса и ухудшением материального положения, для освобождения времени досуга и посвящения его другим, не связанным с работой видам деятельности. Некоторые авторы предтечей дауншифтинга считают образ Диоклетиана, удалившегося в поместье для выращивания капусты» (Бутонова, 2009; Osbaldiston, 2010).

Согласно исследованиям, проведенным в 2003 г. Институтом Австралии, 23% австралийцев в возрасте от 30 до 59 лет сознательно пошли на понижение своего материального уровня жизни. Опрос, проведенный в США в 1990-е годы, показал, что 19% респондентов за последние пять лет осуществили долговременное изменение в жизни, что привело к снижению их заработка. По данным опросов, проведенных в начале 2000-х годов, не менее 25% британцев в возрасте от 30 до 59 лет стали дауншифтерами в последние 10 лет (Hamilton, 2003). «Синдромом отложенного счастья» - так обозначил причину, толкающую людей на такое действие, Клив

Гамильтон (Hamilton, 2004)]. Исследователи рассматриваемого явления чуть ли ни в один голос заявляют: «одной из отличительных черт дауншифтинга является не просто движение вниз, а «скатывание» с уже завоеванных, достаточно высоких позиций» (Бутонова, 2009, с. 172)].

Однако расширяя взгляд на совокупность тех явлений, которые порождаются кратером современного города, уместно сделать предположение о наличии еще одной форме альтернативного урбанистическому жизнеустройства – о явлении «апшифтинга». То есть о таком же *ценностном*, как и дауншифтинг, бегстве от города, но только бегстве от него не вниз, а вверх по цивилизационной кривой. Данное предположение было проверено в ходе исследования, результаты которого описываются в этой статье.

3. Типологические соображения

Отчетливо наблюдаемое и ширящееся ныне явление переселения из города в сельскую местность, имея некоторые общие основания (возросшее до чрезмерности давление урбанистической *связности*), тем не менее, образуется разными – до противоположности – потоками.

Один поток этих переселенцев наполняется *урбанолуддитами*, другой – *постурбанистами*. Первые, ожесточенные городским насилием, делают всё против города, не по-городскому, назло городу и городскому; рвут и крошат связность города, воспринимая ее как путы и оковы. Главное же, что они не выстраивают новые вовлеченности. Баланс между связностью и вовлеченностью создается за счет ослабления и даже разрушения связности. В лучшем (и наиболее частом) случае, сферой их вовлеченности остается тот же самый город, который они только что прокляли и покинули.

Вторые, постурбанисты, действуют ровным счетом наоборот. Они (покидая город как место физического проживания или оставаясь в нем, - в этом смысле сами постурбанисты делятся, в свою очередь, на две большие группы: на городских и сельских постурбанистов) не рубят связность, а если и рубят, то не с плеча и не сгоряча. Их главная цель даже (и вовсе) не связность, - несмотря на то, что ее жесткость и косность также придавила их, как и урбанолуддитов. В центре внимания постурбанистов – новые формы, уровни и типы *вовлеченности* во внешнюю среду, - то, чего город не может им дать, как таковой. Но исторической, образовательной, культурной, экономической и социальной предпосылкой чего он, город, для постурбанистов является (причем, является несомненно).

Итак, главной целевой установкой постурбанистов (осознанной или не вполне) является поиск и реализация новых форм и уровней вовлеченности во внешнюю среду. Осознанность (либо простое ощущение) той внутренней связности, которое дает (вернее, дал, задал) им город, в качестве их собственного бэкграунда, позволяет им свободно парить над этой и любыми другими типичными (привычными, обыденными) формами и видами связности, не сбиваясь (в отличие от урбанолуддитов) в закрытые общности.

В свою очередь, группа постурбанистов дифференцируется на тех, кто покинул пространство города (переехал жить в сельскую местность) и тех, кто физически остался в городе. При этом часть физически оставшихся *фактически* покинула город тем, что вышла из-под давления его связности.

Наиболее важной чертой предметно-практической деятельности одного класса мигрантов (сельских и внутригородских) является то, что, покидая (номинально или реально) город, они для целей обеспечения жизнедеятельности затребуют и применяют

доиндустриальные виды деятельности. Это и понятно, поскольку выйти из-под ставшего невыносимым давления связности города можно только отказавшись от тех типов, видов и форм деятельности, на которой зиждется эта связность, которые по своей сути есть ни что иное, как воплощенная связность города. Этот класс мигрантов и получил в литературе наименование *дауншифтеров*.

Явление постурбанистической миграции (как сельской, так и внутригородской) строится на том, что покидая город номинально или реально, люди сам факт своего освобождения от давления урбанистической *связности* используют для того, чтобы либо существенно (до экономически значимых пределов) расширить использование в своей жизнедеятельности тех современных технологий, с которыми они имели дело в городе, либо даже перейти на новый, более высокий технологический уровень. В противоположность первому классу мигрантов, дауншифтерам, мы и назвали этот второй тип мигрантов *«апшифтерами»*.

Апшифтеры являются основным объектом нашего исследования. Тем не менее, и здесь мы ограничим свои задачи по изучению широты, распространенности апшифтинга, по его доле в общем потоке внутренней миграции, даже по выявлению соотношения между сельскими и городскими апшифтерами, в пользу наблюдения за технологическими основами апшифтинга, а также за теми новыми видами *связности* и *вовлеченности*, которые возникают на базе этих необремененных урбанизмом технологических основ. В поле нашего внимания находится также оценка той экономической роли, которую играют эти «освобожденные от оков урбанизма» технологии в жизни апшифтеров: доля доходов от них/расходов на них в семейном бюджете; рост производительности от использования этих технологий по сравнению с прошлыми формами профессиональной деятельности.

4. Инструментально-методические основания исследования

При проверке концептуальных гипотез нам приходится иметь дело с совершенно неустоявшимися, буквально мерцающими, колышущимися формами постурбанистической жизнедеятельности. Поэтому основным методом сбора эмпирического материала выступило проведение глубоких полуструктурированных интервью (Ильин, 2006; Страусс & Корбин, 2001; Белановский, 2001; Девятко, 1998). Выбор этого метода сбора эмпирической информации объясняется тем, что целью качественного исследовательского поиска является “описание и интерпретация элементов жизненного мира интервьюируемого субъекта”, но “содержание индивидуального жизненного мира надындивидуально”, поэтому “исследователь копается в индивидуальном, чтобы увидеть в нём проявление социального” (Ильин, 2006, с.с. 151, 181).

Способом интерпретации собранной информации выступает *метод структурирования смысла посредством нарратива*. Руководствуясь этим подходом и сопоставляя содержание нарративов собранных интервью, можно выделить типичные смыслы, которые разные индивиды обретают в возникших типичных ситуациях. Тем самым осуществляется типизация социального опыта, приобретенного различными индивидами (Franzosi, 1998; Пузанова & Троцук, 2003; Дивисенко, 2001).

География опроса – Ростовская область, Краснодарский край, Калужская область, Московская область в Российской Федерации. Время проведения опроса – лето 2015 г. Всего опрошено 12 респондентов (5 из них проживают в городе и 7 – за городом: в родовых поместьях, экопоселениях¹, или просто в сельской местности).

¹ В исследовании изучались поселения родовых поместий “Росток” (Ростовская область), “Милёнки” (Калужская область), экопоселения “Цица” (Краснодарский край).

Кроме того, в целевых тематических поселениях реализовывалось невключенное наблюдение.

Критерии отбора респондентов-постурбанистов. Первичные критерии: 1) новый тип деятельности, основанный на постиндустриальном технологическом укладе; 2) квалификация (компетенции) носителей основанные на образовании / знаниях, сформированных и транслируемых в урбанистической среде; 3) синкретизм работы и семьи (нет разделения работа - дом). Вторичные критерии: 4) все взрослые члены семьи заняты новыми формами семейно-трудового хозяйства; 5) за счет реализации нового технологического уклада бюджет семьи получает не менее 70% доходов (зрелая форма постиндустриальной формы жизнедеятельности).

5. Эмпирическая верификация и дискуссия

В рамках данной статьи остановимся на рассмотрении результатов социологического исследования деятельностно-технологических характеристик апшифтинга как основной формы постурбанистического развития современной России.

Необходимо первоначально отметить, что процессы постурбанизации проистекают и поддерживаются ценностями постурбанистического типа. К важнейшим из них относится ценность уникализации, приходящая на смену ценности унификации; ценность современного семейного трудо- и бытоустройства, замещающая ценность фабрично-заводской отчужденности; ценность человекоцентристского технологического и социально-бытового уклада, конкурирующего с приоритетами машинного производства и стандартами потребления.

5.1. Современные технологии в профессиональной деятельности

Данные аксиологические основания сопровождают изменения в социально-экономическом профиле жизнедеятельности апшифтеров. В тоже время деятельностные индикаторы зарождающегося постурбанистического уклада, как указывалось, концентрируются в плоскости уровня и качества использования современных достижений науки и техники. В частности, важнейшую экономическую роль в профессиональной деятельности опрошенных апшифтеров занимает использование новейших компьютерных технологий. Они используются и в качестве непосредственного источника заработка (программирование, создание и обслуживание сайтов, установка и наладка компьютерных программ и пр.), так и в качестве инструментов для продвижения производимых продуктов и услуг (интернет-магазины, социальные сети, персональные сайты и пр.). Соответственно, у всех опрошенных нами респондентов независимо от места жительства (в городе или сельской местности) есть сотовые телефоны, компьютеры, доступ в интернет, страницы в социальных сетях, большинство из них пользуются облачными сервисами и некоторые респонденты имеют собственные интернет-сайты.

Спектр трудовой деятельности опрошенных постурбанистов широк: от выращивания и продажи экотоваров (овощи, фрукты, грибы, чай, мед и т.д.), изготовления ювелирных изделий, перевода, до веб-дизайна, и создания он-лайн хранилищ данных. Стремление к свободе и самостоятельности определяет характера организации труда апшифтеров. Принявшие участие в социологическом исследовании постурбанисты занимаются, преимущественно, фрилансом или предпринимательством (свой бизнес). Так, живущий в экопоселении программист определил вид своей деятельности как “*IT-помещик*” (Веселин, 33 года, программист, экопоселение “Цица”). Важно отметить, что для многих опрошенных переезд и проживание за

пределами города (реальное или проектируемое) совсем не означает отказ от прошлой профессии и переориентации на сельскохозяйственные работы. Наоборот, в новых условиях апшифтеры видят больше возможностей для реализации своих профессиональных и творческих устремлений: *“Потому что появилось ощущение свободы. Свобода не только во времени, но и творческая... хочешь делать весь процесс, от задумки до завершения, когда человек на палец кольцо одевает”* (Сергей, 34 года, ювелир, садоводство в Ростовская обл.); *“мне для работы нужны настрой, вдохновение, спокойное состояние духа... Этого сложно было достичь раньше, когда на работе тебя постоянно отвлекали сторонними поручениями, городской суетой...”*. (Владислав, 31 год, ландшафтный дизайнер, строитель, родовое поместье “Росток”).

Эмпирические замеры фиксируют также в ряде случаев стимулирующее воздействие новейших технологических решений на мотивацию к труду: *“Я помешан на всех новых инновациях... Я не скуплюсь на эти покупки. Пользуюсь сейчас преимущественно техникой Apple. Мне кажется, что простота, красивый дизайн этой техники, лояльность интерфейса дают **нереальный толчок к работе**. Вот лично я, когда сажусь за компьютер, то мне хочется что-то делать и делать что-то классно”*(Александр, 32 года, диджей, дизайнер, видеограф, г. Ростов-на-Дону); *“Фото-, видео-, офисные программы, карты, словари, дизайнерские программы, веб-дизайн, кодыhtml – я все практически умею делать... и я чем больше я в это погружаюсь, тем интереснее мне это становится“*. (Влад, 29 лет, специалист в сфере IT, переводчик, Ростов-на-Дону).

Апшифтеры расширяют и интенсифицируют использование современных технологий с переходом к постурбанистическим формам жизнедеятельности. *“Все время до этого сидела паяла, но когда вышла в самостоятельное плавание и заказов стало больше, то пошла и изучила программу 3D-моделирование... и сейчас часто делаю 3D-модель, распечатываю ее на 3D-принтере”*.(Мария, 29 лет, дизайнер, ювелир г.Москва). *“Очень много сейчас новых технологий, приходится читать, следить за новациями, общаться с профессионалами в сетях. Общаюсь с дизайнерами, 3D-модельерами. Сейчас народ избалован, корявенькую подвесочку, как в 11 веке не захотят. Все хотят идеально, компьютерно выверено. Хотя есть любители под старину, но это еще сложнее и технологичнее, сидишь за компьютером, а не за верстаком... И еще есть сфера привлечения клиентов. Здесь, конечно, большая роль современных информационных технологий. И это все пришлось осваивать, когда стал работать на себя”*. (Сергей, 34 года, ювелир, садоводство в Ростовская обл.).

Результаты проведенного исследования показывают, что некоторые из апшифтеров с переходом к постурбанистическому укладу эволюционируют на новый технологический уровень. Переехавшая загород и занявшаяся пчеловодством математик Ольга для продвижения своих изобретений и инноваций (изотермы, пчелопакеты, региональное тестирование пчеломаток) занялась изучением языков программирования для создания своих сайтов: *“Я же делала сама этот сайт, изучала все это самопально. Никаких наработок ничьих я не брала. Можно было бы какие-то шаблоны взять. Но я брала и самостоятельно изучала php, изучала java, изучала html... не позволяла себе лениться”*. В освоении и применении компьютерных технологий для постурбанистов также важны установки на самостоятельность, автономность и реализацию творческого потенциала. Наряду с этим знакомство с современными компьютерными решениями становится, как уже отмечалось, источником для дальнейших нововведений: *“Я сайт этот не сразу села написала, это у меня уже не первый сайт... Первое, с чего я начала тогда, это с трехмерной графики. Я 3d Max изучила и потом цветные изоформы делала.... Мне нужно было изучить эту тему и эту программу, я специальную литературу скачала и учила, а **потом творила**. То*

есть, я по интернету не болтаюсь, у меня даже нет времени. Мне интересен творческий процесс”. (Ольга, 54 года, пчеловод, математик, пос. Эльбузд. Ростовская область).

5.2. Экономическая роль новых технологий

В описываемом социологическом исследовании ставилась задача оценки той экономической роли, которую играют эти технологии в жизни апшифтеров. Результаты проведенных интервью показывают, что у большинства опрошенных постурбанистов доля доходов от работы с использованием современных технологий составляет основу семейного бюджета: *“Доходы основаны только на новых технологиях”* (Веселин, 33 года, программист, экопоселение «Цица»); *“Процентов 90 заработка идет от продажи травяных чаев через интернет-магазин”* (Лариса, 30 лет, производитель чая, пос. Александровка); *“Практически 100%, если считать поиск клиентов через интернет. И еще, когда у нас наступают финансовые трудности, жена вспоминает свои досемейные занятия в области веб-дизайна, и занимается фрилансом, но не постоянно”*. (Сергей, 34 года, ювелир, садоводство в Ростов. обл.).

Фиксируется также рост производительности используемых технологий в сравнении с прошлыми “урбанистическими” условиями труда. Переводчик, специалист в сфере IT, Владислав отмечает, что: *“Я сейчас в ином качестве использую некоторые программные продукты... Например, Дитрикс 24. Это русская система управления компанией. Там можно просто в любой момент добавить нового человека, там удобно вести клиентов, там удобно ставить задачи, самому себе либо другим людям.(...) Или система управления клиентами CRM. Вот сейчас смотрю у других тетрадки какие-то, это базы в Word. Я сейчас хочу внедрить среди партнеров как минимум Excel, чтобы можно было вести базу данных и быстро её сортировать хотя бы. Хотя в лучшем случае это всё-таки CRM ввести”*. (Влад, 29 лет, специалист в сфере IT, переводчик, Ростов-на-Дону).

Уровень дохода у опрошенных представителей постурбанистических форм жизнедеятельности достаточно разный, что объясняется нахождением на разных этапах перехода к новому укладу. Одни апшифтеры уже зарабатывают в несколько раз больше по сравнению с периодом офисной работы. *“Доходность на моей нынешней работе увеличилась на 400-500%, по сравнению с прошлой работой, но это что касательно меня, плюс ещё жена зарабатывает сейчас неплохо. Это колоссальная разница, потому что мы можем сейчас себе позволить работать тогда, когда хотим”*. (Александр, 32 года, диджей, дизайнер, видеограф, г. Ростов-на-Дону).

Другие респонденты отмечают уменьшение уровня доходов, но связывают это с временными трудностями: инвестированием в развитие бизнеса, наработкой клиентской базы, затратами на повышение профессионализма и пр. *“Я когда в 2012 году вложил в бизнес, в основном в покупку земли порядка восьми миллионов рублей. Сейчас уставной капитал фирмы (загородный клуб “ТриУземель”), в который входит эта земля, во-первых, она уже поменяла свое назначение, увеличилась в стоимости в десять раз, составляет сорок миллионов. Поэтому с точки зрения бытовой, пока особые доходы это не приносит, но в перспективе заработка, конечно, это своя фирма”*. (Лев, 38 лет, юрист, предприниматель, Москва-Подмосковье). Однако и выгоды от нового уклада жизни для многих не измеряются деньгами: *“Уровень доходности лично мой стал заметно меньше... Я ведь только начала свое производство, я на стартапе. Да и муж в банке раньше получал очень круто. От интернет-торговли доход пока меньше. Но неоспоримое приобретение – свобода,*

легкость, душевный комфорт, самореализация, свободный график работы и жизни”. (Лариса, 30 лет, производитель чая, пос. Александровка).

Выявляется еще одна категория апшифтеров, которые уменьшение заработков рассматривают в контексте пересмотра потребительских стандартов. Особенно это касается жителей экопоселений и родовых поместий: *“Доходы сократились, но также сократились и какие-либо потребности. Сейчас у нас нет слишком больших запросов в жизни, мне не нужно на Ленд Крузере ездить, на золотом унитаза сидеть... Абсолютно другие потребности. Не нужно покупать какую-то дорогую одежду фирменную, в городе вообще деньги тратились на какие-то безумные вещи, как вот сейчас я оцениваю то, что у меня был период, когда я работала по двенадцать часов в сутки, на двух работах, имела хорошую зарплату, но при этом деньги уходили вообще непонятно на что. Если бы я тогда знала, как я буду жить через несколько лет, я бы, наверное, уже как-то по-другому планировала жизнь. В городе на ненужные вещи уходит очень много денег...”* (Елизавета, 24 года, экопоселение “Цица”).

“Городские” постурбанисты также пересматривают свои потребительские привычки: *“Во-первых раньше очень много денег уходило на транспорт, а в Москве это дорого. И на всякую офисную одежду тоже. Раньше у меня офисная одежда была очень дорогая. Много офисной одежды. Сейчас отпала в этом нужда... И еще там всякие обеды. Я обедала дорого в центре города всегда”.* (Мария, 29 лет, дизайнер, ювелир г.Москва). *“Я сейчас меньше стал тратить денег на кафе, рестораны, караоке, кино и тому подобное и не потому что не могу себе этого позволить, а потому что мне это стало не интересно... Вообще я не сторонник зарабатывания огромного количества денег. Одно дело, если я куда-то инвестировать буду, на чьи-то нужды – это одно дело. То есть, если я начну заниматься благотворительностью, тогда мне надо будет конечно очень много денег. А если я буду жить сам или у меня будет семья я понимаю, что должно быть с избытком, но не больше”.* (Влад, 29 лет, специалист в сфере IT, переводчик, Ростов-на-Дону).

5.3. Технологии жилищного жизнеобеспечения апшифтеров

Формирование нового социально-экономического уклада постурбанистов сопровождается и реорганизацией сферы традиционных технологий жилищного жизнеобеспечения, в которую также внедряются современные технологические решения с целью обеспечения экологичности и автономии.

Необходимо отметить, что большим преимуществом города со времени появления первых исторических городов было развитие технологий жизнеобеспечения, которые, однако, в большей своей части носили коллективный характер. Коллективное потребление, строительство и обслуживание объектов жизнеобеспечения было экономически оправдано. Не случайно отрасли жилищного жизнеобеспечения и производимые ими услуги получили название общих, общественных, коммунальных не только в русском языке (жилищно-коммунальные услуги), но и в других языках (public utility services, les services publics). И, действительно, экономия от масштаба, ведущая к сокращению удельных затрат на производство жизнеобеспечивающих благ обеспечила в XX веке физическую и ценовую доступность услуг, существенно повышая комфортность жилища. Современные услуги жизнеобеспечения существенно повысили качество жизни, прежде всего, городского населения, которое в крупных городах практически на 100% обеспечено централизованными услугами энерго- и водоснабжения.

В то же время сельская местность, например, в России до сих пор не обеспечена доступными услугами жизнеобеспечения, что существенно сокращает комфортность

проживания. Вместе с тем, комфорт городского жилища до сих пор является значимым фактором привлекательности урбанизированного образа жизни. Не случайно по просторам интернета бродит поговорка неизвестного автора:

*“Мне надоел бездушный шумный город,
Мне давит грудь тройной стеклопакет,
Уехать бы с палаткой на природу,
Но только ванна чтоб была и интернет”.*
(<https://vk.com/womanpage>)

XX век принес новые технологии, которые существенно изменили не только производство благ, но их потребление. Причем новые технологии имели стойкую тенденцию все больше обеспечивать индивидуализацию потребления. Наиболее революционным событием истории потребления стал переход от коллективной телефонной связи к индивидуальной. Благодаря технологиям сотовой связи телефонный номер перестал быть принадлежностью места (дома, квартиры или офиса), а стал атрибутом личности, его владельца. Новые технологии разрушили инфраструктурную монополию телефонного кабеля и очень быстро стали доступными и массовыми.

Мечта горожанина о полной независимости и индивидуализации потребления распространялась и на блага жилищного жизнеустройства. В России это стремление является особенно острым в связи с низким качеством и постоянным ростом стоимости коммунальных услуг.

По мнению экспертов, сегодня практически все блага жизнеобеспечения возможно производить с помощью автономных технологий, для реализации которых не требуется материальной сетевой инфраструктуры. Эти технологии разнообразны, отличаются производительностью, стоимостью, надежностью и качеством производимых услуг. Само появление и развитие постурбанистических форм жизнедеятельности вне городской инфраструктуры становится возможным вследствие появления доступных автономных технологий жилищного жизнеобеспечения.

Невключенные наблюдения и глубинные интервью с постурбанистами показали, что зависимость от городского комфорта и стремление обеспечить этот комфорт и в условиях негородского образа жизни отличают дауншифтеров от апшифтеров. *“Живя именно в том месте, где мы живем, (надо) обустроить ... свою жизнь таким образом, чтобы..., удобства повышать, чтобы родственники могли приезжать, более комфортно себя чувствовали, чтобы к нам гости приезжали”.* (Елизавета, 24 года, экопоселение “Цица”). Интересно, что экопоселение «Цица» было основано типичными дауншифтерами, которые предполагали уйти не только от городского образа жизни, но и от городских технологий. В первые годы формирования поселения они предъявляли строгие требования к новым поселенцам, включающие в том числе и неиспользование городских технологий. Однако сейчас и сами основатели используют блага цивилизации для обеспечения комфорта своего жилища.

Апшифтеры из числа жителей экопоселений, родовых поместий², а также из других сельских поселений уже внедряют или планируют в ближайшей перспективе освоить автономные технологии жизнеобеспечения современного типа.

Первая проблема, которую решают постурбанисты – обеспечение электроэнергией. И здесь обычной историей становится использование возобновляемых источников энергии, прежде всего солнечных аккумуляторов. Потенциал этих технологий уже хорошо проверен мировой практикой: в 2014 году

² Необходимо отметить, что не все жители экопоселений и родовых поместий в России являются носителями прогрессивного постурбанистического уклада. В таких поселениях достаточно часто можно встретить и дауншифтеров.

ветер, солнце, биомасса и вода обеспечили 26,2 процента всей произведенной в Германии электроэнергии, впервые обогнав по этому показателю традиционного для отрасли лидера - бурый уголь, на который пришлось 25,4 процента («Возобновляемая энергетика...», 2015). С помощью гидронасосов и тепловых коллекторов жилища экопоселенцев обеспечиваются горячей водой, которая также нагревается с помощью энергии солнца в солнечные дни. Совокупность технологий позволяют широко использовать бытовую технику: стиральные машины-автоматы, кухонные комбайны и т.п.

Для «загородных» постурбанистов важны не только соображения автономии, комфорта, экономности, но и идеи экологичности: *“У нас электроэнергия от солнечных батарей летом и от бензо-генератора зимой. Пластиковый мусор сжигается в печах, кострах или вывозится на свалки. По возможности стараемся не пользоваться одноразовыми вещами. Органический мусор компостируется, в том числе, с использованием эффективных микроорганизмов (ЭМ). (...) Коллективный проект поселения – микро гидроэлектростанция (ГЭС), то есть организация автономного электроснабжения. Есть возможность получения электроэнергии от движения воды в реке... но пока это проект, основанный на энтузиазме”*. (Веселин, 33 года, программист, экопоселение “Цица”). *“И еще мне понравилась автономная канализация «Топаз». С очисткой воды, которую можно использовать для полива. ... Круто иметь ветряк, солнечные батареи. Основная идея - независимость”*. (Лариса, 30 лет, производитель чая, пос. Александровка).

Некоторые жители поселений ведомы также идеями эстетичности в использовании автономных технологий жизнеобеспечения: *“Активно используем альтернативные источники энергии: солнечные батареи, «ветрячки». По нескольким причинам. Одна из них - это эстетический вид. Так как у нас планируется огромное количество деревьев, кустарников. Деревьев, прежде всего, высоких. Они дают намного больше тени. А столбы электропитания очень некрасивые. Так же от них идет излучение. У нас «этих столбов» не было. И мы решили идти этим путем... Ветряные насосы еще собираемся купить и ими качать воду. Может еще солнечный коллектор”*. (Владислав, 31 год, ландшафтный дизайнер, строитель, родовое поместье “Росток”).

Опрошенные апшифтеры, которые в настоящее время проживают в городе, также ориентированы на использование подобных технологий жизнеобеспечения. Многие из городских постурбанистов хотели бы переехать жить за город и обустроить коммунальную инфраструктуру схожим образом: *“Я думал о ветряках и о солнечных батареях, сейчас я пытаюсь понять, что из этого эффективнее и лучше”* (Александр, 32 года, диджей, дизайнер, видеограф, г. Ростов-на-Дону); *“Сейчас интересные технологии использования солнечно энергии или энергии ветра. Еще можно, например, резервуары для воды автономные делать... Ведь у жизни за городом недостатки – это продолжение достоинств. Если что-то случится, коммунальные службы в последнюю очередь занимаются загородными поселениями”*. (Влад, 29 лет, специалист в сфере IT, переводчик, Ростов-на-Дону).

В поселениях российских апшифтеров практически не встречаются дорогие по инвестициям, но дешевые и удобные в использовании технологии жизнеобеспечения. Например, в построенном латвийским миллионером в окрестностях г. Цесис «городе солнца» Амацциемсе все дома оснащены коммунальной канализацией, проложенной спецтехникой под корнями сосен и елей. Обогреваются дома в основном теплом от земли – в каждом доме имеется геотермальный тепловой насос со скважиной 90-100 м, преобразующий энергию земли в теплоэнергию. Этой теплоэнергии круглый год достаточно для обогрева дома и подогрева горячей воды. И только в холодные зимние

дни жители прибегают к розжигу камина, которым оснащен каждый дом («Город солнца...», 2015). Возможно, в будущем такие технологии будут доступны и россиянам со средним уровнем доходов.

Таким образом, в настоящее время уровень развития автономных технологий бытового жизнеобеспечения жилища достаточен для развития удаленных от города поселений. При этом само развитие постурбанистических тенденций создает активный спрос на автономные и экологичные системы жизнеобеспечения жилища.

6. Заключение

Целью данной статьи было введение и эмпирическая проверка гипотезы о том, что поток тех, кто покидает ныне пределы города, далеко не однороден. Прежде всего, в этом потоке набирает силу тот слой, движение которого никак не связано с колебаниями спроса/предложения на рабочую силу. В основе этого потока лежит проблематизация самих ценностей индустриально-городского уклада жизни. Проведенные полевые исследования отчетливо подтвердили это наше первое предположение.

Вторым, еще более важным концептом, сформулированным в статье, был концепт разделения этого самого нового потока на два крупных рукава: уже известных науке дауншифтеров и еще совершенно неизученных и – более того – незамеченных ею апшифтеров. В результате проведенных нами глубинных интервью и эта часть нашей гипотезы получила самые определенные доказательства. Теперь мы можем, располагая фактологической базой, утверждать о том, что нам удалось открыть вторую, доселе не видимую никем сторону исходящего из города потока людей. Подтвердилось и наше предположение о том, что часть апшифтеров остается в городе, как бы воспарив над ним и всеми его проблемами. Обе эти составляющие апшифтинга роднит то, что покидая ценности урбанизма, они забирают из города его наилучшие достижения (гуманистические, технологические, культурные) для того, чтобы из них выстроить гнезда (а кое-где и гнездовья) своего нового существования, - существования, не обремененного гнетом городских условий существования.

Однако до полного торжества нашей гипотезы еще далеко. Теперь нам предстоит углубиться в хозяйственно-экономические и технологические основы жизни апшифтеров для того, чтобы убедиться (либо, наоборот, разувериться) в том, что апшифтинг имеет прочную хозяйственную и технологическую почву для своего воспроизводства, расширения и развития. Этим аспектам будут посвящены следующие логические этапы нашего исследовательского проекта.

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Н.Н. Евченко,
профессор Южного федерального университета
natayevch@aanet.ru

Субъектная база управления внешнеэкономической деятельностью региона: структура, типология, показатели, технологии минимизации рисков

В докладе исследуется проблема изучения субъектной базы экспорта регионов РФ. Рассматривается типология региональных экспортеров, методы их межфирменного взаимодействия при экспорте, представлена система учета (показатели) субъектного среза участников ВЭД, предложены направления ее совершенствования.

Выявлена необходимость преодоления монополизации и концентрации экспортных операций. Доказывается, что в условиях роста административных рисков ведения ВЭД субъекты внешней торговли формируют типовые стратегии и технологии минимизации экспортных рисков путем включения в торговые операции цепи посреднических компаний, создания пула зависимых (аффилированных) субъектов.

Ключевые слова: *субъект предпринимательства, внешнеэкономическая деятельность, регион, концентрация, монополизация, поддержка экспорта, показатели субъектного состава экспортеров*

1. Введение: актуальность проблематики исследования

Экспортеры как ключевой субъект процесса осуществления внешнеэкономических связей (ВЭС) и ведения внешнеторговых операций (ВЭД) государственной (федеральной и региональной) управляющей системы должны находиться в фокусе государственной политики и управления. Анализ показывает, что система государственного управления ВЭС и ВЭД России пока еще далека признания участников ВЭД, включая экспортеров, в качестве объектов внимания управленческих, таможенных, инфраструктурных и иных организаций, формирующих стратегию включения России в международное разделение труда¹.

К сожалению, постсоветское наследие и сохранившаяся традиция учета экспортно-импортных операций преимущественно на основе их товарной структуры практически не претерпела изменений. Учет внешнеторговых операций регионов по данным таможенной статистики не позволяет получить объективной информации о формах, методах и условиях включения субъектов регионов с мирохозяйственные связи, что само по себе мало дает управленческим структурам в части понимания потребностей, запросов, стратегий участников ВЭД – предприятий и организаций. Механизм обратной связи с экспортерами осложняется противоречиями между бизнесом и властью, сложными условиями ведения бизнеса, особенно, для малых и средних предприятий.

Актуальность управления процессом взаимодействия бизнеса и власти при экспорте, перенесение внимания с удовлетворения потребностей крупнейшего и крупного бизнеса на уровень субъектов малого и среднего предпринимательства регионов позволит выявить направления выхода из текущего затяжного структурного экономического кризиса, причиной которого, согласно признанному экспертному мнению, стала высокая зависимость российского федерального бюджета от экспорта энергоносителей.

2. Цель исследования

Целью настоящего исследования является постановка задачи и уточнение ключевых аспектов проблемы количественного и качественного исследования субъектного состава участников ВЭД, типологизация экспортеров регионального уровня, предложение показателей, отражающих структуру, динамику роста численности предприятий-субъектов в целях совершенствования управления наращиванием объемов отечественного несырьевого экспорта и роста доли товаров с высокой долей добавленной стоимости как стратегического вектора развития российской экономики в среднесрочной перспективе.

3. Методология

Исследование выполнено на эмпирических данных о предприятиях-экспортерах, институтах региональной поддержки экспорта, данных таможенной статистики ЮФУ ФТС РФ, опубликованных научно-практических и аналитических материалах, авторских полевых исследованиях.

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4. Основные результаты исследования

4.1. Субъекты ВЭД: состав, структура, типология

Согласно принятой в экономической литературе и в практике классификации, экспортеры и импортеры представляются практически единственными группами – участниками международного сотрудничества, в т.ч. на региональном уровне. По крайней мере, другим субъектам внешнеэкономического комплекса (ВЭК) региона – иностранные инвесторы и мигранты – уделяется существенно меньше внимания в исследованиях и в процессе управления ВЭД региона.

Отношение к категориям «экспортеры» и «импортеры» значительно отличается и носит определенный «дискриминационный» характер: крупнейшие предприятия-экспортеры регионов, как правило, перечисляются в концептуальных, стратегических документах поименно, с указанием номенклатуры и приоритетных направлений товарных потоков, а о крупных импортерах известно очень мало, как, впрочем, и об импортных операциях самих экспортеров. Импортеры практически не находятся в фокусе внимания органов управления ВЭД региона в силу государственной и региональной политики, сложившейся практики ведения бизнеса и принятия решений импортерами. Следует подчеркнуть, что импортные операции являются обязательным элементом успешного экспорта.

Состав, структура, динамика числа экспортеров, принятие решения о прекращении (приостановке) внешнеторговой деятельности, либо о ее начале тесно коррелируют с условиями ведения бизнеса и уровнем экономической активности в регионе, что позволяет сосредоточить внимание управленческих и коммерческих структур на выявлении требуемого объема, форм, сроков и принципах предоставления экспортерам государственной, частной и общественной поддержки и содействия.

В Ростовской области и регионах России в экспортно-импортном секторе работают несколько групп участников ВЭД:

- международные компании: транснациональные и национальные;
- инорегиональные российские: предприятия, учрежденные и имеющие головное подразделение в другом регионе РФ;
- региональные (местные): предприятия, контрольный пакет которых принадлежит резидентам региона, и головной офис компании располагается здесь.

В экспортных секторах соотношение перечисленных ключевых групп различно. В наиболее маргинальных секторах присутствие региональных (местных) компаний постепенно перераспределяется в пользу первых двух групп, чем диктуется необходимость выработки новой политики в управлении ВЭК региона, более полно учитывающей фактор регионализации.

Участники экспортной деятельности области по роли в международной торговле, участию в пополнении регионального бюджета, лидерским позициям в региональной экономике, степени зависимости от помощи государства дифференцируются по нескольким критериям (табл. 1).

Предложенная классификация составляет основу системы мониторинга ВЭД региона на субъектном, персонифицированном уровне, позволяя выделить приоритетные целевые группы ее участников, вносящих максимальный вклад в эффективность международных интеграционных процессов и содействующих росту бюджетных отчислений, динамичных, создающих основу внешнеторговых кластеров региона.

Типологизация, классификация и ключевые характеристики роли субъектов ВЭД в региональных экономических системах представлены в табл. 1.

Таблица 1 – Типовая структура предприятий и организаций - региональных экспортеров

<i>Признак</i>	<i>Экспортеры-субъекты</i>	<i>Роль в региональном международном сотрудничестве</i>
Страна и регион учреждения и финансового контроля	иностранное государство (ТНК)	Растущие объемы экспорта продовольствия, планируется распространение на другие сферы торговли и услуг: банки, консультационная деятельность
	головное подразделение расположено за пределами региона	Ключевые игроки на рынке региона, экспортируют основную долю товаров происхождения из региона, являются конкурентами для местных компаний, подразделения иногородних компаний, финансовые и внешнеторговые потоки контролируются, доходы от ВЭД учитываются в консолидированных балансах финансовых групп
	головное подразделение компании расположено в регионе	целевая группа для государственной поддержки экспортеров , контрольный пакет предприятие принадлежит региональным собственникам, оно проводит самостоятельную политику в сфере ВЭД, доходы от ВЭД концентрируются в регионе
Объемы экспортных поставок (в год)	крупные	обеспечивающие свыше 1 млн долл. США экспортных отгрузок в год
	средние и мелкие	поставки составляют от 100 тыс. долл. США до 1 млн долл. США в год
	микро	объем экспорта до 100 тыс. долл. США в год
Доля экспорта в объемах производства (в год)	50 % – 100 %	подавляющее число - посредники, опытные участники ВЭД, гибкие, освоившие особенности конъюнктуры мировых рынков
	10 % – 50 %	ориентированные на экспорт предприятия, зависящие от изменения внешних и внутренних условий ведения бизнеса за рубежом
	до 10 %	производители, дополняющие работу на внутреннем рынке поставками за рубеж, начинающие экспортеры, поставщики готовой продукции в сложной конъюнктурной ситуации
Номенклатура экспорта (основная)	готовые изделия	традиционные производители экспортной продукции, со значительным внешнеторговым опытом, динамичные, желательные (по критерию уплаты местных налогов) на региональном уровне участники ВЭД
	сырье, полуфабрикаты	созданные в течение последних 10–15 лет, конъюнктурно ориентированные, средние и малые предприятия, посредники, следующие динамике изменения мировых цен и условий использования российской внешнеторговой инфраструктуры (порты, таможенные переходы)

	услуги	динамично растущая с просматриваемыми перспективами группа участников ВЭД, требующая получения адекватного внешнеторгового опыта и государственной поддержки
Способы ведения внешне-торговых операций	самостоятельно, через собственные или аффилированные подразделения	регистрируемые региональные участники ВЭД, получатели государственной финансовой помощи и иной господдержки
	через независимых посредников	«скрытые» экспортеры, работающие на заказах, существенную или некоторую оговоренную часть дохода перераспределяют в пользу посредника в целях снижения рисков ведения внешней торговли

4.2. Система и показатели учета числа экспортеров региона

Анализ задачи персонифицированного учета субъектов ВЭД свидетельствует, что процессы изменения их числа в регионах России характеризуются следующим комплексом возможных показателей:

- общее число участников ВЭД региона (экспортеры и импортеры);
- доля участников ВЭД в числе зарегистрированных в регионе хозяйствующих субъектов;
- число предприятий и организаций-экспортеров;
- число предприятий и организаций, осуществляющих как экспортные, так и импортные операции;
- число предприятий и организаций-импортеров¹;
- степень концентрации экспорта региона (доля экспорта крупных предприятий в общем объеме экспорта).

В 1995-2003 гг. в отчетах таможенных органов для официальных управленческих структур федерального округа и региона публиковались детальные данные о составе и общем объеме экспортно-импортных операций по выделенным категориям участников ВЭД: государственные и муниципальные предприятия; акционерные общества и производственные кооперативы; фермерские хозяйства, колхозы и совхозы, общественные, религиозные и некоммерческие организации; ассоциации; иностранные физические и юридические лица; предприниматели и др., что позволяло провести сравнительный анализ активности различных групп участников ВЭД, определять некоторые категории участников ВЭД региона в качестве целевых субъектов управления.

Изменение структуры открытой отчетности таможенных органов с 2004 г. вывело статус данной информации в раздел служебной. Тем самым органы управления лишены достоверной и структурированной информации о составе участников ВЭД.

В настоящее время (с 2010 г.) таможенные органы РФ в отчетных данных фиксируют следующие показатели:

- общее число участников ВЭД, ед.
- из них – юридические лица, ед.
- товароборот на 1 участника ВЭД, млн.долл. США.

Представленная система учета числа участников ВЭД характеризует только общий характер включенности предприятий и организаций в ВЭД, а также (в

¹ Импортерами в данном исследовании являются предприятия и организации, зарегистрированные в зоне деятельности таможенных органов ЮТУ ФТС РФ для целей таможенного оформления. Среди них могут быть не только предприятия региона, учитываемые таможенными органами.

определенной степени) уровень концентрации экспорта, который возможно выявить по динамике операций, приходящихся на одно предприятие.

Следовательно, важным и значимым представляется возвращение в число показателей открытой таможенной отчетности значения «число участников ВЭД региона, экспортеров и импортеров», и, что особенно важно, с разделением экспортеров на внерегиональных (иногородних) и имеющих региональных учредителей (более 75 % уставного капитала). Это позволит проводить мониторинг процесса роста числа субъектов внешней торговли региона как одного из целевых показателей эффективности управления ВЭД.

Таким образом, для целей управления государственной поддержкой экспорта путем концентрации на приоритетных направлениях взаимодействия с экспортерами важны изменения, в первую очередь, в методике учета субъектов, занятых ВЭД.

Качественными показателями успеха политики стимулирования и поддержки экспорта России возможно принять «динамику прироста численности экспортеров», впервые приступивших к ВЭД, либо возобновивших ее в периоде, но при позитивной динамике общего числа экспортеров. Важно отслеживать общую динамику роста, поскольку, в случае опережающего темпа выбытия экспортеров (приостановления деятельности) из ВЭД, возникает отрицательная динамика численности субъектов-участников внешней торговли региона РФ.

Представленные выше показатели участия предприятий региона в ВЭД следует дополнить показателем, отражающим степень монополизации объемов экспортных поставок региона и определяющим степень их концентрации – «доля крупных предприятий с максимальным объемом экспортных отгрузок в общем объеме экспорта региона».

4.3. Концентрация (монополизация) регионального экспорта

Россия остается государством с высокой долей крупных предприятий в экспорте. За рубежом вклад предприятий среднего бизнеса в экспорт существенен: «На малый и средний бизнес приходится от 25% до 35 % мирового экспорта продукции обрабатывающей промышленности и около 20 % прямых иностранных инвестиций»¹.

Малый и средний бизнес гибче по отношению к мировой конъюнктуре, успешнее в ценовой конкуренции.

Информации о степени концентрации экспорта регионов в российской экономической литературе и программах представлена минимально. Так, в региональной целевой программе Ленинградской области указано: «из 1568 участников внешнеторговой деятельности на 20 предприятий проходило три четверти товарооборота и свыше 80 % всех экспортных отгрузок области»². Следовательно, в Ленинградской области на 0,6 % от числа предприятий-экспортеров пришлось 80 % отгрузок, а в Ростовской области аналогичные по доле в объемах экспорта отгрузки пришлись на 50 крупных предприятий, или 6,7 % общего числа экспортеров. Очевидно, что в Ленинградской области уровень региональной концентрации экспортеров в 10 раз выше, чем в Ростовской.

Другим примером высокой степени концентрации экспорта служит Кемеровская область: «15 наиболее крупных участников ВЭД из 509 обеспечивают 82,4 % экспорта

¹ Globalization of Industry: Overview and Sector Reports. OECD. – Paris. 2005; Small and Medium Enterprise Outlook 2005. OECD. – Paris. 2005.

² Региональная целевая программа Ленинградской области «Основные направления развития и поддержки экспорта в Ленинградской области на 2004–2006 гг.». С.3.

области»¹, или 2,9 % экспортеров обеспечиваю более 80 % поставок, т.е. концентрация экспорта сверхвысокая.

Таким образом, переход на рыночные методы управления во внешней торговле не изменили сохраняющегося монополизма поставок крупных предприятий-экспортеров, поскольку спустя и в настоящее время более 70-80 % регионального экспорта субъектов РФ производится на ограниченном в 0,6 – 6,7 % числе предприятий-экспортеров.

Таким образом, *субъектная диверсификация участников ВЭД* является не менее показательным критерием эффективности функционирования ВЭК региона, чем товарная и отраслевая его диверсификация, однако задача изменения степени регионального монополизма крупного экспорта российскими исследователями и властями пока не ставится².

Высокая концентрация экспорта на ограниченном числе российских предприятий свидетельствует о высоких бюрократических барьерах выхода на внешний рынок, сохраняющихся рисках ВЭД, отсутствии системы работы с национальными экспортерами в противоположность инновационной мировой практике.

Концентрация экспорта свидетельствует о значимости «веса» различных групп предприятий в экспортной активности региона, распределении объема поставок среди крупных, средних и мелких экспортеров. Динамика концентрации экспорта региона демонстрирует как тенденцию укрупнения либо диверсификации поставок между группами предприятий, так и политику учреждения «дочерних и зависимых компаний, целевым образом создаваемых для ведения внешнеторговых операций, минимизацию их рисков».

4.4. Пути минимизации рисков при экспорте товаров

4.4.1. Включение посреднических компаний в цепочку экспортных поставок

Опыт автора показывает, что крупные предприятия предпочитают стратегию минимизации рисков ВЭД путем диверсификации направлений и методов поставок: государственные поставки крупных партий товаров (по госконтрактам для структур, связанных с государством) производятся непосредственно самим крупным предприятием-экспортером. А мелкие партии товара небольшим клиентам поставляются через собственную дилерскую сеть, ее небольшие компании-члены.

В качестве консультанта по ВЭД автор сотрудничала с одной из дилерских компаний крупного российского производителя сельскохозяйственной техники Ростова-на-Дону - ОАО «Ростсельмаш». Данный дилер продал комбайн фермеру из Молдовы, а через месяц комбайн серьезно сломался - из строя вышел двигатель. Товар находился на гарантии, осложнением ее исполнения послужило то, что шла уборочная кампания и покупатель нес ежедневные убытки. По условиям контракта продавец был обязан заменить вышедшую из строя деталь в двухнедельный срок, что оказалось непростой задачей: производитель комбайна категорически отказывался менять двигатель, мотивируя тем, что их надо доставить из Новосибирска. И поставка ожидалась только через 4 месяца.

¹ Концепция развития внешнеэкономической и межрегиональной деятельности Кемеровской области. Распоряжение Коллегии Администрации Кемеровской области 10.10.2006 № 1123-р / www.ved.kuztpp.ru/downloads/kocsept_ved. С.7.

² Сельцовский. В.Л. Диверсификация – необходимое направление развития российского экспорта // Российский внешнеэкономический вестник. 2009. № 1. С.30-42; Магомедова З.Г. Диверсификация экспорта как условие экономического роста в России // Российский внешнеэкономический вестник. 2009. № 3. С.35-40.

В настоящее время существует несколько компаний Ростовской области – представителей малого бизнеса, экспортирующих комбайны, которых они сами не производят. Возможно утверждать, что у крупных экспортеров сохранилась стратегия использования небольших компаний для продвижения собственного экспорта и минимизации рисков его ведения.

4.4.2. Кейс: Аффилированность компаний как методология минимизации рисков контроля государственных органов в сфере ВЭД предприятий

Риски ВЭД предприятий и использование организационных механизмов и методов их оптимизации прослеживаются на авторском исследовании предприятий Ростовской области в ходе разработки областной целевой программы поддержки экспорта в Ростовской области.

В целях выявления уровня концентрации экспорта проведено большое полевое исследование на основе статистики ЮТУ ФТС РФ о поставках продукции на экспорт у 100 крупнейших предприятий-экспортеров Ростовской области за семилетний период.

Сортировка данных производилась по трем группам: 10, 30 и 50 крупнейших предприятий-экспортеров из 100, однако в каждом отдельно взятом году действующих предприятий оказывалось все меньше, поскольку не все крупные предприятия непрерывно выполняли экспортные поставки в течение всего анализируемого периода. Уровень концентрации и динамика экспортных поставок показывают, что в Ростовской области выявлена тенденция роста концентрации поставок у ограниченного числа региональных экспортеров.

Масштабное экономико-социологическое исследование на основе персонального анкетирования крупнейших предприятий-экспортеров позволило исследовать еще одну грань деятельности экспортеров - аффилированность организационных структур экспортеров».

В процессе исследования доказано, что среди незначительной части предприятий сырьевого сектора (продовольствие и металлы) наблюдается тенденция создания крупным предприятием – головной структурой – сети зависимых (аффилированных) предприятий, чаще всего с незначительной численностью занятых работников, по сути формально принадлежащих к малым предприятиям.

В Ростовской области выделено 12 групп крупных экспортеров с сетью зависимых предприятий: шесть – в зерновом секторе; четыре – в черной металлургии, две – в машиностроении.

Интересны внутренние взаимосвязи в аффилированных группах: некоторые предприятия создавались на период от года до трех-четырёх лет; прослеживается взаимозаменяемость предприятий, перевод контрактов с одной фирмы на другие той же группы, т.е. осуществление экспортных операций в рамках единой организационно-управленческой структуры, но под разными названиями компаний.

В целях выявления реальной структуры и состава предприятий-экспортеров региона необходим детальный учет концентрации экспорта с учетом финансовой и организационной зависимости фирм-экспортеров. Анализ уровня концентрации экспортных поставок проведен по изменению доли в объеме экспорта области выделенных групп (10, 30 и 50) крупных предприятий (табл.2).

Таблица 2 – Влияние степени аффилированности предприятий на рост концентрации экспортных поставок Ростовской области для групп 10, 30 и 50 крупнейших предприятий-экспортеров, %

Крупные	Период (лет)	1	2	3	4	5	6	7
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экспортеры, ед.								
10	Неаффилированные	34,0	37,5	29,9	37,3	37,0	48,7	44,4
	Аффилированные	34,2	38,9	36,3	49,7	44,7	57,0	53,0
	Рост доли с учетом аффилированности	0,2	1,4	6,4	12,4	7,7	8,3	8,6
30	Неаффилированные	49,4	62,8	52,5	69,2	62,2	73,9	69,1
	Аффилированные	50,0	64,2	56,8	76,3	69,3	80,5	74,4
	Рост доли с учетом аффилированности	0,5	1,4	4,3	7,1	7,1	6,5	5,2
50	Неаффилированные	51,1	68,7	60,8	82,0	73,4	84,7	79,3
	Аффилированные	51,1	68,8	60,7	83,9	76,8	87,4	81,3
	Рост доли с учетом аффилированности	0,0	0,1	-0,1	1,9	3,4	2,7	2,0

Формирование аффилированных групп экспортеров активно шло в первые два года анализируемого периода и заметно в группах 10 и 30 наиболее крупных предприятий: доля 10 предприятий в объеме областных поставок (с учетом аффилированности) выросла на 12,4 %, а доля 30 крупных предприятий – на 7,1 % .

В целом, группа из 10 крупных экспортеров фактически имела долю в объеме экспортных поставок области не 44,4 % (согласно таможенной статистике ЮТУ), а 53,0 %, т.е. более половины. С учетом аффилированных структур группа из 10 крупных предприятий области поставила на экспорт максимум – 57,0 % объема экспорта региона (табл.2). Для группы 30 крупных экспортеров учет аффилированности дал менее заметную прибавку, максимально в 7,1 %, а совокупная доля группы повысила ее долю в объеме экспорта с 50,0 % до 80,5 % .

Наименее заметен учет аффилированности для группы из 50 экспортеров, поскольку для данной группы предварительно учтено максимальное влияние группы из 10 крупных экспортеров, хотя и небольшая прибавка в 2,7 % подняла долю 50 крупнейших экспортеров области до 87,4 %.

Таким образом, аффилированность субъектов ВЭД региона отражает особенности управления внешнеэкономическими рисками предприятия (прежде всего, внутренними решениями собственников, защищающихся от необоснованных претензий налоговых и таможенных органов РФ и неадекватности наказания за незначительные проступки внешнеторговой направленности), независимых предпринимательских структур. Маневр в решении задачи «учреждение-закрытие» предприятий также свидетельствует, что данные методы управления ВЭД используются, преимущественно, субъектами ВЭД – поставщиками сырья, для которых кредитная история компании не является значимой для импортера (иностранной компании), где для бизнеса важны личные связи и доверительные отношения, а также при сделках со своими собственными зарубежными предприятиями¹.

5. Выводы и предложения

В результате исследования субъектного состава предприятий-участников ВЭД региона выявлены следующие тенденции, закономерности состояния и динамики их развития:

¹ Евченко Н.Н. Региональный внешнеэкономический комплекс: структура, управление, программирование развития. Автореферат дисс. ... докт. экон.наук. Ростов-на-Дону, 2010.

1. Ликвидация государственной монополии на внешнюю торговлю несущественно изменила концентрацию предприятий-экспортеров: более 80 % экспорта некоторых регионов РФ приходится на 0,6 - 6,7 % числа предприятий-экспортеров. Диверсификация субъектов ВЭД региона – экспортеров является не менее важным критерием использования преимуществ ВЭС, чем товарная и отраслевая. Высокая концентрация экспорта на незначительном числе предприятий в субъектах РФ свидетельствует о значительных бюрократических барьерах выхода новых участников ВЭД на внешний рынок, значительных финансовых затратах, высоких рисках ведения ВЭД, слабости системы их минимизации, отсутствии системной работы с национальными экспортерами среднего бизнеса - в противоположность сложившейся инновационной мировой практике.

2. Организационные структуры экспортеров используют принцип аффилированности, отражающий реакцию органа управления на внешнеэкономические риски предприятия (прежде всего, внутренние, от претензий налоговых и таможенных органов), путем их распределения на несколько предпринимательских структур, формально независимых. Данные методы управления ВЭД используются, преимущественно, субъектами – поставщиками сырья, для которых кредитная история компании не является значимой перед иностранной компанией - импортером: группы аффилированных предприятий-экспортеров были, например, созданы в Ростовской области в сырьевых комплексах: шесть – в зерновом секторе; четыре – в черной металлургии, две – в машиностроении.

3. Доля участников ВЭД в общем числе действующих предприятий рассчитывается к общему числу предприятий промышленности региона и для Ростовской области стабильно составляет около 20 % (с 2000 г.). Экспортеры продукции сельского хозяйства - три крупнейших региональные холдинга с совокупным оборотом до 1 млрд долл. в год, а сельскохозяйственные предприятия-производители самостоятельными экспортерами выступают в относительно редких случаях, следовательно, в расчете достоверной доли экспортеров следует опираться, прежде всего, на долю экспортеров в совокупности предприятий промышленности региона.

Результаты исследования демонстрируют наличие специфических тенденций в стратегиях ВЭД для компаний-экспортеров, классифицируемых типом экспортируемых товаров; размером, опытом работы; степенью «встроенности» в глобализационные цепочки добавленной стоимости.

Состав, структура, динамика числа экспортеров, принятие решения о старте, прекращении (приостановке) внешнеторговой деятельности косвенно свидетельствуют об условиях ведения бизнеса и уровне экономической активности региона, что позволяет сосредоточить внимание управленческих структур на принципах, условиях, объеме, формах и сроках содействия региональному экспорту.

Юг России объективно выступает одним из лидирующих макрорегионов в системе взаимодействия субъектов бизнеса и власти при поддержке несырьевого экспорта. В условиях волатильности сырьевых рынков важно тиражировать успешный опыт отдельных субъектов Федерации (Ростовская область, Краснодарский край) в данной сфере. Структурный экономический кризис 2014-2015 гг. объективизирует создание новой парадигмы включения региональных предприятий во внешнюю торговлю, формирование новой системы взаимодействия бизнеса и власти. Конкурентоспособность и устойчивость экономик регионов будет определяться, в том числе, разработкой и использованием данной технологии.

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Н.А. Зенкевич
Кафедра операционного менеджмента,
Высшая школа менеджмента СПбГУ
zenkevich@gsom.spbpu.ru

А.В. Зятчин
Кафедра операционного менеджмента,
Высшая школа менеджмента СПбГУ
zyatchin.work@gmail.com

Равновесные коалиционные структуры транспортной игры

Аннотация: В статье исследована расширенная версия открытой модели маршрутизации транспортных средств по доставке грузов (OVRP), которая предполагает рассмотрение потребителей услуг транспортировки в качестве игроков. Каждый потребитель характеризуется спросом и расстоянием от места отгрузки до места назначения груза. Для этой проблемы построена коалиционная транспортная игра (CTG). В такой игре каждый потребитель (игрок) выбирает коалицию игроков, с которыми он желает кооперировать по заказу грузовика и доставке груза в пункт назначения при ограниченной грузоподъемности автомобиля в предположении, что транспортные затраты делятся между членами коалиции в соответствии с заданным механизмом. Для транспортной игры конструктивно найдено равновесие по Нэшу.

Ключевые слова: *транспортная игра, кооперативная транспортная игра, коалиционное разбиение, оптимальное коалиционное разбиение.*

1. Введение

Большинство статических моделей, исследуемых в теории игр в настоящее время, делятся на два основных класса: стратегические и кооперативные игры (Петросян, 2012). Под стратегическими играми понимаются игры, в которых игроки своим выбором стратегий стремятся максимизировать свою функцию выигрыша. Основными принципами оптимальности в таких задачах являются равновесия по Нэшу, сильные равновесия, арбитражные схемы.

В классических кооперативных моделях изначально предполагается, что игрокам выгодно объединиться в коалицию максимального размера с целью максимизации суммарного выигрыша в силу свойства супераддитивности характеристической функции (Aumann & Dreze, 1974). Поэтому проблема заключается в нахождении дележа максимального выигрыша. Основными принципами оптимальности в кооперативных играх являются: С-ядро, вектор Шепли, NM-решение, вектор Банзафа и т.д.

Однако в практических задачах трудно предположить возможность объединения всех игроков в одну максимальную коалицию, также как и невозможность промежуточной кооперации между участниками конфликта. Поэтому актуальной является задача формирования коалиционного разбиения при ограничении на размер коалиций, где участники конфликта объединяются в коалиции определенного размера, образующие некоторое разбиение множества игроков.

Начало исследованиям в области коалиционной теории игр положил Оуэн в 1971 году (Оуэн, 1971; Owen, 1979). Он обобщил понятие вектора Шепли для игр с коалиционными разбиениями, построив вектор Шепли-Оуэна. При вычислении этого вектора он допускал, что элементы заданного коалиционного разбиения могут действовать как отдельные игроки и объединяться в большие коалиции. Для нахождения дележа выигрыша между коалициями использовался вектор Шепли. Внутри каждой коалиции коалиционного разбиения допускалась возможность объединения игроков в подкоалиции, когда для нахождения дележа между игроками также использовался вектор Шепли. Коалиционные игры также исследовались в работах Майерсона (Myerson, 1991) и, позднее, Ван ден Бринка и Ван дер Лаана (Van den Brink & Van der Laan, 2005). Эти авторы ввели нормализованный вектор Банзафа для коалиционного разбиения и использовали этот принцип оптимальности для нахождения дележа в игре с коалиционным разбиением.

В данной работе предлагается новый механизм формирования коалиционного разбиения и функций выигрышей игроков на основе решения некооперативной игры. В качестве принципа оптимальности этой игры использовано равновесие по Нэшу. Для парного коалиционного разбиения похожий результат получен в работе Андерсона, Гудмундсена, Талмана и Янга (Andersson et al., 2014; Talman & Yang, 2011).

2. Теоретико-игровая модель маршрутизации транспортных средств

Определим транспортную сеть G и проведем формализацию теоретико-игровой модели задачи маршрутизации транспортных средств Γ .

2.1. Транспортная сеть

Рассмотрим конечное множество точек $V \subset R^2$ на плоскости R^2 . Обозначим через $\nu = |V|$ мощность множества V . Пусть функция $\gamma: V \times V \rightarrow R_+^1$ является Евклидовым расстоянием между точками $x, y \in V$.

Множество V и функция γ определяют неориентированный граф $Z = (V, E)$, где $V = \{x\}$ – множество вершин графа и $E = \{(x, y)\} = V \times V$ – множество ребер.

Фиксированную вершину $a \in V$, из которой начинаются все маршруты, будем называть *депо*.

Определим транспортную сеть $G(a)$ на графе $Z = (V, E)$ как набор $G(a) = \langle V, \gamma; a \rangle$ (Zenkevich & Zyatchin, 2014).

Под маршрутом r будем понимать ориентированную простую цепь, которая начинается в вершине a :

$$r = r(a) = (a, x_1, x_2, \dots, x_l),$$

где $1 \leq l < v$, $x_i \in V$, $x_i \neq x_j$, $x_i \neq a$, $i = 1, \dots, l$.

Обозначим множество всех маршрутов через $R_0 = R_0[G(a)]$. Будем говорить, что два различных маршрута $r^1 = (a, x_1^1, x_2^1, \dots, x_l^1) \in R_0$ и $r^2 = (a, x_1^2, x_2^2, \dots, x_l^2) \in R_0$ не пересекаются, и писать $r^1 \cap r^2 = \emptyset$, если они не имеют общих вершин, за исключением a , т.е.: $\{x_1^1, x_2^1, \dots, x_l^1\} \cap \{x_1^2, x_2^2, \dots, x_l^2\} = \emptyset$. В дальнейшем будем рассматривать только непересекающиеся маршруты.

Длиной маршрута r будем называть величину

$$L(r) = \gamma(a, x_1) + \gamma(x_1, x_2) + \dots + \gamma(x_{l-1}, x_l). \quad (1)$$

Рассмотрим произвольное множество точек $X = \{x_1, x_2, \dots, x_l\}$, $x_i \in V$. Пусть π_X – произвольная перестановка номеров $1, \dots, l$, $\pi_X = (k_1, \dots, k_l)$.

Кратчайшим маршрутом для множества точек X будем называть такой маршрут r_X^{\min} , на котором достигается наименьшее значение длины маршрута (1) на всех возможных перестановках точек множества $\{x_1, x_2, \dots, x_l\}$:

$$r_X^{\min} = \{(a, x_{\bar{k}_1}, x_{\bar{k}_2}, \dots, x_{\bar{k}_l}) \mid L(a, x_{\bar{k}_1}, x_{\bar{k}_2}, \dots, x_{\bar{k}_l}) = \min_{\pi_X} L(a, x_{k_1}, x_{k_2}, \dots, x_{k_l})\}. \quad (2)$$

2.2. Формулировка теоретико-игровой модели маршрутизации транспортных средств

Определим на сети $G(a)$ игру маршрутизации транспортных средств $n = v - 1$ игроков. Обозначим множество игроков через $N = \{1, \dots, n\}$. Будем предполагать, что каждый игрок $i \in N$ находится в вершине $x_i \in V$, $x_i \neq a$, $i = 1, \dots, n$. Пусть для каждого игрока $i \in N$ задана функция спроса $d_i = d(x_i) \geq 0$.

Грузоперевозки осуществляются независимой компанией, которую будем называть перевозчиком. Пусть перевозчик владеет парком из t транспортных средств (ТС) одинаковой вместимости D , при этом:

$$d_i \leq D, \quad i \in N,$$

$$\sum_{i=1}^n d_i \leq Dt.$$

Будем предполагать, что стоимость перевозки $C(r)$ по маршруту $r \in R_0$ пропорциональна расстоянию:

$$C(r) = \alpha L(r),$$

где α – стоимость перевозки груза на единицу расстояния.

Пусть $S \subseteq N$ – произвольная коалиция игроков и $s = |S|$ – количество игроков в этой коалиции. Коалицию S будем называть допустимой, если:

$$\sum_{i \in S} d_i \leq D.$$

Поскольку множество V ограничено, для каждой допустимой коалиции $S \subseteq N$ существует кратчайший маршрут, который будем обозначать r_S^{\min} . Тогда $C(r_S^{\min})$ – стоимость перевозки по маршруту r_S^{\min} . Таким образом, для каждой допустимой коалиции $S \subseteq N$ ставится в соответствие функция затрат $c: S \rightarrow R^1$:

$$c(S) = C(r_S^{\min}).$$

Обозначим через $c_i = c(\{i\})$. Маршрут для одноэлементной коалиции имеет вид: $r = (a, x_1)$.

Будем предполагать, что затраты $c(S)$ распределяются между игроками коалиции S в соответствии с арбитражным решением Нэша, поэтому затраты игрока $i \in S$ будут иметь вид:

$$\varphi_i(S) = c_i - \frac{\sum_{j \in S} c_j - c(S)}{s}, \quad (3)$$

где разность $\sum_{j \in S} c_j - c(S)$ может быть проинтерпретирована как выигрыш коалиции S .

Поэтому любая допустимая коалиция характеризуется маржинальной функцией выигрыша $\varphi(S): S \rightarrow R^1$, где:

$$\varphi(S) = \frac{\sum_{j \in S} c_j - c(S)}{s}. \quad (4)$$

Тогда выражение (3) принимает вид (5):

$$\varphi_i(S) = c_i - \varphi(S). \quad (5)$$

Коалицию, для которой выполняется неравенство $\varphi(S) \geq 0$ или $\varphi_i(S) \leq c_i$, $i \in S$ будем называть *существенной*. Понятно, что одноэлементные коалиции являются допустимыми и существенными, поскольку

$$\varphi(\{i\}) = 0. \quad (6)$$

Множество всех существенных допустимых коалиций обозначим через \tilde{S} .

Стратегией h_i игрока $i \in N$ в транспортной игре является выбор такой допустимой коалиции $S_i \in \tilde{S}$, что $i \in S_i$. Множество всех стратегий игрока $i \in N$ обозначим через H_i , ситуацию обозначим $h = (h_1, \dots, h_n)$, $h_i \in H_i$. Множество всех ситуаций обозначим через H .

Определение 1. Коалиционным разбиением будем называть такое множество коалиций $\bar{S} = \{\bar{S}_j\}_{j=1}^J$, что:

$$\bigcup_j \bar{S}_j = N, \quad \bar{S}_i \cap \bar{S}_j = \emptyset \text{ для любых } i, j.$$

Для произвольной ситуации $h = (S_1, \dots, S_n)$ рассмотрим следующее правило формирования коалиционного разбиения $\bar{S}(h) = \{\bar{S}_j(h)\}_{j=1}^J$:

$$\bar{S}_j(h) = \begin{cases} S, & \text{если } h_j = S \text{ для любого } j \in S \\ \{j\}, & \text{если } h_j = S \text{ и } \exists j_0 \in S : h_{j_0} \neq S \end{cases}$$

Целью игрока $i \in N$ является минимизация $\varphi_i(S)$. Определим выигрыш $K_i(h)$ игрока i в следующем виде:

$$K_i(h_1, \dots, h_n) = K_i(S_1, \dots, S_n) = \varphi(\bar{S}_i)$$

Определим транспортную игру $\Gamma = \Gamma(a)$ как набор $\Gamma(a) = \langle G(a), N, \{H_i\}_{i \in N}, \{K_i\}_{i \in N} \rangle$.

2.3. Сильное равновесие

Определение 2. Ситуацию $h^2 = (h_1^2, \dots, h_n^2) \in H$ будем называть сильным равновесием типа SE_2 в игре маршрутизации транспортных средств $\Gamma(a)$, если для каждой коалиции $S \subseteq N$ и согласованной ситуации $(h_S, h_{-S}^2) \in H$ существует игрок $i_0 \in S$, для которого выполнено следующее неравенство:

$$K_{i_0}(h_S^2, h_{-S}^2) > K_{i_0}(h_S, h_{-S}^2).$$

Множество всех сильных равновесий в игре $\Gamma(a)$ обозначим через SE .

3. Техника построения сильного равновесия

Для построения сильного равновесия найдем коалиционное разбиение, устойчивое в смысле определения 2. Тогда стратегией каждого игрока будет соответствующая коалиция из построенного коалиционного разбиения.

Каждый игрок i предпочитает оказаться в коалиции S из коалиционного разбиения с максимальным значением $\varphi(S)$, поскольку c_i для каждого игрока $i \in N$ фиксировано. V – конечное множество, поэтому и множество всех коалиций конечно. Для каждой допустимой существенной коалиции S найдем число $\varphi(S)$ по формуле (4).

Пусть для всех непересекающихся коалиций $S_i, S_j \in \tilde{S}$ выполнено свойство:

$$\varphi(S_i) \neq \varphi(S_j), S_i \neq S_j, S_i \cap S_j \neq \emptyset, S_i, S_j \in \tilde{S}. \quad (7)$$

В предположении выполнения условия (7), рассмотрим следующую многошаговую процедуру M :

1. Все коалиции $S \in \tilde{S}$ ранжируются в соответствии со значением $\varphi(S)$ в порядке невозрастания. В соответствии с (6) и (7) такой список содержит, по крайней мере, все одноэлементные коалиции.
2. На шаге 1 в ранжированном списке коалиций выбираем такую коалицию $\bar{S}_1 \in \tilde{S}$, что $\bar{S}_1 = \arg \max_S \varphi(S)$. Игроки, принадлежащие коалиции \bar{S}_1 , исключаются из дальнейшего рассмотрения и коалиции S_j , для которых $S_j \cap \bar{S}_1 \neq \emptyset$, удаляются из ранжированного списка.
3. На шаге 2 в ранжированном списке коалиций выбираем коалицию $\bar{S}_2 \in \tilde{S}$ такую, что $\bar{S}_2 = \arg \max_{S \in \tilde{S}, S \cap \bar{S}_1 = \emptyset} \varphi(S)$. Игроки, принадлежащие коалиции \bar{S}_2 , исключаются из дальнейшего рассмотрения, а коалиции S_j , такие что $S_j \cap \bar{S}_2 \neq \emptyset$, удаляются из ранжированного списка.
4. На шаге i в ранжированном списке коалиций выбираем коалицию $\bar{S}_i \in \tilde{S}$ такую, что $\bar{S}_i = \arg \max_{S \in \tilde{S}, S \cap \left(\bigcup_{j=1}^{i-1} \bar{S}_j \right) = \emptyset} \varphi(S)$. Игроки, принадлежащие коалиции \bar{S}_i , исключаются из дальнейшего рассмотрения, а коалиции S_j , такие что $S_j \cap \bar{S}_i \neq \emptyset$, удаляются из ранжированного списка.
5. Процедура M^3 завершается, когда $\bigcup_{\bar{S}_j \in \tilde{S}} \bar{S}_j = N$.

Построенное множество $\bar{S}_0 = \{\bar{S}_j\}$ состоит из непересекающихся коалиций, причем $\bigcup_{\bar{S}_j \in \bar{S}} \bar{S}_j = N$, $\bar{S}_j \in \tilde{S}$, т.е., множество \bar{S}_0 образует коалиционное разбиение.

Теорема. Ситуация $\bar{h} = (\bar{h}_1, \dots, \bar{h}_n)$, где $h_i = S_i$, $i \in S_i$, $S_i \in \bar{S}_0$ является сильным равновесием в транспортной игре $\Gamma(a)$.

Приведен численный пример построения равновесной коалиционной структуры в транспортной игре.

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Гибкие формы занятости в российских компаниях

В.И. Кабалина, Национальный исследовательский университет Высшая школа экономики, vkabalina@hse.ru, veronika.kabalina@gmail.com

Аннотация

В статье рассматриваются вопросы использования российскими компаниями гибких форм занятости, которые автор разделяет на две группы: формы гибкости рабочего времени (ГРВ) и гибкости рабочего места (ГРМ). Эмпирические данные были собраны с использованием анкеты международной исследовательской сети CRANET в 2010 г. (75 анкет) и в 2014-2015 гг. (131 анкета). На вопросы анкеты отвечали руководители и специалисты службы персонала. Анализ данных нацелен на (а) изучение динамики использования форм гибкой занятости российскими компаниями за последние 5 лет; (б) выявления факторов, которые влияют на использование форм ГРВ и ГРМ.

Ключевые слова: формы гибкости рабочего времени и рабочего места, динамика и факторы использования гибкой занятости, российские компании

1. Введение. Основные понятия.

Гибкие формы работы и нестандартные формы занятости в последние десятилетия были в фокусе внимания исследователей в России и за рубежом. Распространение того, что в Европейском Союзе называют «нетипичными» трудовыми практиками, было признано как ключевой вопрос для специалистов по управлению персоналом во многих европейских странах (Mayne, Tregaskis, Brewster, 1996; Richbell, Brookes, Brewster and Wood, 2011). Гибкая занятость стала предметом исследований и российских ученых (Кабалина и Рыжикова, 1998; Капелюшников и Гимпельсон, 2009; Варшавская, 2009). Российские авторы указывают на расширение нестандартной занятости и связывают эту тенденцию с развитием информационных технологий, изменениями в экономической среде, а также со всеобщей «флексбилизацией» занятости в стране и в глобальном масштабе (Лихолетов, 2014). В свою очередь, «флексбилизация» необратимо следует за изменениями, происходящими в структуре экономики, например, ростом доли сферы услуг, фокусированием компаний на снижении издержек (Розеватов, 2014).

В большинстве научных источников гибкая занятость рассматривается как тождественная нестандартной (Mangan, 2000; Ramesh, 2004). В данной работе¹ я буду рассматривать именно те формы, которые не являются стандартными, но которые нельзя отнести к неформальной занятости. Объектом изучения являются те гибкие формы занятости, которые используются компаниями в формальном секторе экономики.

Преобладающая часть российских публикаций опирается на данные государственной статистики и рассматривает макроэкономические показатели гибкие формы занятости на макроуровне. Я анализирую гибкие формы в привязке к организациям формального сектора, т.е. на микроуровне.

Поскольку на уровне организации сторонами отношений занятости являются работодатели (менеджмент) и работники, то анализ использования гибких форм занятости можно проводить как с позиции работодателя, так и работника. Научные исследования и дискуссии, в основном, фокусируются на вопросах политики управления: отражает ли рост гибкой занятости адаптацию компаний к кризисной ситуации (Clarke, 2007) или это результат сознательного выбора менеджеров как аспект стратегического подхода к управлению человеческими ресурсами (Gurkov, Zelenova, Saidov, 2012).

В литературе представлены различные классификации форм гибкой занятости: по характеру параметров, по месту применения, по содержанию (Варшавская, 2009). В частности, в соответствии с последним критерием, выделяются следующие группы форм гибкости: численности работников, рабочего времени, рабочего места, организации труда. В настоящей статье я сфокусировала внимание на двух группах гибкой занятости – с использованием гибкости рабочего времени (ГРВ) и гибкости рабочего места (ГРМ).

Ниже сформулированы определения форм занятости, включенных в выбранные группы, согласованные с Трудовым кодексом и адаптированные для российского рынка труда для дальнейшего использования их в исследовании практик УЧР в российских компаниях.

¹ В подготовке материалов статьи принимала участие выпускница магистерской программы «Управление человеческими ресурсами» НИУ ВШЭ Наталья Оцабрик, которой автор выражает свою благодарность.

Гибкость рабочего времени:

- Сверхурочная работа – работа сверх установленной продолжительности рабочего времени (дня / недели), выполняемая по инициативе работодателя и оплачиваемая в повышенном размере (или предполагающая вместо денег получение дополнительного времени отдыха).
- Посменная работа – форма занятости, при которой работа выполняется в установленное время суток с интервалом в 24 часа, в соответствии с разработанным работодателем графиком сменности.
- Гибкий график работы – форма занятости, при которой четко определяются: переменное (гибкое) время в начале и в конце рабочего дня, в пределах которого работник вправе начинать и заканчивать работу по своему усмотрению, а также фиксированное время его обязательного присутствия на рабочем месте.
- Удлиненная смена – форма занятости, при которой работник имеет стандартную продолжительность рабочей недели, сжатой в сокращенное количество смен (например, сутки через трое).
- Работа в выходные и праздничные дни – форма занятости, предполагающая выход на работу по инициативе работодателя в выходные (суббота, воскресенье) и праздничные дни, при условии письменного согласия работника или без него (в чрезвычайных случаях), с обязательной последующей оплатой не менее чем по двойному тарифу.
- Трудовой договор с определённым объёмом годовой нагрузки – форма занятости, предполагающая заключение трудового договора с указанием определенного количества часов, которые сотрудник должен отработать в течение года.

Гибкость рабочего места:

- Надомная работа – форма занятости, при которой работа выполняется по месту жительства работника, и он не имеет постоянной электронной связи с работодателем.
- Разделенное рабочее место – форма занятости, предполагающая разделение работы (рабочего места), которую выполняет один занятый полное рабочее время работник, между двумя или более работниками, занятыми неполное рабочее время.
- Удаленная работа (дистанционная работа) – форма занятости, при которой работодатель и работник находятся на расстоянии друг от друга, передавая и получая задания, результаты труда и оплату при помощи современных средств связи (интернета, телефона, факса и т.п.).

2. Методология исследования

Для выявления динамики распространения указанных выше форм гибкой занятости за последние 5 лет были использованы данные исследований, которые проводились в 2010 г. и 2014 г., с использованием анкеты международной исследовательской сети CRANET.² Анализ факторов использования гибких форм

² CRANET (Cranfield Network on Comparative Human Resource Management) – международная сеть исследователей практик УЧР, созданная по инициативе ученых Крэнфилдского университета (Великобритания), в ней состоят исследовательские группы более 40 стран. Международные исследования проводятся с 1989 г. В России исследование 2010 г. было

занятости опирался на эмпирические данные 2014-2015 гг. Выборка 2010 года включает 75 анкет, 2014 года – 131 анкету. Анкеты были распространены по электронным каналам и были заполнены сотрудниками служб УЧР.

В выборках были представлены компании различных отраслей деятельности, а также различных размеров – в 2010 году численность сотрудников варьировалась от 100 до 6500, а в 2014 – от 100 до более 835000 сотрудников. Несмотря на то, что наиболее многочисленная сфера деятельности 2010 года – производство продуктов питания и текстильных изделий и целлюлозно-бумажная промышленность, а 2014 года – добывающая промышленность, в обоих случаях речь идет преимущественно о промышленности. Ввиду различия выборок нельзя настаивать на строгости сравнения, вместе с тем, существует возможность сравнения показателей частоты использования форм гибкой занятости для выявления тенденции.

3. Результаты исследования

3.1. Динамика распространения гибких форм занятости

Можно отметить, что независимо от периода наблюдения, наиболее распространенными формами ГРВ оказалась посменная и сверхурочная работа, при этом использование сверхурочной работы увеличилось на 5,3% в 2014 году (табл. 1).

Наименее распространённой формой занятости как в 2010, так и в 2014 году, является работа на дому, несмотря на то, что процент компаний, использующих данную форму, увеличился к 2014 г. до 4,4% (табл. 2).

Таблица 1

Степень распространенности форм ГРВ (1), в % , 2010-2014 гг.

	Работа по выходным дням		Посменная работа		Сверхурочная работа	
	2010	2014	2010	2014	2010	2014
нет такой схемы	37,3	40,3	24,0	23,6	32,0	26,7
1-5%	28,0	26,1	25,3	8,9	28,0	35,0
6-10%	13,3	5,9	12,0	5,7	22,7	13,3
11-15%	9,3	5,0	8,0	5,7	6,7	5,0
16-20%		9,2		4,9		5,0
21-50%	6,7	6,7	18,7	20,3	9,3	6,7
>50%	5,3	6,7	12,0	30,9	1,3	8,3
Итого	100,0	100,0	100,0	100,0	100,0	100,0

С одной стороны, для половины представленных схем гибкости рабочего времени показатели увеличились за рассматриваемый период, в том числе и для наиболее распространенных форм посменной и сверхурочной работы. С другой стороны, три схемы стали использоваться значительно меньше, например, доля компаний, применяющих работу с определенным объёмом годовой нагрузки, за 4 года сократилась на 19,3% (табл. 2).

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Таблица 2

Степень распространенности форм ГРВ (2), в % , 2010-2014 гг.

	Работа с объёмом годовой нагрузки		Работа по гибкому графику		Работа по удлиненной смене	
	2010	2014	2010	2014	2010	2014
нет такой схемы	73,3	92,6	68,0	61,8	58,7	73,5
1-5%	5,3	2,5	20,0	20,3	28,0	11,1
6-10%	9,3	2,5	6,7	5,7	5,3	5,1
11-15%	1,3	0,8	4,0	3,3	5,3	2,6
16-20%		0		0		0,9
21-50%	1,3	0	1,3	3,3	1,3	3,4
>50%	9,3	1,7	0	5,7	1,3	3,4
Итого	100,0	100,0	100,0	100,0	100,0	100,0

Что касается форм гибкости рабочего места, то две из трех форм стали использоваться чаще, среди них форма с наиболее значительным для обеих групп ростом в 30,9% это работа с удаленным рабочим местом (табл. 3).

Таблица 3

Степень распространенности форм ГРМ, в % , 2010-2014 гг.

	Работа с разделением рабочих мест		Работа на дому		Работа с удаленным рабочим местом	
	2010	2014	2010	2014	2010	2014,
нет такой схемы	64,0	83,6	100,0	95,6	94,7	63,8
1-5%	25,3	8,6	0	3,5	5,3	20,7
6-10%	8,0	1,7	0	0	0	6,0
11-15%	1,3	2,6	0	0	0	1,7
16-20%		0		0		0
21-50%	0	0	0	0	0	0,9
>50%	1,3	3,4	0	0,9	0	6,9
Итого	100,0	100,0	100,0	100,0	100,0	100,0

3.2. Факторы использования гибких форм рабочего времени и рабочего места

На основе анализа научной литературы можно предположить, что среди факторов, оказывающих влияние на распространение той или иной формы гибкой занятости, находится отраслевая принадлежность организации (Belman & Golden, 2000) и размер предприятия, выраженный в численности сотрудников (Davis-Blake and Uzzi, 1993). В публикациях среди причин повышения степени распространенности гибких форм занятости упоминается также ослабление роли профсоюзов в принятии решений относительно труда работников. Ослабление происходит как с количественной, так и качественной стороны, так как число членов профсоюзов снижается одновременно со степенью влияния профсоюзов в управлении предприятий (Розеватов, 2014).

Еще одним фактором, который следует принять во внимание, является стабильность выше упомянутого размера компании, а точнее его отсутствие. В литературе отмечено, что при значительном росте либо сокращении масштабов деятельности предприятия условия для использования гибких форм занятости становятся более благоприятными, так как многие элементы деятельности являются неустойчивыми и формирующимися, и рабочая сила должна быть гибкой и легко изменяющейся в соответствии с внешними условиями.

Наконец, стоит проанализировать возможное влияние социально-демографических характеристик работников на выбор ими и работодателем форм занятости, так как данная связь неоднократно рассматривалась как в зарубежных, так и российских источниках (Козина, 2012). Среди упоминаемых параметров можно выделить такие основные характеристики, как пол, возраст и уровень образования сотрудников.

С учетом выявленных в ходе анализа литературы факторов были сформулированы две группы гипотез о наличии, характере и направленности связи между этими факторами и формами ГРВ и ГРМ (табл. 4):

Таблица 4

Гипотезы исследования

ГРВ	ГРМ
Н1.1 Существует значимая связь между сферой деятельности предприятия и степенью распространения форм ГРВ.	Н2.1 Существует значимая связь между сферой деятельности предприятия и степенью распространения форм ГРМ.
Н1.2 Существует отрицательная связь между степенью влияния профсоюзов и степенью распространения форм ГРВ.	Н2.2 Существует отрицательная связь между степенью влияния профсоюзов и степенью распространения форм ГРМ.
Н1.3 Существует отрицательная связь между численностью сотрудников в компании и степенью распространения форм ГРВ.	Н2.3 Существует отрицательная связь между численностью сотрудников в компании и степенью распространения форм ГРМ.
Н1.4 Существует положительная связь между наличием изменения численности сотрудников и степенью распространения форм ГРВ.	Н2.4 Существует положительная связь между наличием изменения численности сотрудников и степенью распространения форм ГРМ.
Н1.5 Существует значимая связь между возрастной структурой и уровнем образования сотрудников и степенью распространения форм ГРВ.	Н2.5 Существует значимая связь между возрастной структурой и уровнем образования сотрудников и степенью распространения форм ГРМ.

Перед тем как приступить к оценке взаимосвязей между переменными, была выполнена проверка распределения зависимых переменных (форм ГРВ и ГРМ) на нормальность с использованием критерия Колмогорова-Смирнова, которая показала, что распределение не является нормальным и при дальнейшем анализе следует

использовать непараметрические тесты. Корреляционный анализ с помощью коэффициента корреляции Спирмена дал следующие результаты:

- 1) Для форм гибкости рабочего времени значимыми оказались связи только с двумя из предложенных факторов - сферой деятельности и уровнем образования сотрудников. Таким образом, численность сотрудников, наличие изменений размера компании, возраст сотрудников, а также количество сотрудников в составе профсоюза и его влияние не имеют связи с зависимой переменной.
- 2) Для форм гибкости рабочего места была выявлена значимая связь с следующими переменными: доля членов профсоюза среди сотрудников, степень влияния профсоюзов в компании, сфера деятельности, возраст и уровень образования сотрудников. Таким образом, незначимой оказалась связь лишь с двумя предполагаемыми факторами – численностью сотрудников и изменениями размера предприятия.

На следующем этапе анализа была построена бинарная логистическая регрессия. Для этого в качестве зависимых переменных были использованы перекодированные в дихотомические переменные распространения гибкости рабочего места и времени, а в качестве независимых – те факторы, связь которых с зависимой переменной оказалась значимой.

Для построения логистической регрессии был выбран метод включения, а значит, все предложенные переменные были включены в окончательную модель.

По результатам анализа регрессии можно утверждать, что составленная модель объясняет распространение форм гибкости рабочего времени на 10,1% – 35,5%.

Для форм гибкости рабочего времени было составлено следующее уравнение:

Использование форм ГРВ = 96,199 – 15,668* уровень образования – 0,045*сфера деятельности.

Логистическая регрессия аналогичным способом была построена и для второй группы гибких форм занятости – форм ГРМ.

Несмотря на то, что данная зависимая переменная имела значимую связь с большим количеством факторов, чем переменная форм ГРВ, полученная модель объясняет меньшую часть её распространения: отобранные факторы объясняют лишь 15,8% - 21,0% зависимой переменной. Это может быть обусловлено тем, что комбинация этих факторов не усиливает их взаимосвязи с зависимой переменной по сравнению с показателями парной корреляции для каждого фактора индивидуально.

Из полученной таблицы переменных, включенных в уравнение регрессии, можно выделить единственный фактор, роль которого в модели является наиболее значимой – это фактор уровня образования сотрудников, его показатель значимости равен 0,067. Это означает, этот фактор объясняет большую часть распространения форм ГРМ.

На основе данных таблицы результатов регрессионного анализа было составлено уравнение, объясняющее распространение форм ГРМ в организациях:

Использование ГРМ = -0,94 -0,47* сфера деятельности + 0,559* уровень образования – 0,395*возраст – 0,143* доля сотрудников в профсоюзе + 0,231*степень влияния профсоюзов.

Итак, в результате проведенного статистического анализа и проверки сформулированных гипотез:

- подтверждены гипотезы Н1.1, Н2.1, Н2.2 и Н2.5
- отклонены гипотезы Н1.2, Н1.3, Н1.4, Н2.3, Н2.4
- частично подтверждена гипотеза Н1.5.

4. Ограничения и перспективы исследования

Среди ограничений данного исследования можно выделить, во-первых, размер выборки. Несмотря на то, что респонденты соответствовали всем требованиям исследования, и анкеты были заполнены достаточно полно, объём данных является недостаточным для проведения тщательного и глубокого статистического анализа. Кроме того, неравномерность некоторых параметров выборки обусловило тот факт, что распределение переменных не является нормальным, и это ограничило выбор метода анализа. Более того, так как сбор данных был проведен с помощью анкеты, которая состояла из вопросов с четко определенными вариантами ответа, ответы респондентов могли быть в какой-то степени направлены самой структурой вопросов. Это значит, что некоторая информация, имеющая ценность для исследования, могла быть заведомо исключена из данных.

Таким образом, будущие исследования могут преодолеть данные ограничения путем увеличения масштабов исследования, а также включения других методов сбора данных. Например, с представителями служб УЧР могут быть проведены углубленные интервью, которые раскроют новые детали и особенности применения гибких форм занятости в организации. Рассмотренные в данном исследовании факторы влияния на использование гибкой занятости отражают по большей части лишь позицию работодателя в трудовых отношениях. Потенциальной областью для исследования может быть рассмотрение выбора различных гибких форм занятости работниками. В то время как данная тема довольно хорошо изучена зарубежными авторами, исследования о том, чем руководствуются российские работники, предпочитающие гибкие формы занятости и каковы для них последствия такого выбора, практически отсутствуют.

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С.М. Кадочников,
д.э.н., профессор
Национальный исследовательский университет Высшая школа экономики,
г. Санкт-Петербург,
Уральский федеральный университет, г. Екатеринбург
skadochnikov@hse.ru

А.А. Федюнина
Национальный исследовательский университет Высшая школа экономики,
г. Санкт-Петербург,
Уральский федеральный университет, г. Екатеринбург
afedyunina@hse.ru

**Продолжительность существования экспорта в российской
экономике: роль эффектов опыта, невозвратных издержек и
предпринимательского климата в регионах**

В статье исследуется продолжительность существования экспорта в российской экономике 2002-2010 годов. С применением методики анализа выживаемости и пробит-оценивания мы исследуем роль классических гравитационных переменных и качества предпринимательского климата на выживаемость торговых потоков экспортоориентированных несырьевых российских регионов. Выявлена гетерогенность рисков исчезновения экспортных потоков в товарном и географическом измерении. Обнаружены эффекты опыта и эффекты невозвратных издержек: с течением времени влияние географии и социо-культурных факторов на риски исчезновения экспортных потоков снижается, напротив, большую роль приобретает качество предпринимательского климата. При этом последнее более значимо для более крупных экспортеров.

Ключевые слова: *экспорт, выживаемость экспорта, регионы России*

Введение

Расширение экспортной деятельности в странах мировой экономики принято связывать с экономическим ростом. Эмпирические исследования на основе данных о большом числе стран свидетельствуют о том, что расширение внешнеторговой открытости способствует росту валового продукта (Alcalá & Ciccone, 2004; Feyger, 2009). Показано, что увеличение экспортной квоты на 1% приводит к росту ВВП на 1% (Noguer & Siscart, 2005), в том числе для развивающихся стран найдено, что эффект увеличения экспортной квоты в краткосрочном периоде составляет 0,5%, в долгосрочном – 0,8% (Brückner & Lederman, 2012). Кроме того, показано, что экспортеры более важны в терминах размеров и объема трудовых ресурсов для национальной экономики. Фирмы-экспортеры больше по размеру, более производительны и предлагают более высокую заработную плату. При этом предприятия, ставшие экспортерами, растут наиболее высокими темпами, а предприятия, которые перестали экспортировать, показывают относительно более низкие показатели. Данные выводы рассматриваются и подтверждаются на данных по США в 1976-1987 гг. (Bernard, Jensen, & Lawrence, 1995), Южной Кореи в 1981-1991 гг. и Тайвани 1983-1993 гг. (Aw, Chung, & Roberts, 2000), Эфиопии, Ганы и Кении в 1992-1995 гг. (Mengistae & Pattillo, 2004), Чили в 1990-1996 гг. (Alvarez & López, 2005), Франции, Германии и Великобритании в 2003-2008 гг. (Wagner & Temouri, 2013), Японии в 2002-2008 гг. (Okubo & Tomiura, 2013), Германии в 1995-2010 гг. (Powell & Wagner, 2014).

В одной из недавних эмпирических работ отмечается, что ключевым элементом достижения более высоких темпов роста валового экспорта, особенно для развивающихся экономик, является высокая продолжительность существования (выживаемость) экспортных потоков (Besedeš & Prusa, 2011). Более того, хотя развивающиеся страны не отстают от развитых в отношении темпов появления новых экспортных товаров, однако обладают значительно более низким уровнем выживаемости экспорта (Brenton, Pierola, & von Uexkull, 2009).

Как отмечается в литературе, низкая степень выживаемости экспорта необязательно связана с потерями благосостояния в случае, если она отражает высокий уровень экспериментирования страны с выводом новых экспортных товаров (Cadot, Iacovone, Pierola, & Rauch, 2013), что, среди прочего, находят (Hausmann & Rodrik, 2003). Однако, низкая выживаемость может оказаться неэффективной в случае наличия высоких невозвратных издержек входа и выхода с рынка (Das, Roberts, & Tybout, 2007).

Таким образом, выявление детерминант выживаемости экспорта является важной задачей в целях понимания ограничений, связанных с ростом экспорта в стране, стремящейся к экономическому росту. При этом в исследовании факторов динамики экспорта важное внимание следует уделять субнациональному уровню. Так, на основе данных по Индии (Pradhan & Das, 2012; Pradhan & Zohair, 2014), Китаю (Perkins, 1997; Wu, 2007) и Южной Африке (Matthee & Naudé, 2008) найдено, что экспортная деятельность гетерогенна внутри страны, что может являться результатом действия ряда факторов, в том числе проактивной региональной политики.

В настоящей статье мы проводим анализ факторов, оказывающих влияние на продолжительность существования экспорта российских регионов. В частности, отдельное внимание уделяется факторам, отражающим предпринимательский климат – качеству человеческих и финансовых ресурсов, а также уровню административных барьеров и доступности инфраструктуры. Насколько известно авторам, это первое исследование факторов выживаемости экспорта на российских данных. Мы используем модель, предложенную (Cox, 1972) и широко распространенную в анализе

выживаемости, а также проводим проверку устойчивости результатов посредством использования пробит модели.

Статья далее структурирована следующим образом. В первой части мы представляем методику эмпирического анализа выживаемости и описываем группы переменных, включенных в регрессию факторов продолжительности существования экспорта российских регионов. Во второй части мы описываем базу данных и рассматриваем особенности продуктового и географического разнообразия в продолжительности существования экспортных потоков. В третьей части мы представляем результаты эмпирического анализа. Четвертая часть рассматриваем основные недостатки методики анализа выживаемости и представляет проверку полученных результатов с использованием методики пробит оценивания. В заключении представлены основные результаты.

Выживаемость экспорта российских регионов: методика эмпирического анализа и переменные регрессии

В настоящем исследовании мы используем подход, основанный на анализе моделей выживаемости. Как отмечается в литературе, в рамках семейства моделей выживаемости модель Кокса (Cox, 1972) имеет преимущество обусловленное отсутствием требования о спецификации распределения функции выживания и, таким образом, подходит для случаев, когда необходимо оценить влияние объясняющих переменных на уровень риска¹. Уровень риска в модели Кокса оценивается следующим образом:

$$h_i(t) = h_0(t)\exp(\beta'x_i), \quad (2)$$

где $h_0(t)$ – базовая функция риска, которую модель Кокса рассматривает как неизвестную и оставляет без параметров², x_i – вектор переменных, представляющих собой характеристики объекта i , β – вектор коэффициентов, учитывающий эффекты от характеристик. Логарифмирование уравнения позволяет получить следующую лог-линейную форму для оценивания:

$$\log\left(\frac{h_i(t)}{h_0(t)}\right) = \beta'x_i \quad (3)$$

В качестве независимых переменных мы используем несколько групп факторов.

Первое, *гравитационные переменные*. Мы основываемся на стандартном гравитационном уравнении, предложенном (Anderson & van Wincoop, 2003) и результатах мета-анализа факторов международной торговли (Disdier & Head, 2008; Head & Mayer, 2013), и включаем в регрессионную модель ВВП страны-импортера на душу населения (логарифм), ВВП региона-экспортера на душу населения (логарифм), географическое расстояние между столицами страны-импортера и региона-экспортера в км (логарифм), а также дамми переменные, отражающие наличие у торговых партнеров официального общего языка, общей границы, общей истории, а также наличие у региона-экспортера выхода к морю.

Второе, *товарные характеристики*. Существенные различия в продолжительности существования однородных, референтных и дифференцированных товаров выявлен, среди прочего, (Besedeš & Prusa, 2006b) на данных по импорту США 1972-1988 гг. Мы следуем подходу (Rauch, 1999) и выделяем следующие три группы товаров: однородные (торгуемые на организованных биржах, например, зерно, нефть), референтные (товары, ориентировочные цены на которые указаны в отраслевых каталогах и специальных сборниках, но которые не торгуются на

¹ (Fugazza & Molina, 2011, p. 14)

² Базовая функция риска $h_0(t)$ обозначает риск в момент времени t , при котором $x_i(t) = 0$

организованных биржах) и дифференцированные (обладающие большим числом разнообразных характеристик, особенных для каждого производителя).

Третье, *переменные, отражающие уровень благоприятствования ведению бизнеса в регионе*. В ряде исследований в качестве прокси переменной используются данные проекта Doing business, в частности, переменная, отражающая количество дней, необходимых для осуществления экспортной операции (например, (Fugazza & Molina, 2011)). В качестве базы данных мы используем результаты исследования «Развитие малого и среднего предпринимательства в регионах России «Индекс Опоры»», проведенный на основе опросов представителей малого и среднего бизнеса в 35 российских регионах. В целях настоящего исследования в качестве издержек бизнеса мы используем прокси, отражающие издержки на два основных типа ресурсов – финансовые ресурсы и человеческие ресурсы

Четвертое, *переменные, отражающие невозвратные издержки ведения бизнеса*. Показано, что вероятность выжить увеличивается с ростом соотношения невозвратных издержек к фиксированным (Albornoz, Fanelli, & Hallak, 2014). Мы также добавляем в качестве прокси переменных для невозвратных издержек ведения бизнеса по отдельности (вследствие высокой мультиколлинеарности) средний и начальный объем экспортного потока (в логарифмах), что соответствует (Brenton, Saborowski, & von Uexkull, 2010; Carrère & Strauss-Kahn, 2012; Fugazza & Molina, 2011).

Наконец, пятое, *переменные, позволяющие контролировать проблему эндогенности*, вызванную возможной двунаправленной взаимосвязью между региональными характеристиками и выживаемостью экспортных потоков, а также вероятным наличием проблемы самоотбора. Проблемы эндогенности в этой связи, например, отмечаются (Faruq, 2011) при исследовании влияния институциональных переменных (уровня коррупции, эффективности бюрократии и юридических прав) на качество экспорта, или (Commander, Svejnar, & Tinn, 2008), рассматривающими более широкую проблему эмпирической взаимосвязи роли качества бизнес среды и развития фирм и стран. В ряде исследований подтверждается эндогенность транспортных издержек товарам во внешней торговле и рынкам или рыночной структуре сопровождающих внешнюю торговлю отраслей (Hummels, Lugovskyy, & Skiba, 2009; Sequeira & Djankov, 2008).

В целях настоящего исследования для контроля за эндогенностью регрессоров мы включаем набор переменных, позволяющих учесть отраслевые и географические особенности существования экспортных потоков в российских регионах. Следуя (Feng, Li, & Swenson, 2012), для контроля возможной эндогенности мы включаем в модель средний уровень импортного тарифа, потенциально оказывающий влияние на решения экспортеров о продолжении внешней торговли.

В соответствии с подходом (Fugazza & Molina, 2011) в регрессию также включена переменная, отражающая конкуренцию на импортном рынке и рассчитываемая как среднее число российских регионов, которые экспортируют продукт i в страну j .

Кроме того, в соответствии со стандартными подходами к анализу выживаемости (Besedeš & Blyde, 2010; Besedeš & Prusa, 2006a, 2006b; Cadot et al., 2013; Fu & Wu, 2014) в регрессию включена дамми переменная, отражающая повторное возникновение торгового потока после гибели. Такая дамми переменная позволяет контролировать тот факт, что длина первого экспортного потока (до гибели и повторного возникновения) может оказаться систематически короче, по сравнению с экспортными потоками, которые делятся без прерываний³.

³ (Fugazza & Molina, 2011, p. 11)

Для того, чтобы проконтролировать возможную эндогенность, связанную с особенностью выживаемости экспорта в разных регионах мира, мы разделяем все страны на три региона в соответствии с (Akin & Kose, 2008), которые выделяют развитые страны (страны Севера), а также разделяют развивающиеся страны на два типа в зависимости от уровня их интеграции в мировую экономику, соответственно, страны развивающегося юга и страны быстрорастущего юга. Мы также добавляем четвертый регион – страны СНГ, являющийся одним из основных торговых партнеров для российских регионов, как было показано ранее.

Смещенные оценки, связанные с эндогенностью выживаемости различных отраслей, мы дополнительно корректируем посредством включения дамми для двух типов товаров – дифференцированных и однородных, принимая оценки для референтных товаров за базовые.

Наконец, мы следуем (Cadot et al., 2013) и оцениваем разработанную модель с использованием кластеризованных ошибок, специфичных для связанной пары переменных товар - импортный рынок, предполагая наличие неконтролируемых эффектов, специфичных для отдельных отраслей на рынках определенных стран. Как отмечается, кластеризация на уровне товар - импортный рынок позволяет учесть коррелированные шоки спроса, оказывающие влияние на экспортные потоки, специфичные на уровне товар-импортный рынок. При этом кластеризация ошибок на уровне товар-экспортный регион приводит к схожим результатам⁴.

Выживаемость экспорта российских регионов и ее факторы: эмпирический анализ

В таблице 2 представлены оценки базовой модели. Использование разных прокси переменных невозвратных издержек не оказывает влияние на знаки прочих коэффициентов, при этом вариация размера эффектов объясняющих переменных на риск при смене прокси переменной невозвратных издержек не превышает 5,22%. Увеличение средней стоимости экспортного потока приводит к более существенному снижению риска по сравнению с увеличением начальной стоимости. Это, связано с тем, что более высокое значение средних издержек может также отражать некоторые другие особенности ведения экспортной деятельности, выходящие за пределы измерения невозвратных издержек. В частности, отмечается, что более высокое значение средних издержек может отражать относительно более низкие уровни влияния шоков спроса вследствие большей «зрелости» экспортного потока или вследствие экспорта товара более высокого качества (Fugazza & Molina, 2011).

Таблица 2 – Риски исчезновения экспортных потоков российских регионов 2002-2010 гг.: оценки базовой модели методом Кокса

	(1)	(2)	(3)	(4)
ВРП экспортера на душу населения (лог)	-0.0024	0.0346*	-0.0068	0.0302*
ВВП импортера на душу населения (лог)	-0.0100***	-0.0087***	-0.0119***	-0.0107***
Средняя стоимость экспортного потока (лог)	-0.0479***	-0.0481***		
Начальная стоимость экспортного потока (лог)			-0.0164***	-0.0166***
Общий язык	-0.0683***	-0.0652***	-0.0438***	-0.0408***
Общая граница	-0.1606***	-0.1662***	-0.1473***	-0.1528***
Общая история	-0.0676***	-0.0660***	-0.0567***	-0.0554***
Отсутствие выхода к морю	0.1116***	0.1101***	0.1048***	0.1023***
Расстояние до страны-импортера (лог)	-0.0156***	-0.0160***	-0.0118**	-0.0123***
Расстояние до Новороссийска (лог)	-0.2906***	-0.2726***	-0.2940***	-0.2769***
Расстояние до Находки (лог)	-0.1619***	-0.1339***	-0.1639***	-0.1363***
Расстояние до Санкт-Петербурга (лог)	0.0543***	0.0544***	0.0557***	0.0558***
Конкуренция	-0.0053***	-0.0054***	-0.0078***	-0.0079***
Множественный вход	-0.1526***	-0.1522***	-0.1787***	-0.1784***

⁴ (Cadot et al., 2013, p. 288)

Дифференцированный товар	0.0226***	0.0227***	0.0747***	0.0749***
Однородный товар	0.1165***	0.1179***	0.0876***	0.0889***
Регион развивающегося юга	0.1020***	0.1080***	0.0910***	0.0967***
Регион быстрорастущего юга	0.0561***	0.057***	0.0349***	0.0357***
Регион СНГ	-0.0432***	-0.0405***	-0.0491***	-0.0465***
Импортный тариф	-0.0036***	-0.0036***	-0.0040***	-0.0041***
Человеческие ресурсы		0.0015***		0.0015***
Финансовые ресурсы		0.0031***		0.0029***
Количество наблюдений	47519	47519	47519	47519
Количество регионов	20	20	20	20
Количество стран	100	100	100	100

Примечание: Указаны значения функции риска. Значения коэффициентов, отмеченные «*», значимы на 1%-м критическом уровне; значения коэффициентов, отмеченные «**» значимы на 5%-м критическом уровне; значения коэффициентов, отмеченные «***» значимы на 10%-м критическом уровне.
В скобках указаны кластеризованные по стране-импортеру и товарной группе стандартные ошибки.

Рассмотрим основные полученные результаты. Первое, гравитационные переменные значимы для объяснения выживаемости российского экспорта. Так, более низким рискам ведения экспортной деятельности способствует больший размер импортного рынка (коэффициент при ВВП на душу населения страны-импортера отрицателен и статистически значим), что позволяет смягчать шоки спроса при ведении экспортной деятельности. Наличие общей истории (принадлежность к составу республик СССР) снижает риск гибели экспортного потока на 5,5-6,8%, наличие общего официального языка снижает риск гибели на 4,0-6,8% в зависимости от спецификации. Кроме того, важное значение на риски ведения экспортной деятельности оказывает география международной торговли. Экспорт из регионов в соседние зарубежные государства, имеющие с регионом общую границу, снижает риск на 14,7-16,6%, при этом в целом экспорт на более короткие расстояния также снижает риск исчезновения экспортного потока.

Интересный результат получен в отношении расстояния экспортных регионов до трех крупнейших российских портов – Санкт-Петербурга, Находки и Новороссийска. Согласно полученным результатам, чем меньше расстояние до Санкт-Петербурга, тем ниже риски исчезновения экспортных потоков, и, наоборот, чем больше расстояние до Находки и Новороссийска – тем больше риски. Это, в частности, связано с тем, что среди основных стран-импортеров российских товаров через порты Балтийской таможни находятся развитые страны, риски ведения экспортной деятельности в которые относительно ниже, в том числе страны северо-западного и западного макрорегионов Европы, включая Финляндию, Швецию, Данию, Германию, Нидерланды. Последнее подтверждается также результатами оценивания дамми переменных, контролирующих принадлежность страны к тому или иному региону. Согласно полученным результатам, принимая группу развитых стран (стран севера) за базу, мы получили, что риски экспорта в страны СНГ ниже рисков экспорта в страны севера на 4,0-4,9%, риски экспорта в быстрорастущие страны – выше на 3,4-5,7%, а экспорта в развивающиеся страны – выше на 9,1-10,8%. Таким образом, в порядке возрастания рисков выживаемости экспорта страны располагаются следующим образом: страны СНГ, развитые страны, быстрорастущие страны, развивающиеся страны.

Второе, принимая за базу риски исчезновения экспортного потока референтных товаров, результаты регрессий показывают, что экспорт однородных и дифференцированных товаров более рискован. При этом риск исчезновения экспортного потока дифференцированных товаров ниже риска исчезновения экспортного потока однородных товаров на 9,4% (в случае спецификации со средней стоимостью экспорта) и на 1,3% (в случае спецификации с начальной стоимостью экспорта). Выявленные различия могут объясняться с точки зрения уровня

конкуренции на рынках стран-импортеров. Экспортеры однородных товаров участвуют в более высокой конкуренции за потребителя и, соответственно, такие экспортные потоки имеют более низкий уровень выживаемости.

В похожей логике может быть проинтерпретирован коэффициент регрессии при импортном таможенном тарифе: увеличение импортного тарифа на 1% снижает риск исчезновения экспортного потока на 3,6-4,1% в зависимости от спецификации. Как было отмечено в литературе (Besedeš & Prusa, 2006b), более высокие импортные тарифы снижают риски экспортной деятельности, поскольку они подразумевают менее высокий уровень конкуренции на рынках. Кроме того, с точки зрения недавних теорий, (Fugazza & Molina, 2011) отмечается, что рынки, характеризующиеся относительно более высоким уровнем протекционизма, обслуживаются только самыми производительными фирмами из стран-экспортеров. Аргумент о более высокой производительности может быть проинтерпретирован с точки зрения наличия у фирмы статуса экспортера.

Выводы о роли конкуренции на рынках, в частности, подтверждаются результатом оценивания переменной, отражающее среднее число стран-импортеров товара i из российских регионов: увеличение разнообразия (числа) импортных рынков на единицу приводит к снижению риска исчезновения экспортного потока на 0,5-0,8%. Иными словами, размер импортного рынка (оцениваемого через количество стран-импортеров) имеет значение: чем больше стран-импортеров покупают товар i , тем ниже может быть конкуренция на рынке каждой из стран, и тем выше выживаемость экспортного потока⁵.

Отметим также интересный результат в отношении переменной, контролирующей повторное появление экспортного потока. Как отмечают (Besedeš & Prusa, 2006b), исчезновение экспортного потока увеличивает риски для повторного исчезновения (после возникновения). С другой стороны, возвращение на зарубежный рынок может являться позитивным сигналом и снижать риски повторного исчезновения. Согласно полученным нами эмпирическим результатам, риски исчезновения экспортного потока в случае повторного возникновения ниже на 15,2-17,9% в зависимости от спецификации.

Наконец, переменные, отражающие качество благоприятствования ведению бизнеса в регионе. Независимо от используемой в регрессии переменной невозвратных издержек, улучшение на единицу позиции в рейтинге регионов индекса Опоры по качеству финансовых ресурсов снижает риски исчезновения экспортного потока на 0,3%, а по качеству человеческих ресурсов – на 0,15%, коэффициенты статистически значимы на 1% уровне.

Включение в регрессию временных эффектов и мультипликативного эффекта влияния разного рода издержек на ведение бизнеса оказало некоторое влияние на эмпирические результаты. Если результатами базовой регрессии стали выводы о том, что отсутствие у региона выхода к морю, расположение в восточной части России (ближе к Находке) и низкий уровень импортного таможенного тарифа увеличивают риски исчезновения экспортного потока, то включение в регрессию «эффекта опыта» привело к смене знаков коэффициентов. Согласно полученным в столбцах (2)-(3) результатам, эффект опыта позволяет фирмам-экспортерам нивелировать негативные риски исчезновения экспортного потока. Так, с учетом эффектов опыта, связанных с большей продолжительностью существования экспортного потока, регионы, не имеющие выхода к морю, не несут более высокие риски экспортной деятельности,

⁵ (Cadot et al., 2013) выявляют аналогичный эффект на уровне фирм, оценивая количество фирм-импортеров из одной страны, импортирующих один и тот же товар с одного рынка, и называют это сетевым эффектом для фирм-экспортеров.

более того, для опытных экспортеров снижение импортных тарифов на 1% способствует росту выживаемости экспорта на 0,4%.

Таблица 3 - Риски исчезновения экспортных потоков российских регионов 2002-2010 гг.: тестирование наличия временных эффектов, метод Кокса

	(1)	(2)	(3)
ВРП экспортера на душу населения (лог)	0.0346*	0.0527***	0.0632***
ВВП импортера на душу населения (лог)	-0.0087***	0.0105***	0.0112***
Средняя стоимость экспортного потока (лог)	-0.0481***	-0.0120***	-0.0445***
Общий язык	-0.0652***	0.0051	0.0072
Общая граница	-0.1662***	-0.0302**	-0.0215
Общая история	-0.0660***	-0.0027	-0.0046
Отсутствие выхода к морю	0.1101***	-0.0243***	-0.0275***
Расстояние до страны-импортера (лог)	-0.0160***	-0.0137***	-0.0167***
Расстояние до Новороссийска (лог)	-0.2726***	-0.1164***	-0.1184***
Расстояние до Находки (лог)	-0.1339***	0.0166***	0.0195***
Расстояние до Санкт-Петербурга (лог)	0.0544***	0.0597***	0.0606***
Конкуренция	-0.0054***	-0.0009***	-0.0009*
Импортный тариф	-0.0036***	0.0035***	0.0037***
Человеческие ресурсы	0.0015***	0.0426***	0.0328***
Финансовые ресурсы	0.0031***	0.0607***	0.0527***
Человеческие ресурсы * Продолжительность экспорта		-0.0280***	-0.0280***
Финансовые ресурсы * Продолжительность экспорта		-0.0451***	-0.0447***
Человеческие ресурсы * Средняя стоимость потока			0.0011***
Финансовые ресурсы * Средняя стоимость потока			0.0008***
Множественный вход	Да	Да	Да
Дифференцированный товар	Да	Да	Да
Однородный товар	Да	Да	Да
Регион развивающегося юга	Да	Да	Да
Регион быстрорастущего юга	Да	Да	Да
Регион СНГ	Да	Да	Да
Количество наблюдений	47519	47519	47519
Количество регионов	20	20	20
Количество стран	100	100	100

Примечание: Значения коэффициентов, отмеченные «*», значимы на 1%-м критическом уровне; значения коэффициентов, отмеченные «**» значимы на 5%-м критическом уровне; значения коэффициентов, отмеченные «***» значимы на 10%-м критическом уровне.
В скобках указаны кластеризованные по стране-импортеру и товарной группе стандартные ошибки.

Важно, что включение в регрессию временных эффектов и тестирование наличия комплементарного эффекта невозвратных издержек и издержек ведения бизнеса не оказало влияния на направление и значимость коэффициентов при переменных человеческих и финансовых ресурсов, однако привело к росту значения этих эффектов. Улучшение позиции региона в рейтинге индекса Опоры по субиндексу человеческие ресурсы приводит к снижению риска исчезновения экспортного потока на 3,3-4,3% (вместо 0,15% в базовой регрессии), а по субиндексу финансовые ресурсы – на 5,3-6,1% (вместо 0,3% в базовой регрессии). При этом данные эффекты снижаются вместе с ростом продолжительности существования экспортного потока – коэффициенты при переменных производства человеческих и финансовых ресурсов и продолжительности экспорта отрицательны и статистически значимы. Иными словами, для длительных экспортных потоков качество финансовых и человеческих ресурсов в регионе экспортера имеет меньшее значение, чем для вновь появившихся.

Кроме того, эмпирические результаты свидетельствуют о комплементарном влиянии невозвратных издержек и издержек на финансовые и человеческие ресурсы на выживаемость экспортных потоков. Эффект снижения риска исчезновения экспортного потока от улучшения качества финансовых и человеческих ресурсов в регионе тем выше, чем выше рост средней стоимости экспортного потока, коэффициент при соответствующих попарных произведениях положителен и статистически значим. Другими словами, положительный эффект снижения издержек на финансовые и человеческие ресурсы в регионе выше для более крупных экспортеров.

Заключение

В настоящей работе с использованием методов непараметрического и параметрического анализа было проведено эмпирическое исследование факторов риска исчезновения экспортных потоков российских регионов, особое внимание было уделено гравитационным переменным, невозвратным издержкам экспортной деятельности и роли благоприятствования предпринимательской деятельности. Анализ основан на базе данных экспортных потоков российских регионов в 100 стран мировой экономики за период 2002-2010 годов. Проведенный анализ позволяет выделить две группы факторов, в разной степени значимых для новых и уже существующих экспортных потоков.

Первый год существования экспортного потока определяется в значительной степени традиционными гравитационными переменными: наличие общего языка снижает риск исчезновения на 2,8-6,8% в зависимости от спецификации, наличие общей границы – на 6,1-16,6%, общей истории – на 5,3-6,9%, наличие выхода к морю – на 4,0-11,0%. Более низкий уровень конкуренции на экспортных рынках и опыт других регионов по экспорту этого же товара также имеют значение: увеличение импортного таможенного тарифа на 1% связано с снижением рисков исчезновения однолетних потоков на 0,4%, увеличение числа рынков, на которые экспортируется этот же товар из других регионов способствует снижению рисков на 0,5%.

С течением времени эффекты гравитационных переменных снижаются или становятся незначимыми, при этом на первое место выходит роль институциональных факторов регионального уровня. Контролируя уровень невозвратных издержек и временные эффекты, было получено, что улучшение позиции региона в суб-индексах Опоры по субиндексу Человеческие ресурсы способствует снижению рисков исчезновения экспортного потока на 3,3-4,3%, по субиндексу Финансовые ресурсы – на 5,3-6,1%.

Выявлен также эффект опыта и эффект невозвратных издержек. Эффект опыта заключается в том, что влияние издержек бизнеса снижается для зрелых экспортеров с течением времени независимо от используемой переменной качества предпринимательского климата. Эффект невозвратных издержек, измеренный в настоящем исследовании посредством начального и среднего объема экспорта, определяет более низкие риски исчезновения для более крупных экспортеров.

Полученные результаты позволяют заключить, что промышленная политика, направленная на поддержку и развитие экспортной деятельности, должна быть направлена на обеспечение роста экспортных доходов, в том числе посредством предоставления экспортерам льгот и преференциального доступа к ресурсам, кредитам, страхованию экспортной деятельности, а также направлена на снижение транспортных и прочих переменных издержек экспортной активности. Данные выводы согласуются, например, с результатами (Das et al., 2007), которые указывают, что предоставление субсидий на доходы от экспортной деятельности имеет более значимый эффект на экспортные доходы по сравнению с предоставлением единовременных трансферов новым экспортерам. Кроме того, результат о том, что более высокие объемы экспорта положительно связаны со снижением рисков исчезновения экспортной деятельности позволяют сделать предложения к механизмам поддержки экспортной деятельности. Следуя логике (Brenton, Pierola, & Uexkill, 2009; Rauch, 2010), мы отмечаем, что институциональные изменения, направленные на поддержку малых фирм (против больших) имеют относительно малый эффект на динамику торговли относительно реформ, направленных на поддержку более крупных экспортеров.

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Китанина Ксения Викторовна, преподаватель кафедры «Организация перевозок и безопасность на транспорте», Дальневосточный государственный университет путей сообщения, Хабаровск, Россия
kitanina_ksenya@mail.ru

Каликина Татьяна Николаевна, заведующий кафедрой «Организация перевозок и безопасность на транспорте», к.т.н., доцент, Дальневосточный государственный университет путей сообщения, Хабаровск, Россия
kalikina@mail.ru

Исследование эффективности применения маркетинговых программ в организации пассажирских железнодорожных перевозок в Дальневосточном регионе Российской Федерации

Статья посвящена исследованию применения маркетинговых программ в организации перевозок пассажиров железнодорожным транспортом для регионов с большой протяженностью и малой плотностью населения. В сфере железнодорожных пассажирских перевозок определена целевая аудитория и количество пассажиров пользующихся предложенными маркетинговыми программами. На основании анализа предложена группировка по выделенным признакам для произведения сегментации пассажиропотока и выбор композиций составов поездов в зависимости от спроса на соответствующий тип подвижного состава.

Ключевые слова: *перевозка пассажиров, маркетинговые программы, сегментирование, пассажирооборот.*

Дальневосточный Федеральный округ – один из самых больших регионов Российской Федерации. Площадь округа составляет 36,08% территории Российской Федерации. Специфика Дальневосточного региона характеризуется большой площадью региона, малой плотностью населения, слабым уровнем развития транспортной инфраструктуры, неравномерностью размещения городов и промышленных центров, территориальной удаленностью от административных, торгово-финансовых, промышленных и исторических центров Российской Федерации.

Транспортный рынок пассажирских перевозок в Дальневосточном Федеральном округе оказывает пассажирам услуги перевозки различными видами транспорта, которые чаще всего неравноценны по стоимости, скорости, регулярности и комфорту. Пассажир, руководствуясь своими возможностями, целями и вкусами, а иногда и вынужденно отдает предпочтение тому или иному виду транспорта. При этом для каждого пассажира решающими критериями при выборе вида транспорта могут являться различные факторы, такие как, макро- и микроэкономические, внешние и внутренние, региональные и локальные, а также политические, социальные, культурные, демографические, информационные, научно-технические.

Организацию пассажирских железнодорожных перевозок в регионе осуществляет Дальневосточный филиал Акционерного общества «Федеральная пассажирская компания» (АО «ФПК»). Специфичность Дальневосточного региона выражается направлениями, где железнодорожный транспорт является единственным видом транспорта и направлениями с развитой устойчивой конкуренцией. Основная деятельность работы компании осуществляется по этим двум направлениям. Увеличение эффективности функционирования АО «ФПК» возможно путем повышения доходов, либо снижения расходов. Повышение доходов возможно за счет привлечения пассажиров с других видов транспорта и предоставления услуг, которые могут быть оплачены дополнительно. Поэтому необходимо разработать механизмы для развития конкуренции на тех направлениях, где она имеется. На направлениях, где железнодорожный транспорт является единственным видом транспорта применяются мероприятия по снижению расходов. Снижению расходов будет способствовать создание таких условий поездки, при которых доходы от перевозки превысят расходы от курсирования поезда. Для предприятия, продающего услуги перевозки, условно все факторы можно разделить на управляемые (стоимость проезда, персонал, ассортимент услуг, методы стимулирования сбыта, качество обслуживания) и неуправляемые (СМИ, конкуренция, технологии, период года, социально-политическая обстановка в стране). Поэтому стратегия эффективного управления на железнодорожном транспорте должна базироваться на маркетинговых принципах и методах: изучении и анализе внешней и внутренней среды, динамике транспортных рынков и спроса на перевозку, разработке комплекса маркетинга для целевых групп потребителей и транспортных рынков. Разделение рынка потребителей на части по определенным одним или несколькими признакам (сегментация рынка) позволяет определить структуру, размеры, емкость, устойчивость, платежеспособность транспортного рынка и условия его освоения.

Для направлений, имеющих конкуренцию с другими видами транспорта (Хабаровск – Благовещенск, Хабаровск – Владивосток, Хабаровск – Комсомольск-на-Амуре), привлечение пассажиров на железнодорожный транспорт осуществляется с помощью применения маркетинговых программ. Для разработки программ используются данные системы АСУ «Экспресс» и проведение анкетирования пассажиров в вагонах различных категорий в различные периоды года, а на некоторых направлениях и в различные периоды недели (будние дни, выходные), что позволяет на основании анализа полученных данных разрабатывать маркетинговые программы.

Были исследованы основные программы проводимые АО «ФПК» за период с 2012 года и по настоящее время :

- при приобретении билета в купейный вагон на поезда курсирующие в пределах Российской Федерации от 45 до 31 суток до отправления поезда тариф снижался на 50%. При приобретении билета за 10 и менее суток до отправления поезда тариф повышался на 10%;

- проезд в вагонах СВ поездов во внутригосударственном сообщении дешевле на 10 % при оформлении билета «туда-обратно», а при условии выкупа целого купе в вагоне СВ - 20% от стоимости проезда и 30%, если пассажир покупает проездной документ на проезд в целом купе вагона СВ «туда-обратно»;

- проезд в купейных вагонах поездов во внутригосударственном сообщении дешевле на 10 % при оформлении билета «туда-обратно» а, при одновременном приобретении всех четырех мест в купе купейного вагона в одну сторону - 20 %, а при покупке всех четырех мест в купе купейного вагона в направлении «туда-обратно» - 30 %.[4]

В результате исследования выявлено, что используемые маркетинговые программы не всегда приносят прогнозируемый результат. Так например, в рамках программы по предоставлению 50% скидки на проезд на верхние полки вагонов категории купе в определенный период года определена целевая аудитория пользования скидками на проезд: в основном это пассажиры от 19 до 30 лет, процент информированности о скидках составил 47%, а процент пассажиров, пользующихся скидкой, 40%. В результате на один поезд со скидкой на верхние полки в купейном вагоне в установленный период будут куплены лишь 18% от всех заявленных. Что составляет всего лишь 2% от общего количества пассажиров, перевезенных поездами формирования Дальневосточного филиала АО «ФПК». Спрос на вагоны СВ в регионе достаточно низок и востребованы они лишь на направлениях Хабаровск – Владивосток и Хабаровск – Благовещенск, поэтому предоставлением 10% скидки воспользовались 8% пассажиров, 20% скидкой, выкупив целое купе в одну сторону - 6%, 30% скидки на проезд, выкупив целое купе “туда-обратно” воспользовались 3% от общего количества перевезенных пассажиров поездами формирования АО “ФПК” Двост. Предоставлением аналогичной скидки на проезд в купейных вагонах воспользовались большее число пассажиров, это связано с тем, что в последнее время спрос на купейные вагоны в регионе возрос. Таким образом, предоставлением 10% скидки воспользовались 13% пассажиров, 20% скидкой, выкупив целое купе в одну сторону - 9%, 30% скидки на проезд, выкупив целое купе “туда-обратно” воспользовались 5% от общего количества перевезенных пассажиров поездами формирования АО “ФПК” Двост. Таким образом, для регионов с большой площадью территории, низкой плотностью населения и слабым уровнем развития транспортной сети эффективность от реализации данных программ низкая, что и показал анализ их применения в Дальневосточном регионе. Разработка программ для таких регионов должна учитывать специфику региона, и пересмотра принципов группирования признаков для выделения сегментов с целью определения целевой аудитории на которую направлена та или иная маркетинговая программа.

Для сегментации рынка услуг в пассажирских перевозках принято использовать следующие признаки: цель поездки, дальность, частота поездки, род деятельности, пол, возраст, среднемесячный доход потребителей, отношение их к характеристикам и параметрам основной услуги – перевозке и набором сопутствующих и дополнительных услуг. В сфере обслуживания для маркетологов представляет интерес то, что потребители, принадлежащие к одному сегменту рынка, обычно характеризуются сходными поведенческими особенностями, в том числе и покупательским

поведением.[1] Обслуживание одной и той же программой потребителей из разных сегментов недопустимо, как по этническим и психологическим мотивам, так и по покупательским особенностям разных слоев общества. Нахождение диаметрально противоположного потребителя в кругу другого может привести к потере пассажира. Исследования показали, что на Дальнем Востоке большое значение для сегментации имеет дальность поездки, цель поездки и среднемесячный доход, которые определяют требования пассажиров к поездке. Причем для сегментации пассажиропотока все эти три признака должны учитываться одновременно. Эффективность работы компании зависит от эффективности курсирования каждого из поездов, при назначении которого определяющим является такое формирование композиции состава поезда при котором удовлетворение спроса пассажиров будет максимальным. Незначительное количество поездов в регионе (1-2 поезда на направление) затрудняют организацию перевозки пассажиров в соответствии с потребностями каждого из сегментов. Поэтому должна быть обеспечена возможность максимального удовлетворения спроса каждой группы населения в одном поезде. Эффективность применения маркетинговых программ может быть повышена, если при их разработке учитывать адресность. Маркетинговые программы следует направлять на группу потребителей со схожими чертами и признаками по сочетанию не одного, а нескольких факторов. Только при совокупности нескольких признаков сегментирования пассажиропотока эффективность от применения программ принесет положительный результат. Сегментация пассажиропотока по спросу на места по типам вагонов, имеет очень важное значение. Имея относительно небольшой пассажиропоток у компании нет возможности формировать поезда для людей имеющих разный доход, то есть одни поезда из вагонов категории купе и люкс, а другие из вагонов категории плацкарт и общих. Поэтому, не одним, а сочетанием групп факторов должны разрабатываться и запускаться механизмы привлечения пассажиров на железнодорожный транспорт.

Так спрос на места по типам вагонов зависит от жизненного уровня населения, как в пункте отправления, так и в пункте назначения поезда. Например, поезда сообщением Хабаровск - Владивосток и Хабаровск - Тихоокеанская, имея примерно одинаковое расстояние, нахождение поезда в пути следования и потребителей с относительно равным доходом, имеют совершенно различный спрос на места по типам вагонов и потребностями в дополнительных услугах, которые зависят от цели поездки в различные периоды года. Например, в период с сентября по май ("непиковый" период) на рассматриваемом направлении спрос на купейные и плацкартные вагоны стабилен, потому что основные цели в данный период – это деловые поездки. [3] Летом существенно возрастает спрос на плацкартные вагоны в связи с массовым периодом отпусков. Аналогично была произведена сегментация на других направлениях, далее был произведен более узкий отбор в каждой группе пассажиров по таким признакам, как цель поездки, среднемесячный доход и возраст пассажира. Исследования на основных направлениях следования пассажиров в регионе показали, что спрос на места в вагоны категории плацкарт на направлениях Хабаровск – Чегдомын составляет 60%, Хабаровск – Комсомольск-на-Амуре составляет 51%, Хабаровск – Нерюнгри составляет 67%, на направлениях Хабаровск – Владивосток, Хабаровск – Благовещенск спрос на вагоны плацкарт снижается и возрастает спрос на вагоны категории купе и люкс.

Удовлетворение спроса на места по типам вагонов может быть затруднено наличием парка подвижного состава соответствующего типа. В зависимости от социальной обстановки в стране у пассажиров, стоящих в одном сегменте, меняется спрос на места по типам вагонов. Так например, в Дальневосточном регионе с 2009 по 2012 г. г. спрос на плацкартные вагоны превышал спрос на купейные, с 2012 по 2013 г.

г. возрос спрос на купейные вагоны, а с 2014 года опять происходит повышение спроса на плацкартные вагоны. Дефицит парка подвижного состава затрудняет реагирование компании на изменение спроса клиентов. Поэтому, для удовлетворения спроса пассажиров необходимо применять маркетинговые программы для того чтобы снизить нагрузку на недостающий тип вагона и привлечь пассажиров в избыточный тип вагона.

При возрастании спроса на плацкартный вагон необходимо предоставлять скидки на верхние полки в купейном вагоне с расширением аудитории в регионах с малой плотностью населения. Для повышения населенности в плацкартных вагонах дифференцировать цены на проезд в зависимости от расположения места в вагоне то есть снизить стоимость проезда на невостребованные места. Так например в поезде сообщением Хабаровск – Комсомольск-на-Амуре с помощью анкетирования анкетирования проведен опрос пассажиров в «непиковый» период. Процентное распределение ответов респондентов в поезде на вопрос – «Что позволило бы вам использовать железнодорожный транспорт чаще», показало что 53% респондентов пользовались бы железнодорожным транспортом чаще если бы цена на проезд была ниже. На основании ответов респондентов предложено снизить цены на проезд на невостребованные пассажирами места:

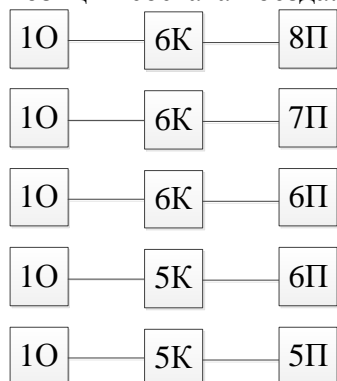
- верхние полки – на 20%;
- верхние боковые полки – на 40%;
- верхние места возле туалета приравнять к стоимости проезда в областном вагоне.

Применение данных мероприятий позволило улучшить коэффициент использования вместимости на 7% и как следствие повышение доходов от курсирования данного поезда.

Снижению расходов при организации пассажирских железнодорожных перевозок способствует оперативное регулирование. Оперативное регулирование путем изменения композиции составов поездов должно производиться на основе тщательных исследований потенциального пассажиропотока, чтобы найти максимальное соотношение по роду подвижного состава в поезде, и тем самым повысить населенность поездов.

Например, поезд 113/114 назначением Хабаровск – Тихоокеанская является круглогодичным, время нахождения в пути – 14 ч 36 мин. В поезде 113/114 назначением Хабаровск – Тихоокеанская в «пиковый» и «непиковый» период определена минимально допустимая вместимость поезда, которая составляет 55%.

Для поезда 113/114 назначением Хабаровск – Тихоокеанская изменяем количество вагонов в составе, но при этом первоначальная степень вместимости останется без изменения, следовательно, доход также не изменится. Возможны следующие варианты композиции состава поезда:



О – общий вагон; К – купейный вагон; П – плацкартный вагон.

Произведенные расчеты показали, что с уменьшением количества вагонов расходы уменьшаются, а степень вместимости увеличивается, при первоначальном числе пассажиров, также имеется запас доходов на случай если часть пассажиров уйдет. Запас составляет для 14 вагонов 3,2%, т.е. доходы покрывают расходы при 55,8% вместимости состава. Запас для 13 вагонов составляет 7,2%, доходы покрывают расходы при 57,8% вместимости состава. Запас для 12 вагонов составляет 11,2%, доходы покрывают расходы при 59,8% вместимости состава. Запас для 11 вагонов составляет 15,2%, доходы покрывают расходы при 60,8% вместимости состава в соответствии с рисунком 1.

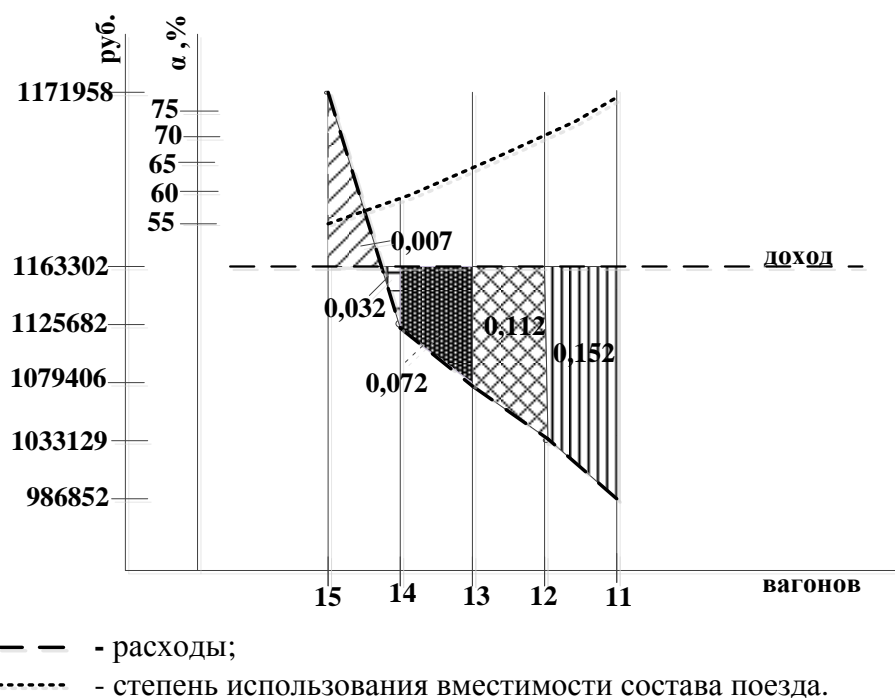


Рисунок 1 – Изменение количества вагонов в составе поезда 113/114 Хабаровск-Тихоокеанская

Следует учитывать, что имеется несколько вариантов композиции состава, то в зависимости от спроса на тот или иной тип вагона можно определить степень вместимости состава, при котором доходы будут покрывать расходы, и количество пассажиров, которые могут уйти при данной композиции состава. При изменении типов вагонов в составе поезда необходимо учитывать спрос пассажиров на ту или иную категорию вагонов. Изменение композиции состава поезда при снижении пассажиропотока возможно производить пока не будет достигнуто минимально допустимое количество вагонов в составе поезда. [2]

Заключение:

Исследованиями установлено, что из-за специфических особенностей региона, применение маркетинговых программ разрабатываемых АО «ФПК» на Дальнем Востоке составляет от 2 до 5% пассажиров перевозимых поездами формирования Дальневосточным филиалом АО «ФПК», поэтому предлагается детализировать целевую аудиторию путем группирования признаков применяемых для сегментирования. Предложенные мероприятия позволят повысить процент использования маркетинговых программ до 15% пассажиров.

Дифференцирование цен в плацкартных вагонах в зависимости от их расположения позволит увеличить коэффициент использования вместимости в

плацкартных вагонах на 5%, в результате чего повысятся доходы от курсирования поезда.

Снижение расходов за счет применения регулировочных мероприятий и применения сегментации по типам вагонов позволит определить из каких вагонов формировать композиции составов поездов, таким образом, при котором будет обеспечен максимальный коэффициент использования вместимости каждого типа подвижного состава. Данные исследования актуальны для регионов с большой площадью и низкой плотностью населения, где услуги перевозки нерентабельны в рамках транспортного бизнеса.

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4. <http://www.rzd.ru/>

Влияет ли структура городской системы на экономический рост?¹

В работе изучается уровень и изменение в межрегиональных различиях городской системы страны и оценивается влияние урбанизации и городской структуры на показатели экономического развития. Анализируются доля городского населения, средний размер города, доля населения, проживающего в крупнейшем городе, отношение численности самого большого и самого малого города, вариация размера городов и индекс Херфиндаля-Хиршмана. Влияние городской структуры на продуктивность изучается на основе регрессионных оценок. Анализ выявил значительные различия в уровне урбанизации и в структуре городской системы регионов. Оценки показали положительное влияние урбанизации на развитие территорий, при этом высокий уровень концентрации городского населения оказывает негативное влияние, а разнообразие городской системы является положительным фактором.

Ключевые слова: *городская система, межрегиональные различия, экономическое развитие, эмпирический анализ*

¹ Работа выполнена при финансовой поддержке РФФИ, грант № 14-06-00114.

1. Введение

Одной из глобальных тенденций последнего столетия в пространственной организации экономической активности является быстрый рост городов и городского населения. В 1900 году горожане составляли 13% населения планеты, в 1950 г. – 29%, в 1990 г. – 46%, а в 2010 г. – уже больше половины. В городах и агломерациях сосредоточены финансовые, инфраструктурные и интеллектуальные ресурсы, их роль особенно значима в условиях акцента на экономику знаний и на инновационное развитие. Этими фактами объясняется рост не только академического, но и политического интереса к вопросам урбанизации. Примерами практических мероприятий в нашей стране являются разработка "дорожной карты" "Развитие агломераций в Российской Федерации", выделение пилотных агломераций и попытки разработки методики делимитации агломераций. Незавершенность мероприятий федеральных государственных органов в решении вопросов развития городской системы, попытки использовать региональное и местное экспериментирование для выявления эффективных моделей управления являются сигналом запроса на изучение механизмов развития городов и последствий изменений в городской системе России.

Исследовательский интерес к теме урбанизации растет, но остается много вопросов, которые не получили однозначного ответа в литературе, и одним из них является оптимальное для общества распределение размеров городов и то, как оно должно эволюционировать. Данная проблема связана с тем, что концентрация ресурсов, населения и активности в городах несет не только экономические и социальные выгоды, но накладывает и издержки. Появление направления, посвященного изучению системы городов, связано с работой Д.Хендерсона (Henderson, 1974), где дано объяснение концентрации деловой активности в городах, обоснование структуры городов опирается на концепцию внешних эффектов А.Маршалла. Пространственная близость экономических агентов в городах снижает издержки взаимодействия агентов, благодаря широкому рынку позволяет использовать эффекты масштаба, расширяет рынок труда и снижает барьеры распространения инноваций. Экстерналии, несовершенство конкуренции и возрастающая отдача от масштаба рассматриваются в качестве ключевых элементов в теории пространственной агломерации и являются центральным звеном в объяснении эволюции системы городов. В модели с эндогенным числом городов (Anas, 2004) пространственная структура экономики не фиксируется и допускается, как исчезновение, так и появление городов. Задача определения траектории развития городской системы для фиксированной величины населения состоит в поиске оптимального размера города, при котором достигается максимум общественной полезности. Основным результатом модели является вывод о колоколообразной зависимости между населением и размером города. Для очень малой и очень большой численности населения оптимальной является система городов с минимально допустимым размером. Выгоды большого рынка оказываются меньше издержек в этих крайних ситуациях, и формирование агломераций не происходит. В середине интервала эффективным является система с небольшим числом крупных городов.

Несмотря на рост числа публикаций в последние десятилетия, теория системы городов пока не дала однозначных объяснений относительно оптимального размера и количества городов в экономике. Свойства равновесий теоретических моделей не всегда находят подтверждения в наблюдаемых фактах. Например, в реальности существует большое число крупных городов и агломераций, и предположение о долгосрочной и устойчивой их неоптимальности нельзя считать обоснованным. Еще одним примером является давно выявленная и описанная эмпирическая закономерность в распределении размера городов, которая имеет универсальный характер и подтверждается, как для

развитых, так и для развивающихся странах. Она известна как закон Ципфа или правило «ранг-размер», в соответствии с ним распределение размера городов характеризуется иерархической структурой с небольшим числом крупных и значительным количеством малых городов. Этому феномену предложена интерпретация с использованием аппарата процессов случайного роста (Gabaix, 1999), но пока не дано обоснования в рамках экономической теории. Остается без объяснений и тот факт, что распределение размеров городов меняется во времени, в определенные периоды растет число крупных городов, эта тенденция сменяется ростом числа средних, а затем малых городов, это явление получило название дифференциальной урбанизации (Трейвиш, 2009).

Изучение городской системы относится к активно развивающимся направлениям исследований в мировой экономической литературе, при этом работ, посвященных российским городам, немного. Проблемы урбанизации в России исследовались в основном демографами и географами. Классические работы в этой области созданы Г.Лаппо, который еще в 90-х гг. высказывал озабоченность торможением процессов агломерации (Лаппо, 1999). А.Трейвиш и Нефедова Т. применили теорию дифференциальной урбанизации в отношении крупных регионов России (Нефедова и Трейвиш, 2002). Зайончковская Ж. оценивала миграционную подвижность населения и ареал притягательности крупных городов на базе социологических исследований (Зайончковская и Ноздрин, 2008). Экономический анализ урбанизации представлен небольшим числом исследований. В. Лексин обращал внимание на концентрацию экономического и социального потенциала в административных центрах субъектов Российской Федерации и в немногих крупных городах, он относил административный ресурс в «региональных столицах» к дополнительному фактору усиления регионального неравенства (Лексин, 2006, 2009). Н. Зубаревич исследовала динамику экономического развития крупных городов России, рассматривая данные по удельному весу городов в регионах (Зубаревич, 2006). Коллектив авторов из Института народнохозяйственного прогнозирования РАН (Белкина и др., 2011) представил анализ основных характеристик и проблем городов России последнего десятилетия.

Данная работа дополняет изучение проблем развития городской системы России, в ней рассматривается изменение в неоднородности городской системы страны и оценивается влияние городской структуры на показатели и динамику экономического развития регионов. Различные аспекты межрегиональных различий в России являются темой многих публикаций, однако неоднородность городских систем субъектов Российской Федерации оставалась до последнего времени за рамками исследовательского интереса. При этом если принять утверждение агломерационной экономики, что пространственная концентрация ресурсов в значительной мере определяет уровень и эффективность производственной активности, то достаточно естественным является предположение о связи развития регионов с их внутренними характеристиками урбанизации.

Анализ свойств равновесий целого ряда моделей агломерационной экономики приводит к заключению о колоколообразной зависимости между пространственной концентрацией активности и показателями производительности. Этот теоретический вывод согласуется с наблюдаемыми фактами и утверждениями о противоречивости последствий урбанизации. Положительными результатами урбанизации являются возможность использования большого и гибкого рынка, сочетания разнообразных факторов производства, экономия издержек на совместном использовании инфраструктуры и близости контрагентов, низкие барьеры в распространении инноваций и обмене информацией. Однако быстрый рост городов сопровождается возникновением дефицита немобильных факторов производства, ростом нагрузки на

транспортную инфраструктуру, ухудшением экологической обстановки и обострением социальных проблем. Аргументом в поддержку неоднозначного влияния урбанизации на экономический рост территории в целом является тот факт, что развитие города происходит не только благодаря внутренним ресурсам, но в большей мере за счет внешних источников. Миграция населения из малых и средних городов, концентрация бизнеса, и аккумуляция финансовых и инвестиционных ресурсов в крупных городах может привести к высокому межрегиональному неравенству, возникновению стагнирующих и депрессивных территорий, «экономических пустынь» вокруг городов.

Одно из объяснений этим процессам представлено в рамках концепции поляризованного развития, где предполагается, что пространство развивается по оси центр-периферия. Центры, которыми выступают, главным образом, крупные города передают импульсы развития периферии, создавая эффект распространения, но при этом и сдерживают ее развитие, отвлекая наиболее качественные ресурсы и генерируя эффект поляризации. В зависимости от того, какой эффект преобладает, экономический рост может сопровождаться как усилением, так и некоторым ослаблением пространственного неравенства. Однако слишком высокий и нарастающий уровень различий может быть свидетельством того, что эффект распространения отсутствует, периферия развивается слишком медленно или стагнирует, и истощение ее ресурсов, достигшее определенного уровня, может стать препятствием как для усвоения ею импульсов развития в будущем, так и для развития самого центра. Кроме того стягивание экономической активности в региональные центры существенно меняет механизмы взаимодействия, конкуренция небольшого числа городов увеличивает координацию, но при этом сокращает возможности маневра и гибкости.

Учитывая неоднозначность последствий увеличения размера города, логично в качестве тестируемой принять гипотезу о нелинейности связи между уровнем концентрации городского населения и результатами экономического развития регионов. Сосредоточение промышленной активности в одном городе может усиливать отрицательные эффекты урбанизации, так как решение инфраструктурных, экологических и социальных проблем большого города отвлекает ресурсы и снижает темпы развития. Городская же система, представленная исключительно малыми и средними городами, не позволяет использовать преимущества агломерации и ограничивает возможности эксплуатации эффектов масштаба. Очевидно, что доминирование тех или иных эффектов зависит от этапов и особенностей развития страны, от сети пространственных связей, ее плотности и структуры, а также от функций крупных городов. И, несмотря на присутствие некоторых универсальных свойств, сочетание выгод и издержек урбанизации в каждой стране имеет свою специфику. Оценим уровень и тенденции в неоднородности городской системы в Российской Федерации и проанализируем ее влияние на показатели регионального развития.

2. Анализ межрегиональной неоднородности городской системы в России

Изучение городской системы России опирается на два эмпирических источника: официальные данные Федеральной службы государственной статистики и отчеты одной из баз данных Мультистата «Экономика городов России». Информация об общей численности населения и доли городского населения в регионах страны представлена в публикациях Росстата, данные по отдельным городам получены из базы Мультистат. Сочетание этих двух источников позволяет провести анализ внутренней структуры городской системы каждого отдельного региона и оценить степень межрегиональной неоднородности в стране. Из анализа исключены два субъекта Российской Федерации: город Москва и город Санкт-Петербург, так как, во-первых, их включение искусственно

добавляет лишнюю вариацию и, во-вторых, в данном случае структурные характеристики урбанизации зафиксированы, а это будет вносить искажение в анализ. Для изучения выбран период с 2003 по 2012 гг., так как в это время серьезных макроэкономических потрясений в стране не наблюдалось, и изменения в городской системе страны можно связывать с общими тенденциями в пространственной организации экономической активности в стране.

Регионы России имеют существенные различия в уровне урбанизации (Табл. 1), что отчасти связано с природно-климатическими условиями и возможностями осуществления сельскохозяйственной деятельности. Минимальный уровень урбанизации был и остается в Республике Ингушетия. В группу, где городские жители составляют меньше половины населения, также входят Республика Дагестан, Карачаево-Черкессия и Республика Калмыкия. Самый высокий показатель урбанизации имела и сохранила Магаданская область. Выше 90% долю городского населения имеют также Мурманская область и Ханты-Мансийский Автономный Округ. Несмотря на рост размаха вариации доли городского населения, который вырос из-за снижения минимального значения и роста максимального, общая межрегиональная неоднородность урбанизации в стране снизилась за рассматриваемый период. Это произошло, как за счет роста среднего уровня урбанизации в стране, так и благодаря некоторому снижению стандартного отклонения этого показателя.

Таблица 1

Различия в доли городского населения в регионах России

	2003	2012	Δ 2003-2012
Минимальное значение, %	41,4	39,2	-2,2
Максимальное значение, %	92,2	95,7	3,5
Стандартное отклонение	11,3	11,2	-0,1
Среднее значение, %	69,2	69,9	0,7
Коэффициент вариации	16,4	16,1	-0,3

Источник: составлено по данным Росстата.

Одним из результатов агломерационной экономики является вывод о ключевой роли эффекта масштаба, который определяет динамику и пространственную структуру развития. При этом межрегиональные различия в агломерационном потенциале городов в России – очень большие, средний размер города в стране варьируется от 7-8 тысяч до 225-230 тысяч жителей, разница составляет почти 40 раз, и эти различия сохраняются. Рост городского населения за рассматриваемый период был незначительным, и он не вызвал существенных изменений в агломерационных процессах, средний размер города за рассматриваемый период практически не изменился в стране. Несколько увеличилось минимальное значение (Чукотский Автономный Округ), сократилось максимальное (Самарская область), но различия между регионами в среднем размере города практически не изменились за 10 лет (Табл. 2).

Таблица 2

Различия в среднем размере города в регионах России

	2003	2012	Δ 2003-2012
Минимальное значение, чел.	7367	7930	563
Максимальное значение, чел.	227846	226208	-1638
Среднее значение	78194	78142	-52
Стандартное отклонение	39097	39618	521
Коэффициент вариации	50,0	50,7	0,7

Источник: составлено по данным Росстата и базы данных «Экономика городов России».

За дифференциацией в средних характеристиках, как правило, стоят и большие индивидуальные различия, в этой связи интерес представляет степень однородности внутри-региональной структуры городов в России. Представление о концентрации городского населения дает доля горожан, проживающих в самом большом населенном пункте региона (Табл. 3). Размах вариации этого показателя в России достигает 90% и меняется от 4% (Московская область) до почти 95% (Магаданская область). Но заметных изменений и в среднем уровне и в дисперсии данной характеристики в рассматриваемом периоде не наблюдается. Произошло лишь небольшое увеличение среднего значения при неизменном стандартном отклонении, что привело к некоторому снижению коэффициента вариации.

Таблица 3

Различия в доли городского населения, проживающего в самом крупном городе в регионах России

	2003	2012	Δ 2003-2012
Минимальное значение, %	4,0	4,2	0,2
Максимальное значение, %	93,2	94,8	1,6
Стандартное отклонение	18,3	18,3	0,0
Среднее значение, %	54,7	56,0	1,3
Коэффициент вариации	33,4	32,6	-0,8

Источник: составлено по данным Росстата и базы данных «Экономика городов России».

Внутри-региональную неоднородность городских поселений можно описать с помощью нескольких характеристик, отношение численности населения самого большого к самому малому городу дает представление о размере различий (Табл. 4). Степень разнообразия городской системы можно оценить на основе традиционных индексов диверсификации: индекса Херфиндаля-Хиршмана распределения городского населения и коэффициента вариации размера городов в регионе (Табл. 5).

Таблица 4

Различия в отношении численности населения самого большого города к самому малому городу в регионах России

	2003	2012	Δ 2003-2012
Минимальное значение, %	2,2	2,8	0,6
Максимальное значение, %	484,9	564,1	79,2
Стандартное отклонение	93,0	100,8	6,8
Среднее значение, %	80,1	85,3	5,2
Коэффициент вариации	116,1	118,2	0

Источник: составлено по данным Росстата и базы данных «Экономика городов России».

Если предыдущие характеристики городской системы демонстрировали различия в разы и десятки раз, то разница в отношении населения самого большого к населению самого малого города в регионе достигает сотни раз. Минимальное значение растет от 2.2 до 2.8 раз (Чукотский АО), а максимальное меняется от 485 до 564 раз (Нижегородская область). Отчасти этот феномен связан с тем, что в России сохраняется значительное число поселений, которые формально не отвечают определению города по параметру численности населения², но сохранили городской статус благодаря историческим причинам. Однако минимальное и максимальное значения не являются

² В соответствии с российским законодательством населенный пункт может получить статус города, если он имеет численность населения больше 12 тыс. человек при этом менее 15% его жителей заняты в сельском хозяйстве.

выбросами в рассматриваемом распределении, и следует признать, что размах в межрегиональных различиях в городской системе России – большой и разрастающийся.

Таблица 5

Различия в неоднородности региональных городских систем в России

	2003	2012	Δ 2003-2012
Коэффициент вариации размера городов			
Минимальное значение	0,354	0,501	0,147
Среднее значение	1,586	1,637	0,051
Максимальное значение	2,799	2,784	0,015
Индекс Херфиндаля-Хиршмана распределения городского населения			
Минимальное значение	0,021	0,022	0,001
Среднее значение	0,371	0,384	0,013
Максимальное значение	0,873	0,902	0,029

Источник: составлено по данным Росстата и базы данных «Экономика городов России».

Растет и неоднородность внутри региональной городской структуры, максимальное значение коэффициента вариации увеличивается существенно, при этом минимальное значение сокращается незначительно, среднее значение несколько выросло (Табл. 5). Индекс Херфиндаля-Хиршмана, который традиционно характеризует уровень диверсификации, можно в рассматриваемом контексте использовать для оценки степени «равномерности» распределения населения по городам, чем он меньше, тем меньше различий в размере городов региона. За 10 лет средний его уровень немного увеличивается, минимальное значение практически не меняется, а максимальное увеличивается заметно (Табл. 5).

В литературе выдвигаются противоречивые предположения относительно влияния неоднородности городской структуры на динамику экономического развития. С одной стороны, так как различия предполагают наличие как больших, так и малых городов, то работа агломерационных сил и эффект масштаба городской системы снижается. С другой стороны, существует гипотеза, что для разных видов деятельности оптимальные размеры экономики и рынка могут различаться, соответственно, диверсифицированная городская структура обладает гибкостью, предлагая выбор производителям и потребителям для разных вариантов размещения.

Подводя итог полученным эмпирическим оценкам можно сделать следующие заключения. Во-первых, регионы России сильно различаются по размеру городской системы, во-вторых, структура региональных городских систем характеризуется значительной неоднородностью, это относится к концентрации городского населения и к разнообразию размеров городских поселений.

Свойство разнообразия и неоднородности экономических систем имеет как преимущества, так и недостатки. В отношении городской системы на стороне выгод находится эффект большого рынка и концентрации ресурсов, на стороне издержек возникают конкуренция за немобильные ресурсы и социальные проблемы. Ниже приводятся регрессионные оценки, с помощью которых выявляется результат взаимодействия противоречивых влияний урбанизации и ее структуры на экономические показатели развития регионов России.

3. Оценка влияния урбанизации и ее структуры на экономическое развитие регионов

Спецификация регрессионной модели использует подход расширенной агрегированной производственной функции, где в качестве зависимой переменной рассматривается валовая добавленная стоимость, ключевым фактором развития

является капитал, а дополнительными переменными выступают характеристики урбанизации и ее структуры. Уровень урбанизации оценивается с помощью доли городского населения в регионе, так как предполагается, что эффекты урбанизации – неоднозначны, то может иметь место нелинейная связь между производительностью и урбанизацией, поэтому следует предположить зависимость, предусматривающую замедление положительной отдачи от урбанизации и переключение на отрицательное влияние. Такой эффект дает комбинация линейной функции и перевернутой параболы, и ожидается положительный коэффициент при линейной зависимости и отрицательный - при переменной урбанизации в квадрате.

Важной характеристикой структуры урбанизации является доля городского населения, проживающего в крупнейшем населенном пункте, этот показатель характеризует уровень концентрации городской экономики. Влияние данной переменной может быть как положительным, так и отрицательным, с одной стороны большой внутренний рынок дает определенные преимущества, с другой стороны отсутствует городская периферия, которая выступает источником внешних ресурсов развития и является площадкой, куда распространяются адаптированные инновации, и может перемещаться бизнес, не выдерживающий конкуренции в крупном городе.

Для оценки степени неоднородности и разнообразия используются такие статистические показатели, как коэффициент вариации и индекс Херфиндаля-Хиршмана. Так как в данном случае также имеют место, как положительные, так и отрицательные эффекты на общую производительность, то результирующее влияние определяется доминирующими в экономике страны механизмами.

Таким образом, оценивалась следующая регрессионная модель:

$$Y_{it} = \alpha + \beta_1 \cdot C_{it} + \beta_2 \cdot U_{it} + \beta_3 \cdot U_{it}^2 + \beta_4 \cdot VC_{it} + \beta_5 \cdot V_{it} + \beta_6 HH_{it} + \mu_i + \lambda_t + \varepsilon_{it},$$

где

C_{it} – основные производственные фонды региона i в году t ;

U_{it} – доля городского населения в общем населении региона i в году t ;

U_{it} – доля городского населения, проживающего в крупнейшем городе региона i в году t ;

V_{it} – коэффициент вариации населения городов региона i в году t ;

HH_{it} – индекс Херфиндаля-Хиршмана для распределения городского населения по городам региона i в году t .

Благодаря тому, что данные имеют панельную структуру, имелась возможность контролировать региональный эффект (μ_i) и временной эффект (λ_t). Оценивалась модель с фиксированными эффектами, так как в ней предположения об ошибке менее жесткие, чем в модели со случайными эффектами. Результаты оценивания приведены в Табл. 6.

Таблица 6

Результаты регрессионных оценок

Независимые переменные	коэффициент	стандартная ошибка	P-value
Основные производственные фонды	0,282	0,005	0,000
Доля городского населения	34,15	18,99	0,073
Доля городского населения в квадрате	-0,237	0,134	0,080
Доля городского населения, проживающего в крупнейшем городе	-32,23	8,980	0,000
Коэффициент вариации	22,26	2,784	0,000
Индекс Херфиндаля-Хиршмана	-30,63	5,240	0,000
R^2_{within}		0,85	

Источник: расчеты автора

Все включенные в модель характеристики урбанизации можно считать статистически значимыми. Расчеты подтвердили предположение о нелинейной зависимости продуктивности региональной экономики от уровня урбанизации. Коэффициент при доли городского населения в регионе - положительный, а при переменной доли городского населения в квадрате – отрицательный. Такая зависимость предполагает замедляющийся темп роста, а начиная с определенного уровня – отрицательный вклад роста урбанизации в показатель общей добавленной стоимости.

В соответствии с полученными оценками, высокий уровень концентрации городского населения оказывает негативное влияние на показатели развития региона в целом. Коэффициент при переменной доли горожан, проживающих в крупнейшем городе, оказался отрицательным. При этом разнообразие и неоднородность городской системы являются положительными факторами регионального роста, предоставляя ресурс взаимодействия центра и периферии и расширяя выбор в решении вопросов размещения. Рост коэффициента вариации и снижение индекса Херфиндаля-Хиршмана оказывают положительное влияние на продуктивность экономики регионов.

4. Заключение

Эмпирический анализ городской системы России показал, что в стране имеют место значительные различия и в уровне урбанизации и во внутренней структуре городской системы регионов. Доля городского населения отличается в разы, средний размер города – в десятки раз, а различия в самых малых и самых больших городах в регионах – в сотни раз. Но при этом межрегиональная неоднородность городской системы в рассматриваемом периоде не демонстрирует существенной динамики, нельзя сделать заключение о присутствии тенденции к дивергенции, но конвергенции тоже не наблюдается.

Таким образом, регионы имеют большие и несокращающиеся различия, как в агломерационном потенциале, так и в его составе, что выступает одним из факторов устойчивых социально-экономических различий субъектов Российской Федерации, так как города являются местом концентрации динамичных секторов развития, выступают основными генераторами инноваций и экономики знаний. Эффекты урбанизации для экономического развития – неоднозначны, но в настоящее время в России положительные эффекты доминируют над отрицательными.

На экономическое развитие территории влияет не только уровень урбанизации, но и структура городской системы, ее разнообразие оказывает положительное влияние на показатели общей региональной продуктивности. Большие городские центры имеют возможность использовать ресурсы малых и средних городов, окружающие территории в свою очередь используют положительные импульсы развития большого города. Появляется возможность маневра в размещении различных производств и гибкость в использовании преимуществ экономик разного размера.

В условиях большого разнообразия городских систем в регионах универсальная пространственная политика в стране, очевидно, оказывается неэффективной. В данном случае необходимо изучать опыт регионального и муниципального экспериментирования и использовать возможности децентрализации, которые предоставляет федеративная форма государственного устройства России.

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М. В. Курбатова, Кемеровский государственный университет
kurbatova-07@mail.ru

Е. С. Каган, Кемеровский государственный университет
kaganes@mail.ru

Оценка последствий использования инструментов нового государственного менеджмента для деятельности преподавателей вузов¹

В настоящее время правительства разных стран проводят демонтаж ранее сложившейся системы государственного регулирования общественного сектора и ее замену квазирыночными структурами. В современных исследованиях подобные преобразования рассматриваются как своевременная реформа, акцент делается на замещении бюрократического управления механизмами конкуренции и современными менеджеральными инструментами. В России эффекты подобной реформы уже сказываются на деятельности преподавателей вузов. Цель исследования – описание, систематизация и оценка степени значимости эффектов внешнего контроля деятельности преподавателей вузов. В данной статье приведены: итоги серии полустандартизованных интервью с преподавателями вузов, по результатам которых была построена иерархическая модель данных эффектов, а также результаты оценки степени значимости этих эффектов, полученные в результате экспертного опроса.

Ключевые слова: *новый государственный менеджмент, квазирынок, метод анализа иерархий, формализация деятельности, внешний контроль, академические стандарты.*

¹ Выполнено при поддержке РФФИ, проект № 14-06-00251

В последние десятилетия коренным образом изменилась государственная политика в отношении высшего образования. Эти изменения оказались частью общих программ повышения эффективности общественного сектора, ставших актуальными в условиях превращения сфер производства человеческого капитала (прежде всего образования и здравоохранения) в самостоятельные отрасли производства услуг для домохозяйств, фирм и государства, инвестирующих в человеческий капитал. С 1970-х годов правительства разных стран начинают демонтаж ранее сложившейся системы государственного регулирования данного сектора и ее замену квазирыночными структурами.

В современных исследованиях экономики образования подобные преобразования подаются как своевременная и прогрессивная реформа, акцент делается на замещении бюрократического управления механизмами конкуренции и современными менеджеральными инструментами. Так, Ле Гранд Д. показывает преимущества модели «невидимой руки» выбора и конкуренции как средства предоставления общественных услуг (Ле Гранд Д., 2011). Крулл В. отмечает, что «система политического и финансового патроната» государства над вузами замещается «контрактным партнерством», основанным на применении процедур бюджетирования, индикаторов результатов деятельности, методик оценивания и бенчмаркинга (Крулл В., 2011, с. 155).

В современных институциональных исследованиях обращается внимание на то, что в общественном секторе приемы оценки результатов и повышения эффективности деятельности организаций и работников, характерные для частного сектора, нередко дают результаты, отличные от ожидаемых. Дело в том, что превращение вузов в клиентоориентированные организации, а преподавателей – в наемных работников коренным образом меняет организационную культуру и стимулы деятельности (Дим Р., 2004). Меняется положение преподавателя, «менеджеры начинают играть более важную роль, чем ученые» (Хед С. 2011, с. 289). Происходит замещение стимулов, основанных на действующих неформальных нормах академических стандартов определенного профессионального сообщества, и репутационных механизмов контроля - на стимулы, задаваемые квазирыночными условиями, формируемыми государством и соответствующими им механизмами внешнего оценивания и контроля. Данные механизмы со всех сторон опутывает вузы, подталкивая их работать на показатель, производить «лишь сигнал, т. е. впечатление о благе» (Тамбовцев В. Л., 2006, с. 10). В литературе описываются эффекты, проявляющиеся в странах, внедряющих данные механизмы нового государственного менеджмента, такие как: внесение принципов корпоративных бизнес-отношений в вузовскую среду, усиление зависимости преподавателей от администрации факультетов и вузов, развертывание конкуренции за рабочее место и увеличение нагрузки на преподавателей.

В данном исследовании для проведения комплексной оценки последствий внедрения менеджеральных инструментов внешнего контроля деятельности преподавателей российских вузов используется методика, основанная на применении метода анализа иерархий (МАИ) и аппарата теории нечетких множеств. Выделяются отдельные структурные составляющие (эффекты) внешнего контроля и строится их многоуровневой иерархическая модель. Каждая составляющая этой модели (отдельный эффект) характеризуется степенью значимости (важностью) и степенью выраженности. Оценка значимости компонентов модели производится на основе обработки данных экспертного опроса, полученного методом парных сравнений. Для оценки степени значимости эффекта применяется метод анализа иерархий (МАИ). Для оценки степени выраженности каждой компоненты предполагается провести социологический опрос, результаты которого будут обработаны с использованием аппарата теории нечетких множеств. В данной статье приведены результаты оценки степени значимости отдельных эффектов внешнего контроля деятельности преподавателей вузов.

На первом этапе исследования эффектов внешнего контроля деятельности преподавателей российских вузов была проведена серия полустандартизованных интервью с преподавателями вузов. Респондентам задавались вопросы об особенностях восприятия показателей, целей внешнего оценивания и внутреннего рейтингования, изменениях в содержании деятельности преподавателя и структуре затрат времени на различные виды работ и пр. (Курбатова М. В., Донова И. В., 2015). Обработка текстов интервью позволила построить иерархическую систему эффектов уже идущих и предполагаемых изменений ситуации по итогам реформирования вузов. Модель имеет 3 уровня и систематизирует эффекты разного рода (рис.1). Данные эффекты имеют для преподавателей различную степень значимости, т. е. степени воздействия на их повседневную деятельность. При этом данные эффекты могут иметь разную направленность, как позитивную, так и негативную, например, снижение/рост транзакционных издержек; позитивные/негативные эффекты конкуренции. Главным при оценке степени значимости является сила их воздействия на деятельность преподавателей.

На втором этапе исследования экспертами методом парных сравнений была оценена сравнительная значимость выделенных эффектов. В качестве экспертов были привлечены преподаватели вузов Екатеринбурга, Кемерово, Красноярска, Москвы, Новосибирска, Омска, Санкт-Петербурга. Всего для количественной оценки было использовано 22 интервью экспертов, а с учетом первого раунда интервью для качественного анализа используется 27 интервью.

При анализе полученных результатов следует учитывать следующие обстоятельства. Во-первых, эксперты работают в вузах, разного статуса: в Федеральных университетах, Научно-исследовательских университетах, вузах, занимающих и высокие и низкие места в рейтингах вузов, в филиалах. Во-вторых, эксперты работают в вузах, находящихся на разных стадиях государственной аккредитации (в процессе подготовки, завершения процедур, в середине цикла). В-третьих, эксперты обладают разным формальным и неформальным статусом и опытом работы. Отдельно следует отметить, что среди опрошенных экспертов есть экономисты-институционалисты и социологи, которые предложили собственные обобщения существующих практик.

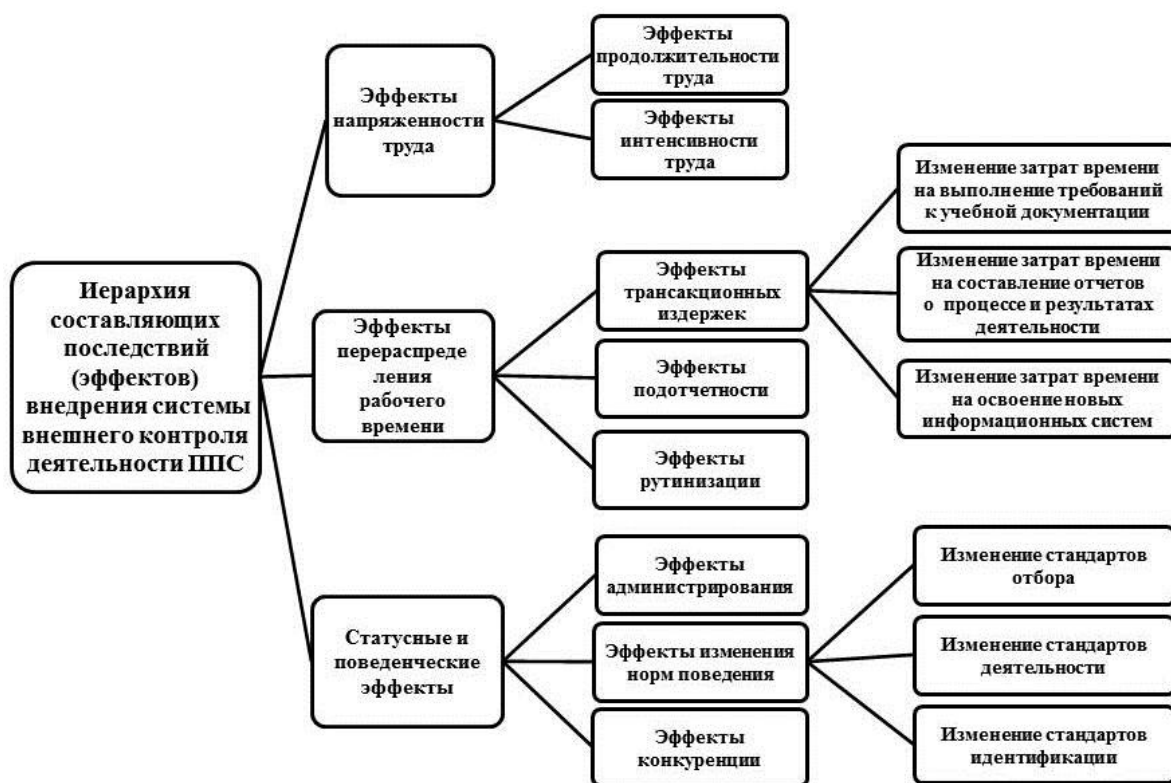


Рис.1. Иерархия составляющих последствий (эффектов) внедрения системы внешнего контроля деятельности ППС

На первом уровне иерархии были выделены 3 типа эффектов:

- Эффекты напряженности труда представляют собой последствия внедрения внешнего контроля деятельности преподавателей вузов, проявляющиеся в изменении объемов затрат труда.
- Эффекты перераспределения рабочего времени представляют собой последствия, проявляющиеся в изменении содержания труда: соотношения между различными направлениями и характером трудовой деятельности.
- Статусные и поведенческие эффекты представляют собой последствия, проявляющиеся в изменениях системы отношений и социально-экономического положения преподавателей вузов.

В результате исследования получены следующие оценки значимости эффектов первого уровня иерархии (см. табл. 1).

Таблица 1 – Оценка степени значимости эффектов первого уровня

№	Эффекты первого уровня иерархии	Степень значимости
1.	Изменения в продолжительности и интенсивности деятельности (эффекты напряженности труда)	0,48
2.	Изменения в содержании деятельности (эффекты перераспределения рабочего времени)	0,27
3.	Изменения в системе отношений и социально-экономическом положении преподавателей вузов (статусные и поведенческие эффекты)	0,25
		1,00

Можно выделить два подхода экспертов к оценке степени значимости эффектов первого уровня:

1. На первое место, с высокой оценкой значимости ставятся эффекты напряженности, а эффекты перераспределения времени характеризуются как результат приспособления к новым условиям и росту затрат времени. Статусные и поведенческие эффекты рассматриваются как вторичные: *«Главное – время. Люди адаптируются. Пытаются действовать по шаблону, экономить время. Статусные и поведенческие эффекты - можно перетерпеть».*

2. На первое место ставятся эффекты перераспределения времени: *«На первом месте перераспределение рабочего времени, а уже как следствие – эффект напряженности труда. А на последнем месте – статусные и поведенческие эффекты. Поскольку мы говорим о внешнем контроле, поскольку это не наша инициатива, то проявляющиеся в культуре изменения – они инерционны, они позже пойдут, они происходят из этого институционального давления, но они отложены по времени».*

Оба подхода экспертов к оцениванию степени значимости эффектов первого уровня исходят из одного и того же посыла – в меняющихся условиях преподаватели делают выбор в пользу работы в вузе. Данный выбор предполагает принятие новых условий либо же уход из вуза: *«Меня ставят в новые условия, и сначала я принимаю эти условия (я же человек свободный, я могу и не работать доцентом, если работаю – значит условия приняты). А вот эти изменившиеся условия, и они же со мной формально согласованы...».*

В свою очередь, суть изменений, по общему мнению экспертов, заключается, в том, что новые требования подотчетности и прозрачности вузов и деятельности преподавателей формируют значительный объем бессмысленной «бумажной работы»: *«Ведь каждый преподаватель имеет свой ограниченный ресурс... И это значит, что он не делает то, что он мог бы сделать. И слишком жирно для квалифицированного преподавателя тратить время на вот это все».* Далее эксперты расходятся в своих оценках. Одни указывают на то, что выполнение преподавателями новых требований идет в основном за счет сокращения свободного времени и роста напряженности труда, другие – в первую очередь за счет перераспределения рабочего времени.

Общее в двух подходах заключается в том, что эксперты оценивают эффекты через призму снижения неденежного вознаграждения своего труда. Дело в том, что структура вознаграждения преподавателя отличается от структуры вознаграждения других работников, во-первых, большей долей неденежного вознаграждения, во-вторых, большой долей в неденежном вознаграждении академического вознаграждения - возможностью относительно свободно распоряжаться рабочим временем в интересах профессиональной творческой деятельности, иметь командировки на конференции, получать оплачиваемые творческие отпуска и т. п. (Курбатова М. В., Левин С. Н., 2013). Различие заключается в том, что изменения в вузах идут разными темпами, поэтому давление и приспособление к меняющимся условиям происходит по-разному.

Полученная общая количественная оценка степени значимости эффектов первого уровня иерархии отразила преобладание следующей логики: в растущей напряженности труда (его продолжительности и интенсивности) концентрируется снижение неденежного вознаграждения преподавателя, связанного с возможностью относительно свободно распоряжаться рабочим временем в интересах профессиональной деятельности, сохранения академических норм и стандартов. Происходят более существенные изменения напряженности труда, обусловленные дополнительными затратами на сохранение на локальном уровне прежних норм работы со студентами, научной деятельности, профессиональных коммуникаций и т. п.: *«У меня приоритет все равно за учебной работой, работой со студентами. А вот все эти бумажки – отчеты, рабочие программы – это ночью, как попало, по остаточному принципу».* Другой эксперт с сожалением отмечает неизбежное сокращение свободного времени и негативные последствия этого

снижения на профессиональную деятельность: «...я считаю, что у нас неправильно выстроена система работы и отдыха».

В вузах, испытывающих меньшее давление и обладающих более сильными академическими традициями, приспособление к более слабому давлению ограничивается перераспределением времени, а рост его затрат еще не стал критичным. Именно эксперты из статусных вузов не отдали приоритет эффекту напряженности труда: «Нет увеличения ни продолжительности, ни интенсивности». И далее: «на первом месте – перераспределение времени за счет увеличения доли очевидно бессмысленной работы. На втором месте статусные, и здесь скорее положительно все, т.е. несмотря на то, что формальность нас сжирает, стали цениться люди, которые реально преподают за рубежом, публикуются, участвуют в реальных международных проектах». Без данных оценок степень значимости эффекта напряженности труда оказалась бы еще выше, что отражает ситуацию, складывающуюся в большинстве российских вузов.

Следует обратить внимание еще на один аспект оценки экспертами степени значимости эффектов первого уровня. В целом, они выразили готовность больше работать в изменившихся условиях. Их выбор профессиональной деятельности в вузе был сделан раньше и уже накоплен достаточный объем специфического человеческого капитала. Уход из вуза в данных условиях чреват более высокими потерями по сравнению с происходящим увеличением напряженности труда, снижением неденежного (академического) вознаграждения и ухудшением соотношения «вознаграждение / затраты труда». Это во многом объясняет достаточно высокую оценку значимости статусных и поведенческих эффектов, лишь немного уступающей оценке эффектов перераспределения времени. В этом вопросе эксперты тоже разошлись в оценках. Позиция, в соответствие с которой значимость статусных и поведенческих эффектов – невысокая, выражена следующим образом: «Не до жиру. Высокая степень загруженности, количество заданий отовсюду, которое приходится выполнять. Некогда задуматься, что происходит с отношениями в вузе». Позиция высокой оценки значимости данных эффектов обосновывается следующим образом: «Для людей, которые работают в образовательных учреждениях и занимаются преподавательской деятельностью, есть ряд причин, по которым статусные и поведенческие эффекты являются единственно определяющими. Они связали свою жизнь с этой деятельностью. Приложили много времени и сил, чтобы подняться в этой системе».

Оценка эффектов второго уровня иерархии позволила выявить значимость более частных эффектов. Остановимся сначала на конкретизации эффектов напряженности труда (см. табл. 2). Эффекты продолжительности труда означают рост/снижение продолжительности рабочего времени за счет свободного (например, удлинение рабочего дня – работа поздно вечером и ночью; работа в выходные и праздничные дни; работа во время отпуска и др.). Более высокую оценку значимости получили эффекты интенсивности труда. Как заметил один из экспертов, для преподавателей вузов пришел эпохи «неторопливого машинописного времени».

Таблица 2 – Оценка степени значимости эффектов напряженности труда второго уровня иерархии

№	Эффекты напряженности труда второго уровня иерархии	Степень значимости
1.	Эффекты продолжительности труда	0,41
2.	Эффекты интенсивности труда	0,59
		1,00

При оценке значимости эффектов напряженности труда эксперты обращают внимание на обусловленность роста напряженности труда факторами непредсказуемости принимаемых решений, постоянными изменениями внешних требований: «Порой даже, сде-

лаешь одно - оказывается это не то, делаешь другое - и опять не то... Все время приходится возвращаться к пройденному этапу»; «и надоедает, когда нужно опять что-то исправлять».

Весьма объемные комментарии экспертов были получены при оценке эффектов перераспределения времени: «отнимает время от работы» (т. е. «бумажные работы» - это не работа, а бессмысленная растрата времени) и «работать стало совсем неинтересно» (т. е. характер преподавательской деятельности меняется, из нее уходит творческое начало). Отмечается общее изменение характера и качества выполняемых преподавателями работ: «Раньше мы собирались, обсуждали методическое обеспечение, что там студентам не хватает, а сейчас нам не до этого»; «И все бы ничего, когда свою работу любишь ... но работать-то не дают со студентами! Всё чего-то надо, пишите, составьте, отчитайтесь... это кошмар, вообще ужас, всё, надоело...»; «Реально страдает научная работа и прежде всего работа со студентами».

Среди эффектов перераспределения рабочего времени существенно большую оценку значимости получили эффекты перераспределения времени между содержательной деятельностью и работой с документами (эффекты транзакционных издержек), эффекты подотчетности и эффекты рутинизации получили примерно одинаковую оценку (см. табл. 3).

Таблица 3 – Оценка степени значимости эффектов перераспределения времени второго уровня

№	Эффекты перераспределения времени второго уровня иерархии	Степень значимости
1.	Эффекты транзакционных издержек	0,45
2.	Эффекты подотчетности	0,28
3.	Эффекты рутинизации	0,27
		1,00

По мнению экспертов, работа с документами поглощает все возрастающие часы рабочего времени. При этом по уровню регламентации труд вузовских преподавателей все больше приближается к труду преподавателей колледжей и учителей школ: «Раньше я работал в педагогическом колледже... и ВУЗ для меня более-менее свободным местом был в этом отношении. Но сейчас мы приблизились к тому состоянию колледжа, где преподаватель загружается по полной программе...»; «Иногда мне кажется, что скоро нас заставят писать планы урока».

На третьем уровне иерархии эффекты транзакционных издержек, в свою очередь, подразделяются на несколько составляющих. Во-первых, это - издержки формализации учебно-методической деятельности (изменение затрат времени на выполнение требований к учебной документации): дополнительные затраты на составление и систематическую переделку рабочих программ, контроль обеспеченности литературой, выполнение требований балльно-рейтинговой системы оценки студентов и т. п. Во-вторых, это - издержки времени на соблюдение формализованных процедур, регламентирующих деятельность преподавателей (составление отчетов о самом процессе и результатах деятельности): оформление документации для командировок; освоение и написание новых форматов индивидуальных планов работы преподавателей; заполнение различных форм отчетности по отдельным направлениям деятельности, в том числе для определения рейтингов преподавателей и т. п. В-третьих, многие эксперты говорят об издержках времени, связанных с освоением и последующим использованием информационных систем, поддерживающих новые формализованные процедуры (форм отчетности, рейтингования ППС и сотрудников, балльно-рейтинговых систем, личных кабинетов преподавателя и т. п.). Оценка степени значимости отдельных составляющих эффектов транзакционных издержек представлена в таблице 4.

Таблица 4 – Оценка степени значимости эффектов транзакционных издержек

№	Эффекты перераспределения времени второго уровня иерархии	Степень значимости
1.	Изменение затрат времени на выполнение требований к учебной документации	0,60
2.	Изменение затрат времени на составление отчетов о самом процессе и результатах деятельности	0,22
3.	Изменение затрат времени на освоение новых информационных систем	0,18
		1,00

Следующими по значимости эффектами перераспределения времени стали так называемые эффекты подотчетности – перераспределение рабочего времени между содержательной деятельностью и работой на установленный показатель эффективности, контролируемые индикаторы деятельности. Как отмечает В. Л. Тамбовцев, «если целевой показатель лишь косвенно отражает содержание задачи, велика вероятность возникновения феномена «работы на показатель». Суть его известна: ведя себя оппортунистически, работник (или подразделение фирмы) не столько решает задачу, сколько добывается требуемого (установленного сверху) значения показателя способом, который представляется ему наиболее простым, экономящим его время и усилия (для того, чтобы использовать сэкономленные ресурсы для своих собственных целей)» (Тамбовцев В. Л., 2006, с. 9).

Оценки экспертов о направленности действия данного эффекта различаются. Часть экспертов указывает на необходимость перемен в оценке деятельности преподавателей и считают, что установление контролируемых индикаторов деятельности может стать хорошим инструментом стимулирования и повышения эффективности деятельности преподавателей: *«Стали цениться люди, которые реально преподают за рубежом, публикуются, участвуют в реальных международных проектах»; «В принципе, эта работа в правильном направлении, которая заставляет преподавателя думать о своём рейтинге, не откладывать то, что он может сделать сегодня на завтра. А сейчас крути педали, зарабатывай рейтинг».*

С другой стороны, обращая внимание на переориентацию своей деятельности на направления, подлежащие внешней оценке, эксперты указывают на проблемы формирования системы показателей оценки и на негативные изменения в поведении: *«А люди же быстро понимают, где проще баллы набрать, и если выгодно свозить 4 студента на олимпиаду, а не принести хоздоговор или статью написать, то будут заниматься ерундой и получать кучу баллов и денег...»; «Приспосабливаются... публикуют массу макулатуры. То есть, это макулатура. И я считаю, что от количества ничего не меняется. Выигрывает количество».* Таким образом, в российских вузах формируются практики работы на показатель, как особой разновидности сигнализации: *«Если есть рейтинг хороший – это такой сигнал для руководства – кафедрального и вузовского, что, дескать, лояльна, все исполнила»; «рейтинг, - это сигнал - чтоб не цепляли».*

Еще одним проявлением эффектов перераспределения рабочего времени являются эффекты рутинизации (см. табл. 3) – такое изменение характера трудовой деятельности преподавателя, которое проявляется в снижении доли творческого труда в учебной, методической, научно-исследовательской и воспитательной деятельности за счет роста шаблонных операций. Отметим, что речь идет, скорее всего, о шаблонизации, которая, с одной стороны, при частой повторяемости одних и тех же работ экономит время и усилия преподавателя, с другой – размывает мотивацию в результате распространения механически выполняемых работ. Последствия рутинизации труда оцениваются экспертами крайне негативно. Прежде всего, указывается на изменение содержания труда,

вытеснение из него собственно преподавательской работы: *«Все-таки доцент должен учить и развиваться сам, чтобы соответствовать более современному уровню»; «И, уважая себя, хочется в высокорейтинговом импактном журнале напечататься. Но! Хочется ... на это мало времени: статью быстро не сделаешь, на это нужно очень много времени, а нас зажимают в эти рамки, и нет возможности».*

Далее более подробно рассмотрим третью составляющую первого уровня иерархии - изменения в системе отношений и социально-экономическом положении преподавателей вузов (статусные и поведенческие эффекты). На втором уровне иерархии данный эффект имеет три составляющих: эффекты администрирования, понимаемые как изменение соотношений между академическими свободами и следованием формальным правилам, устанавливаемым сверху; эффекты изменения норм поведения (эрозия академических стандартов); эффекты конкуренции – изменения отношений между преподавателями (см. табл. 5).

Таблица 5 – Оценка степени значимости статусных и поведенческих эффектов

№	Статусные и поведенческие эффекты второго уровня иерархии	Степень значимости
1.	Эффекты администрирования	0,50
2.	Эффекты изменения норм поведения	0,31
3.	Эффекты конкуренции	0,19
		1,00

Наиболее значимым для экспертов оказались эффекты администрирования - изменение соотношений между академическими свободами и следованием формальным правилам. Как отмечают эксперты, независимо от статуса вуза, в котором они работают, направленность данного эффекта однозначна: происходит свертывание академических свобод. Ограничение академических свобод и их замещение принуждением следованию формальным правилам проявляется по всем направлениям реализации их принципов: в воздействии на содержание дисциплин и методы преподавания; в обсуждении вопросов, относящихся к деятельности вуза; в правах на выбор учебников и учебных пособий и т. п. Так, наши респонденты говорят о прямом и косвенном навязывании как определенных форм контроля успеваемости (тесты, сложные показатели «контрольных точек»), так и учебников определенного года издания. Ограничение свобод и снижение доверия к преподавателю, по мнению экспертов, связано и изменением институциональной природой вузов и положения в них преподавателей: *«Просто университет становится все менее университетской организацией, т. е. ... эта степень академической свободы она конечно имеет отрицательную динамику»; «В преподавательской деятельности – мы подчиненные. И нам говорят, и не смотрят на твой профессионализм, и что ты можешь сделать в другой области больше»; «На ученом совете я не могу выступить тоже, там всё регламентировано, я не так воспитана. Да везде тебе рот не дадут открыть просто, а если откроешь, то потом такое получишь, что мало не покажется. Всё заадминистрировали».*

Изменение институциональной природы вузов проявляется и в эрозии академических стандартов. При этом под академическими стандартами нами понимаются общепринятые нормы поведения преподавателей, вырабатываемые определенным академическим сообществом, которые регулируют производственную деятельность преподавателей и направляют ее на формирование репутации вуза, как неосязаемого актива, повышающего его конкурентоспособность на рынке образовательных услуг. Я. Кузьминов и М. Юдкевич характеризуют академические стандарты следующим образом: *«В идеальной ситуации преподаватели ориентируются на них при выборе поведения, принимают их во внимание, вынуждены и стараются им следовать. Эти стандарты перенимаются теми, кто приходит в уже сложившиеся исследовательские группы, передаются аспи-*

рантам от научных руководителей. Стандарты воспринимаются как норма, и отклонение от них связано для сторон с дискомфортом» (Кузьминов Я. И., Юдкевич М. М., 2007, с 87). Фактически речь идет о том, что разрыв межпоколенческих связей в профессиональной среде, в том числе и в результате внешних воздействий (навязывания новых формальных норм), может привести к серьезным изменениям академических стандартов (как в сторону их повышения, так и снижения).

Следуя логике, изложенной в работе Дентона Маркса (Дентон Маркс, 2005), мы выделили изменения норм поведения, проявляющиеся в трех видах трансформаций. Во-первых, это изменение стандартов отбора, которые определяют доступ к преподавательской деятельности, определяемый определенными механизмами фильтрации. К таким механизмам можно отнести неформальные требования к уровню профессиональной подготовки, культурному уровню, уровню активности (фиксируемой определенными формальными показателями, в т. ч. рейтингами), а также сам по себе уровень сложности ООП вуза и общепринятый уровень сложности преподавания. Во-вторых, изменения норм могут проявляться в изменениях стандартов, которые регулируют производственную деятельность преподавателей, стандарты работы преподавателя в аудитории: методы, интенсивность работы, частота и глубина непосредственных контактов со студентами (консультации, курсовые и выпускные работы); уровень общепринятой шкалы оценивания, поддерживающий барьер сложности и фильтрации как для студентов, так и для преподавателей; требования академической честности (требования к уровню самостоятельности студенческих работ). Эксперты также отмечают наличие неформальных норм для деятельности по другим направлениям: требования к исследовательской активности; требования к участию в «общем деле» - несению ответственности по определенным направлениям работы кафедры, факультета, вуза (работа с абитуриентами, участие в написании заявок на научные гранты и пр.). Третьим подвидом являются стандарты идентификации. Речь идет о предпочтениях и ценностях, которым привержено данное академическое сообщество: приверженность ценностям науки, индивидуализм и независимость, отказ от вознаграждения (например, при рецензировании, участии в работе профессиональных сообществ), свободные и открытые коммуникации и т. п. Степени значимости отдельных составляющих эффектов изменения норм представлены в таблице 6.

Таблица 6 – Оценка степени значимости эффектов изменения норм третьего уровня иерархии

№	Оценка степени значимости эффектов изменения норм третьего уровня иерархии	Степень значимости
1.	Изменение стандартов отбора	0,31
2.	Изменение стандартов деятельности	0,39
3.	Изменение стандартов идентификации	0,30
		1,00

Степень значимости трех составляющих эффектов изменения норм является примерно одинаковой, при некотором преобладании эффектов изменения стандартов деятельности. *«Отбор: пока процедуры отбора кадровый состав существенно не меняют. Кадровый состав сформировался. Важнее – модели поведения внутри команды».*

Третьей составляющей статусных и поведенческих эффектов, получившей наименьшую оценку значимости стали эффекты конкуренции (см. табл. 5). Творческое соревнование в образовательной и научной деятельности между преподавателями, как центральными агентами «творческой иерархической организации», замещается конкуренцией, основанной на рыночных и квазирыночных основаниях. Эксперты обращают внимание на появление элементов конкуренции в вузах: *«в последние десятилетия резко усилилась конкуренция в преподавательской среде. А в условиях конкуренции планка*

требований никогда не снижается, наоборот повышается»; «Все кто остались работать, кадровые преподаватели, все стремятся расти профессионально, этому способствует и система материального стимулирования, и в общем дух здорового карьеризма, который я вижу и ощущаю». Эффекты конкуренции проявляются дифференцированно по различным вузам. Однако большинство экспертов отмечает, что конкуренция пока проявляется слабо: «Конкуренция между преподавателями пока не выражена. Ее не будет до тех пор, пока от этого не будет зависеть трудоустройство и увольнение»; «отношения внутри коллектива и преподавателей спасает до сих пор сохранение, может быть, рудиментарной и отчасти формальной, вот этой самой системой конкурсного отбора».

Таким образом, в результате проведенного исследования удалось выяснить, что внедрение в практику управления системой высшего образования, как важнейшей отрасли общественного сектора российской экономики, механизмов квазирынка и инструментов нового государственного менеджмента (прежде всего, внешнего формализованного контроля деятельности преподавателей) существенным образом отражается в продолжительности и содержании труда преподавателей, ведет к сдвигам в их статусе и поведении. Наиболее значимыми эффектами являются эффекты напряженности труда.

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Дискретные структурные альтернативы развития предпринимательства в регионах «ресурсного типа»*

С.Н. Левин, ФГБОУ ВПО «Кемеровский государственный университет», кафедра экономической теории и государственного управления, levin.sergey.n@gmail.com
К.С. Саблин, ФГБОУ ВПО «Кемеровский государственный университет», кафедра экономической теории и государственного управления, sablin_ks@mail.ru

Аннотация. Исследование посвящено выявлению дискретных структурных альтернатив развития предпринимательства в регионах «ресурсного типа». Выделяются две дискретные структурные альтернативы: производительное и непроизводительное предпринимательство. Типы предпринимательства рассматриваются в контексте порождаемых ими положительных и отрицательных внешних эффектов, существенно влияющих на траектории социально-экономического развития регионов «ресурсного типа». Описываются результаты, которые планируется получить в ходе исследования: формирование базы данных для оценки степени представленности выделенных типов предпринимательства в экономиках Кемеровской области и Красноярского края; построение формальной модели, позволяющей оценить соотношение между преобладающим типом предпринимательства и вариантом экономического развития региона «ресурсного типа»; разработка рекомендаций по стимулированию развития в регионе "ресурсного типа" производительного предпринимательства.

Ключевые слова: *сравнительный институциональный анализ, дискретные структурные альтернативы, производительное и непроизводительное предпринимательство, «анклавная двойственная экономика», «целостная региональная экономика», регион «ресурсного типа»*

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Постановка проблемы. В настоящее время четко проявился тот факт, что развитие предпринимательства в современной российской экономике происходит в формах, заметно отличающихся от стандартных моделей, и оказывает противоречивое воздействие на развитие национальной экономики. Это обусловлено тем, что предприниматели, преследуя свои интересы, выбирают стратегии в рамках возможностей и ограничений, определяемых сложившимися правилами игры в российской экономике. При этом необходимо отметить, что предприниматели принадлежат к числу акторов, которые не просто играют по сложившимся правилам, но и участвуют в процессе их формирования, исходя из собственных интересов.

Специфической особенностью современной России является то, что между регионами существует серьезные институциональные различия, связанные с особенностями их социально-экономического развития, политических систем, культурными особенностями, многообразием практик взаимодействия власти и бизнеса (Левин, 2008). В результате на различных территориях России сложились различные конфигурации формальных и неформальных институтов, образующие устойчивые региональные институциональные системы. Параметры этих систем во многом определяют поведение и мотивацию региональных властных структур и предпринимателей в контексте развития региональной экономики.

Особое значение для понимания перспектив развития предпринимательства и российской экономики в целом, имеют региональные институциональные системы, сложившиеся в регионах «ресурсного типа». Под регионами «ресурсного типа» мы понимаем регионы, базовыми отраслями которых являются горнодобывающие отрасли, и/или отрасли обрабатывающей промышленности первичного передела, производящие сырьевую и промежуточную продукцию. Их ключевая роль определяется тем, что они образуют основу всей современной российской экономики и определяют ее место в международном разделении труда. Соответственно, проблемы российской экономики связаны с исчерпанием потенциала модели экономического развития России, ведомого экспортно-сырьевым сектором.

В связи с этим особую актуальность приобретает вопрос о возможных альтернативах развития предпринимательства в регионах «ресурсного типа», его роли в процессе диверсификации экономики и построении новой модели экономического развития, основанной на широком генерировании и внедрении шумпетерианских инноваций, создании новых отраслей в региональной экономике, которые выступали бы «полюсами роста», конкурентоспособными в национальной и мировой экономиках.

Цель исследования состоит в выявлении типов предпринимательства в регионах «ресурсного типа», рассматриваемых в контексте их влияния на траектории социально-экономического развития региональных экономик и описании подходов к построению формальной модели, позволяющей дать количественную оценку этого влияния, а также выработке рекомендаций по стимулированию развития в регионе "ресурсного типа" производительного предпринимательства.

Наше исследование базируется на использовании инструментария такого направления новой институциональной экономической теории как сравнительный институциональный анализ. Методологические принципы данного направления были заложены в работах А. Аоки (Aoki, 2001), А. Грейфа (Greif, 1998), Р. Ла Порты (La Porta, 1999) и др. Базовой теоретической моделью для нас является модель выбора между дискретными структурными альтернативами, основы которой были разработаны О. Уильямсоном (Williamson, 1991) и Г. Демсецем (Demsetz, 1969). В рамках предлагаемого исследования дискретные структуры альтернативы развития предпринимательства будут рассмотрены с позиций их влияния на варианты развития экономики регионов «ресурсного типа».

Принципиальное значение для нашего исследования имеет неинституциональный подход У. Баумоля (Baumol, 1990; Баумоль, 2013), который обратил внимание на то, что разные типы институциональной среды создают для предпринимателей стимулы заниматься разными типами деятельности: производительной (например, шумпетерианские инновации), непроизводительной (рентоориентированной), разрушительной. Он показал ограниченность подхода Й. Шумпетера, продемонстрировав, что кроме производительного предпринимательства («созидательное разрушение» по Й. Шумпетеру), возможно развитие непроизводительного (взяточничество и другие общие формы коррупции, поиск чиновничьей синекуры, погоня за рентой) и разрушительного (пиратство, каперство, наёмничество) предпринимательства. В соответствии с подходом У. Баумоля, предпринимательство является не столько синонимом добродетели, сколько синонимом способов достижения богатства, могущества и авторитета, которые приспособляются к преобладающим в обществе правовым и экономическим условиям, когда нередки случаи предприимчивого использования правовой системы для извлечения ренты (Баумоль, 2013, с. 326-343). Так, например, В.В. Волков на обширном материале охарактеризовал «силовое предпринимательство» как одну из форм разрушительного предпринимательства и показал его деструктивное влияние на развитие российской экономики в 1990-е гг. (Волков, 2005).

В рамках исследования в качестве основных дискретных структурных альтернатив развития предпринимательства в регионах «ресурсного типа» будет рассматриваться производительное и непроизводительное предпринимательство. Разрушительное предпринимательство не рассматривается в рамках исследования, поскольку в современных экономических условиях оно занимает определенную нишу и не является типичным выбором большинства предпринимателей (это обусловлено тем, что они не обладают существенным силовым ресурсом). Выбор предпринимателями одной из двух альтернатив в значительной степени предопределяет варианты развития регионов «ресурсного типа».

В качестве одной из дискретных структурных альтернатив развития регионов «ресурсного типа» рассматривается такой вариант как «анклавная двойственная экономика». В данном случае используется подход Дж. Стиглица (Стиглиц, 2003), который обратил внимание, что в ряде развивающихся и постсоциалистических стран формируются «анклавные двойственные экономики», связанные с формированием изолированного от остальной экономики высокопроизводительного экспортно-ориентированного сектора, представленного предприятиями добывающих и промежуточных отраслей (нефтедобывающая и горнорудная отрасли, черная и цветная металлургия и др.). В качестве альтернативного варианта развития регионов «ресурсного типа» рассматривается модель «целостной региональной экономики», в рамках которой экспортный сектор выступает локомотивом развития других отраслей, стимулирует диверсификацию и модернизацию всей экономики региона.

Альтернатива развития регионов «ресурсного типа» во многом определяется сложившимися правилами игры, которые определяют характер взаимосвязи власти и бизнеса и выбор предпринимателями направления своей деятельности. «Анклавная двойственная экономика» базируется на предоставлении приближенным к власти определенным группам предпринимателей особых привилегий со стороны региональных властей. По замечанию Дж. Стиглица, «если стандартная экономическая наука концентрирует внимание на деформации инициатив в результате выдачи таких привилегий, то надо сказать, что они имеют более коварный аспект: эти привилегии, как правило, получены путем коррупции и взяточничества государственных чиновников» (Стиглиц, 2003, с. 96). Такой вариант развития предоставляет определенные возможности для развития производительного предпринимательства в рамках «анклавной двойственной

экономики» в форме высокопроизводительного экспортно-ориентированного сектора. Однако он не порождает существенных внешних эффектов (экстерналий), создающих условия для развития и модернизации других секторов экономики. Более того, закрепление привилегий за представителями «анклавов богатства» служит источником отрицательных внешних эффектов (экстерналий), связанных с деформацией стимулов у предпринимателей из других секторов экономики, которые переключаются с создания новой добавленной стоимости на рентоориентированное поведение, связанное с их участием в перераспределении стоимости в высокопроизводительном экспортно-ориентированном секторе региональной экономики.

Вариант «целостного регионального развитие» отличается тем, что предпринимательская деятельность в рамках экспортно-сырьевого сектора порождает многообразные положительные внешние эффекты (экстерналии) в других отраслях экономики региона «ресурсного типа». Это ведет к формированию цепочек создания добавленной стоимости, связанных с углубленной переработкой сырья и обслуживанием предприятий, производящих сырьевую и промежуточную продукцию. На этой основе возникает спрос на человеческий капитал, что формирует условия для развития образовательной системы и научной сферы, и приводит к ускоренному развитию социальной сферы региона, а также обеспечивает финансовым и человеческим капиталом развитие производственного предпринимательства в отраслях обрабатывающей промышленности, в сельском хозяйстве и сфере услуг. В результате происходит диверсификация региональной экономики, возникают конкурентоспособные на национальном и мировом рынке «полюса роста» в отраслях, не связанных с её базовой ресурсной специализацией.

Таким образом, новизна предложенного подхода заключается в комплексном анализе микро- и макроуровней функционирования и развития экономики «ресурсного типа». При этом взаимосвязь между этими уровнями раскрывается посредством выявления положительных и отрицательных внешних эффектов (экстерналий), которые возникают в результате деятельности предпринимателей в региональной экономике. Производительная деятельность предпринимателей влечет за собой значительные положительные внешние эффекты, т.е. выгоды, получаемые другими акторами региональной экономики, в том числе предпринимателями из других секторов экономики «ресурсного типа». Под воздействием положительных внешних эффектов возможно увеличение количества предпринимателей, способных к реализации производительной деятельности, что в свою очередь ведет к повышению уровня образования и положительно воздействует на рост производительности труда (Баумоль, 2013, с. 192). Иными словами, производительный предприниматель выступает опорой роста и источником шumpетерианских инноваций в экономике, а положительные внешние эффекты, связанные с его деятельностью, являются основой для проведения широкой модернизации региональной экономики и удлинения цепочек добавленной стоимости. С другой стороны, наличие сравнительных преимуществ у предпринимателей, ориентированных на непроизводительную деятельность, порождает отрицательные внешние эффекты, снижающие стимулы к производительной деятельности у других предпринимателей, представляющих иные сектора региональной экономики. Это ведет к тому, что стимулы к занятию производительным предпринимательством существенно снижаются. Оценивая целесообразность приложения своих усилий, предприниматели делают выбор между производительной и непроизводительной видами деятельности, при этом некоторые предприниматели разными способами активно участвуют в изменении правил игры в своих интересах (Li, Feng, Jiang, 2006).

Взаимосвязь между направлениями развития предпринимательства, порождаемыми ими внешними эффектами и вариантами развития экономики региона «ресурсного типа» отражена в предложенной графической модели (см. рис. 1).

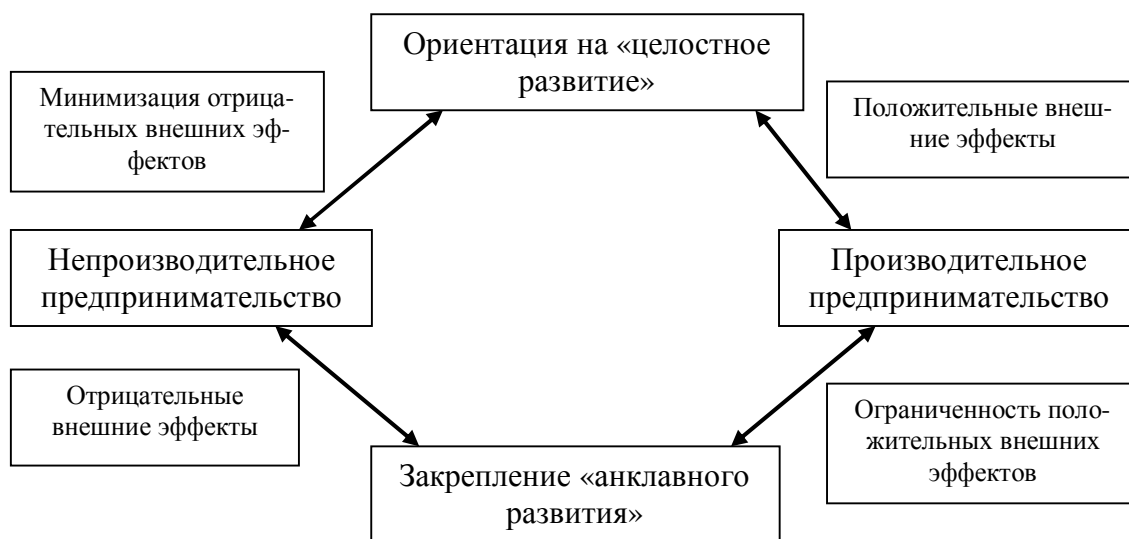


Рис. 1. Взаимосвязь между типами предпринимательства, порождаемыми ими внешними эффектами, и направлениями развития экономики региона «ресурсного типа»

Для сравнения дискретных структурных альтернатив используется математический инструментарий в виде теории нечетких множеств и метода анализа иерархий. Экономико-математические методы используются нами при выделении группы критериев, по которым оценивается тип предпринимательства/тип развития экономики регионов. С помощью метода анализа иерархий путем построения матриц парных сравнений для каждого типа предпринимательства/типа развития экономики региона будут рассчитаны весовые коэффициенты для каждого из выделенных критериев. Используя нечеткий подход, для каждого региона по выделенной группе критериев с учетом весовых коэффициентов будет вычислена количественная оценка степени выраженности в регионе определенного типа развития. Аналогичным образом, используя подход нечетких множеств, для каждого предпринимателя по выделенной группе критериев и их соответствующих весовых коэффициентов будут вычислены значения двух показателей, характеризующих комплексную оценку выраженности каждого типа предпринимательства в регионе «ресурсного типа». В качестве методов сбора информации используются анализ статистических данных, анализ документов (нормативных актов и стратегий развития исследуемых регионов), а также социологический инструментарий, представленный структурированными глубинными интервью, анкетными опросами.

В целях первичного сбора информации для выявления типов развития предпринимательства в регионах «ресурсного типа», нами были разработаны гайды для опроса экспертов среди представителей региональной власти и бизнеса. Гайды содержат четыре блока вопросов, позволяющие выявить тип развития предпринимательства в его взаимосвязи и взаимовлиянии на направления развития региональной экономики в рамках одной из дискретных структурных альтернатив: «Отраслевой блок», «Инвестиционный блок», «Инновационный блок» и «Социальный блок». Следующим этапом социологического исследования является проведение анкетного опроса выделенных групп акторов (предпринимателей и представителей региональной власти). Данные социологических исследований будут использованы во взаимосвязи с анализом статисти-

ческих данных по инновациям, инвестициям, эффективности региональных «институтов развития» и рядом других данных.

«Отраслевой блок» связан с выявлением стратегии социально-экономического развития региона «ресурсного типа» и реальных целей региональной экономической политики. Для целей нашего исследования в этой связи значимо, как учитываются интересы предпринимателей в процессе разработки стратегических программ развития отраслей региональной экономики, какие стимулы возникают для развития производительного предпринимательства в рамках развития новых отраслей региональной экономики, связанных с созданием цепочек добавленной стоимости. В результате можно говорить о том, что развитие производительного предпринимательства в одних секторах экономики порождает положительные внешние эффекты (экстерналии), стимулирующие развитие данного типа предпринимательства в других ее секторах. С другой стороны, опора на поддержку традиционных для региональной экономики отраслей, и значительные барьеры вхождения в них означают предоставление привилегий и протекции немногочисленным участникам «анклавов богатства», что ведет к изолированности ресурсодобывающего сектора. В данном случае традиционные отрасли наиболее выгодны для ведения предпринимательской деятельности в привилегированных условиях, которые ведут к закреплению «анклавного развития» региональной экономики. Соответственно, в этом случае можно говорить о преобладании отрицательных экстерналий и об ограниченности положительных внешних эффектов от развития предпринимательства в традиционных отраслях экономики.

Принципиально значимым в этой связи является преобладающий тип взаимодействия крупных компаний, характерных для «ресурсных» отраслей экономики, с региональным малым и средним бизнесом. Взаимодействие предпринимателей с крупными компаниями (на основе «конкуренции», в качестве «младших партнеров» или предприятий инфраструктуры) оказывает влияние на тип развития предпринимательства в регионе «ресурсного типа». Если крупный бизнес инвестирует в создание трудно преодолимых барьеров для развития малого и среднего бизнеса, и не нацелен на сотрудничество, тогда можно говорить о закреплении «анклавного развития» в контексте моноотраслевой структуры региональной экономики. В случае, когда крупные компании, работающие в ресурсодобывающем секторе, ориентированы на тесную взаимосвязь с малым и средним бизнесом, вовлекая его в сотрудничество в новых отраслях или в удлинении цепочек добавленной стоимости, то тогда можно сделать вывод об ориентации крупных компаний на «целостное развитие» региона «ресурсного типа».

«Инвестиционный блок» нацелен на выявление характеристики инвестиционных проектов, которые реализуются бизнесом в отраслях региона «ресурсного типа». В этой связи значимо, какие инвестиционные проекты реализуются, прежде всего, крупным бизнесом в традиционных и новых отраслях региональной экономики. При этом инвестиционная деятельность крупного бизнеса рассматривается в рамках его взаимосвязей с региональной властью. Региональная власть выступает для крупных компаний из «ресурсных» отраслей партнером, который обеспечивает благоприятные условия доступа к ресурсному потенциалу региона. Она способна существенно влиять на стимулы крупного бизнеса. Если она видит в инвестициях крупного бизнеса преимущественно источник налоговых и квазиналоговых платежей, «обменивая» на них свою поддержку, то при этом развитие традиционных отраслей не порождает существенных положительных внешних эффектов, не стимулирует развитие производительного предпринимательства в других секторах региональной экономики.

С другой стороны, если региональная власть создает стимулы для переориентации крупного бизнеса на инвестиционные проекты, связанные с углубленной переработкой сырья, развитием новых отраслей экономики, то это порождает положительные внеш-

ние эффекты, создающие условия для развития производительного предпринимательства в различных секторах региональной экономики, что закрепляет ее ориентацию на модель «целостной региональной экономики».

Анализ статистических данных о структуре инвестиций в основной капитал показывает, что в региональной экономике, как Кемеровской области, так и Красноярского края, в предшествующий период благоприятные условия для производительной деятельности крупного бизнеса были ограничены преимущественно кругом традиционных «ресурсных» отраслей. Об этом свидетельствует высокий удельный вес инвестиций в добывающую промышленность, что особенно характерно для Кемеровской области (см. табл. 1 и табл. 2).

Таблица 1. Динамика инвестиций в основной капитал по видам экономической деятельности в Кемеровской области (без субъектов малого предпринимательства; миллионы рублей)

	2013	2012	2011	2010	2009	2008
Всего	140350,8	176740,7	137175,7	93802,8	75771,5	119217
сельское хозяйство, охота и лесное хозяйство	2280,9	2670	2754,1	1681,9	1341,8	2572
рыболовство, рыбоводство	0	0,05	2,4	3,4	0	0
добыча полезных ископаемых	57723,1	95698	73451,7	46374,4	33843,5	56137
обрабатывающие производства	18811,8	22967,1	11365,6	8961,6	7486,8	9438
производство и распределение электроэнергии, газа и воды	10027,1	11933,9	11762,8	6583,1	3999,7	9274
строительство	780,2	313,5	619,3	418,3	440,7	890
оптовая и розничная торговля; ремонт автотранспортных средств, мотоциклов, бытовых изделий и предметов личного пользования	5816,1	3741,3	2867,1	2456,6	1783,5	3515
гостиницы и рестораны	275	227,3	194,9	187,4	54	194
транспорт и связь	22564,5	18365,2	16946,6	12171,3	8968	15465
из них связь	3208,4	4316,1	4032,8	2611,2	1814,2	6720
финансовая деятельность	975,5	1326,2	1090,3	910,4	777,5	1029
операции с недвижимым имуществом, аренда и предоставление услуг	9684,9	8834,5	7285,4	7996,3	9342,1	10290
государственное управление и обеспечение военной безопасности, социальное страхование	2347,2	1838,9	1481,2	799,4	1499,3	2447
образование	3438,8	2763,5	3083,7	1762,3	2047,2	2914
здравоохранение и предоставление социальных услуг	3586,5	3687,3	2650,4	2082,6	2750,1	3317
предоставление прочих коммунальных, социальных и персональных услуг	2039,2	2374	1620,1	1413,8	1437,2	1734

Источник: Регионы России. Социально-экономические показатели. 2014: Стат. сб. / Росстат. – М., 2014. – с. 854-855.

Таблица 2. Динамика инвестиций в основной капитал по видам экономической деятельности в Красноярском крае (без субъектов малого предпринимательства; миллионы рублей)

	2013	2012	2011	2010	2009	2008
Всего	327241,1	328853,6	251440	214680,7	209990,1	169524
сельское хозяйство, охота и лесное	6190,6	5260,5	5155,9	3794,9	3433,6	3486

хозяйство						
рыболовство, рыбоводство	1,8	2,7	3,1	17,5	6,1	0
добыча полезных ископаемых	91122	90823,9	78372,5	70108,8	95910,5	9914
обрабатывающие производства	87113,4	84802,5	57561,5	42391,8	28540,8	36426
производство и распределение электроэнергии, газа и воды	47253,2	42622,3	36981,3	41626,2	28269,3	18362
строительство	2477,1	2900,5	4101,7	1360,4	12450,9	12619
оптовая и розничная торговля; ремонт автотранспортных средств, мотоциклов, бытовых изделий и предметов личного пользования	3107,3	3645,7	2751,8	1434,1	560	389
гостиницы и рестораны	1997,3	1935	1588	753,9	7,1	8
транспорт и связь	36185	44106,4	27072,1	19664,6	15454,9	18068
из них связь	4137,1	6614,3	5900	4864,6	2824	6887
финансовая деятельность	2103,7	2442,8	2115,9	1266,3	966,8	875
операции с недвижимым имуществом, аренда и предоставление услуг	30948,8	31309,1	19590,7	19685,1	14231,6	59361
государственное управление и обеспечение военной безопасности, социальное страхование	3535,2	3523,7	3064,7	3749,9	2995,9	1863
образование	5957,7	5380,8	2550,6	2322,8	3133,9	2936
здравоохранение и предоставление социальных услуг	6711,8	7343,6	7043,3	3625,6	2188	3256
предоставление прочих коммунальных, социальных и персональных услуг	2536,3	2754,1	3486,9	2878,7	1840,7	1964

Источник: Регионы России. Социально-экономические показатели. 2014: Стат. сб. / Росстат. – М., 2014. – с. 854-855.

Для выявления перспектив развития производительного предпринимательства, способного порождать положительные внешние эффекты, обеспечивающие переориентацию экономики региона «ресурсного типа» на модель «целостной региональной экономики», особенно значим «инновационный блок». Генерирование и внедрение инноваций является одним из проявлений производительной деятельности со значительными положительными внешними эффектами и созданием новых отраслей. В данном случае, необходимо выявить в какой степени условия, сложившиеся в региональной экономике, стимулируют шумпетерианские инновации и развитие «инновационного предпринимательства».

Для оценки перспектив развития «инновационного предпринимательства» в региональной экономике будут использованы как статистические данные об инновационной активности, так и результаты социологических исследований. При этом предметом специального анализа в рамках данного исследования является функционирование созданных в исследуемых регионах «институтов развития», которые по своему предназначению призваны генерировать инновации в экономике. Значимой является оценка эффективности их деятельности как инструмента формирования «полюсов инновационного развития» в регионе «ресурсного типа».

С точки зрения их роли в развитии производительного предпринимательства для нас особое значение имеют данные о «спросе» со стороны бизнеса на их услуги. При этом будет оценена структура данного «спроса», поскольку опыт свидетельствует о том, что «институты развития» активно используются не только производительными предпринимателями, но и рентоориентированными. Если «институты развития» становятся сферой взаимодействия рентоориентированных предпринимателей и чиновников, то они трансформируются в «квазиинституты развития» (Саблин, 2012). Поэтому оцен-

ка характера «институтов развития» имеет особое значение для выявления преобладающих типов предпринимательства, и порождаемых ими внешних эффектов. Если они выступают в качестве одной из форм государственной поддержки инновационной активности/реализации инновационных проектов в регионе, это свидетельствует о формировании благоприятных условий для производительного предпринимательства, порождающего положительные внешние эффекты, стимулирующие переход к модели «целостной региональной экономики». В случае если «институты развития» выступают преимущественно инструментом поиска преференций/льгот в традиционных отраслях региональной экономики посредством использования средств регионального/федерального бюджета, то они фактически стимулируют переориентацию предпринимателей на модель рентоориентированного поведения, порождающего отрицательные внешние эффекты, ограничивающий круг секторов региональной экономики, в которых существуют благоприятные условия для развития производительного предпринимательства.

Для оценки преобладающего типа предпринимательства в регионе «ресурсного типа» большую значимость имеют данные о характере и структуре спроса на человеческий капитал. Несомненный интерес представляют данные об инвестициях предпринимателей в человеческий капитал и информация о совместных проектах бизнеса, региональной власти и научно-образовательного сообщества, связанных с подготовкой специалистов и реализацией инновационных проектов. В этой связи будет специально проанализировано развитие МИПов и других инновационных структур научно-образовательных учреждений с позиции их влияния на формирование человеческого капитала, необходимого для развития производительного предпринимательства. При этом будут оцениваться положительные внешние эффекты, возникающие в рамках взаимодействия предпринимателей, региональной власти и научно-образовательного сообщества, связанные с возникновением потенциальных «полюсов роста» в новых для региональной экономики отраслях.

В рамках «социального блока» анализируется участие предпринимателей в финансировании социальных проектов, их участие в соглашениях о социально-экономическом партнерстве с властью. Данные практики оцениваются с позиции внешних эффектов (положительных и отрицательных), которые они оказывают на развитие производительного предпринимательства и формирование спроса на человеческий капитал. Отрицательные внешние эффекты связаны с тем, что эти практики создают дополнительные издержки для предпринимателей. С другой стороны, они выступают как инвестиции в социальную инфраструктуру и человеческий капитал, что создает благоприятные условия для развития производительного предпринимательства.

В ходе реализации проекта планируется получить следующие основные результаты, составляющие его научную новизну.

1. Сформировать базу данных для оценки степени представленности выделенных типов предпринимательства в экономиках Кемеровской области и Красноярского края как типичных представителей регионов «ресурсного типа».

2. Построить формальную модель, позволяющую оценить соотношение между преобладающим типом предпринимательства и вариантом экономического развития региона «ресурсного типа».

3. Разработать рекомендации по стимулированию развития в регионе "ресурсного типа" производительного предпринимательства.

Первых два результата ориентированы на академических исследователей, а третий результат имеет значение для практиков в лице представителей региональных органов власти, решающих задачи по развитию предпринимательства в регионе «ресурсного типа».

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Е.А. Мидлер
Южный федеральный университет
midler2005@yandex.ru

Развивающиеся ресурсные рынки в контексте региональной асимметрии: пространственные возможности и ограничения (на материалах регионов Юга России)

Аннотация: Предпринята попытка исследовать влияние неравномерности и асимметрии развития российских регионов на ресурсные возможности развивающихся рынков в условиях макроэкономических ограничений. Представлена дифференциация ресурсных рынков по темпам экономической динамики. Показана усугубляющаяся периферизация южно-российских регионов, как и страны в целом. Определены тренды развития рынков в условиях региональной асимметрии, дисбалансов пространственного размещения природных ресурсов.

Использовались методы количественного и качественного, институционального и сопоставительного анализа. Эмпирические исследования дополнялись официальными данными службы Росстата РФ. Установлено, что асимметрия ресурсного развития регионов задается воспроизводственными константами периферийных пространственно-экономических систем (доступ к природным ресурсам, рентоориентированность, дефицит собственных финансовых ресурсов, многоукладность). Крен в сторону усугубляющейся периферизации региональных экономик усиливает ресурсные ограничения.

Ключевые слова: *региональная экономика, пространственное развитие, институты, ресурсные рынки развивающиеся рынки, региональная асимметрия*

1. Введение.

Неизбежным атрибутом развития и экономического роста в развитии любой социально-экономической системы является пространственная неравномерность и территориальная неоднородность. Не является в этом плане исключением и Россия.

Асимметрия как органическая черта внутренней организации обширного экономического пространства России создает дополнительные угрозы в социально-экономическом развитии страны, усиливает дисбалансы. Возникает и усугубляется эффект периферизации российских регионов. По некоторым оценкам 70% территории России можно отнести к внешней периферии и еще около 15% - к внутренней (Дружинин, Колесников, Овчинников, 2014). В наибольшей степени эти процессы выражены в развитии регионов Юга России, прежде всего российского Кавказа, где создаются многочисленные угрозы и риски, возникает напряженность и воспроизводится конфликтногенная социальная среда.

Юг России как модельный объект исследования региональной асимметрии позволяет рассматривать развитие различных ресурсных рынков через призму концептов периферийности, институциональной разбалансированности, капитализации. При этом лейтмотивом любого исследования в области пространственной экономики остаются ориентиры на сближение, снижение неравномерности, что в частности характерно для французской школы пространственной экономики (см. например, Carrière, 2008). Подобный концепт предполагает также и поиск источников конкурентоспособности для развивающихся рынков, не сводя последние только лишь к хорошей географии или простым институтам (Бусыгина, Филиппов, 2013)

Таким образом, целью данной работы является исследование влияния неравномерности и асимметрии развития российских регионов на ресурсные возможности развивающихся рынков в условиях макроэкономических ограничений.

2. Гипотеза исследования.

Основная гипотеза исследования заключается в предположении о том, что сложность и противоречивость территориально-ресурсного феномена российских регионов обусловлена, с одной стороны, сохраняющейся фрагментарностью, многоукладностью, мелкотоварностью региональных экономических систем, формирующих ресурсные рынки. С другой - подчинением региональных рынков макроэкономической динамике.

В результате возникает своеобразный эффект замещения "хорошей" географией развития ресурсных рынков "плохих" институтов. Механизм региональной асимметрии предельно прост: при низком качестве управления и институтов в целом ресурсные потоки (например, инвестиции) перемещаются в регионы, обладающие уникальными географическими преимуществами. Сам характер таких инвестиций выступает своего рода "функцией" от этой уникальности, что подрывает саму идею межтерриториальной конкуренции и устойчивого развития (Бусыгина Филиппов, 2013). Фактором, усугубляющим деформацию ресурсных рынков (например, рынка рабочей силы), своеобразным катализатором, может стать открытость внешних рынков. А это, в свою очередь, запускает механизм периферизации, формирующий одновременно как успешные регионы (например, московская агломерация с высоко развитыми рынками рабочей силы, инвестиций и др.), так и депрессивные регионы (например, моногорода). Этот факт иллюстрирует сравнительный анализ развития инвестиционных рынков в Ростовской области и Краснодарском крае (табл.1).

В экономике Юга России наблюдается эффект подобного замещения, с акцентом на развитие традиционных многоукладных секторов экономики Юга России.

Сравнительный анализ инвестиционной активности двух соседствующих регионов (Ростовской области и Краснодарского края) показал, что инвестиционная деятельность частных инвесторов далека от высокотехнологических приоритетов и сфокусирована в основном в отраслях индустриального сектора в Ростовской области и в отраслях сельскохозяйственного производства в Краснодарском крае (табл.1)¹.

Инвестиционные проекты, реализуемые и представленные к реализации в регионах в 2011-2013 гг.	Ростовская область	Краснодарский край
Всего проектов	55	60
Имеющих инновационный характер (из общего числа)	11	9

Как видно из таблицы, в условиях низкого качества институциональной среды, отсутствия благоприятного предпринимательского климата в Ростовской области (по данным Индекса Опоры, 2012) инвестиции устремились в комфортную географическую среду.

3. Методология исследования.

В работе использован следующий методологический подход: региональная асимметрия трактуется нами как определенное состояние регионального развития в обозначенном временном интервале, при котором регионы, характеризующиеся относительным преимуществом по конкретному показателю в начале периода, в дальнейшем его наращивают, а регионы с относительным отставанием данное состояние усугубляют, создавая тем самым эффект периферизации. Рассматривая неравномерность регионального развития, мы опираемся на понятие территориальной дифференциации, трактуемое как качество и степень единства пространства экономической, социальной, политической и иной жизни общества в границах конкретного государства и интерпретируемое как процесс или как результат формирования различий между отдельными территориями государства. В качестве территорий государства мы рассматриваем южно-российские регионы.

К проблеме эмпирического доказательства региональной дифференциации неоднократно обращались российские и зарубежные ученые (Лавровский, Дробышевский, Solanko). В литературе много внимания уделяется такого рода анализу и здесь получены важные результаты. Один из них состоит в том, что региональная дифференциация в России в последние 12-13 лет значительно возрастает (Суспицын, 2002). Однако проблема нарастающей периферизации российских регионов в условиях кризиса требует трансформации методологических подходов. Методологически оправданным представляется рассмотрение данного феномена во взаимосвязи региональных процессов и макроэкономических ограничений, системного экономического кризиса и региональных диспропорций.

Анализ межрегиональных экономических сопоставлений связан с анализом развивающихся ресурсных рынков как подсистем регионального пространства, обладающих потенциалом роста.

¹ Рассчитано по: Предпринимательский климат в России: <http://new.opora.ru/> (дата обращения: 23.08.2015), Инвестиционный атлас регионов Юга России / под ред. А.Г. Дружинина. Ростов-на-Дону, 2011. С 119-145, 239-252.

4. Результаты.

Нами рассмотрен рынок промышленной продукции в контексте региональной асимметрии регионов Юга России в интервале 2006-2012 гг. Исследования проводились на основе данных Росстата. При оценке динамики таких показателей, как объем промышленной продукции и уровень региональной асимметрии, были получены следующие результаты.

Вывод первый: если темпы развития рынка промышленной продукции под воздействием макроэкономических факторов в целом снижаются, но это снижение носит поступательный характер, региональная асимметрия остается в неизменных границах.

Вывод второй: если же в регионах с большим объемом производства рынки начинают стремительно падать, а в регионах с меньшим объемом - темпы падения замедляются, можно говорить о снижении асимметрии развития регионов.

Вывод третий: в регионах, обладающих значительным потенциалом развития, где наблюдается более медленное падение рынков промышленной продукции по сравнению с регионами с меньшим потенциалом - региональная асимметрия увеличивается (рис.1).

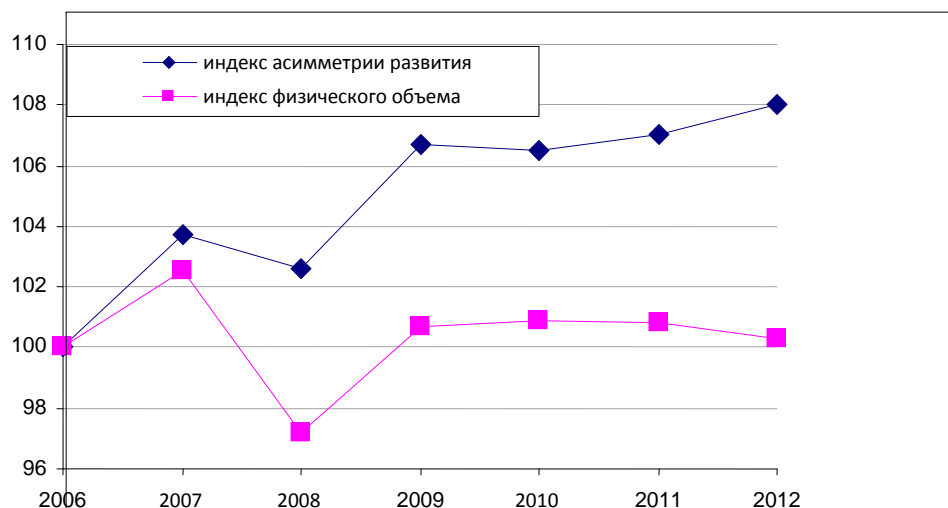


Рис. 1. Динамика рынков промышленной продукции и региональной асимметрии

Для оценки данных взаимосвязей использовался показатель дифференциации - коэффициент вариации (индекс асимметрии развития).

$$V = \sqrt{\frac{1}{N} \sum_{i=1}^N \left(\frac{x_i}{\tilde{x}} - 1 \right)^2},$$

где x_i – значение показателя для региона i , \tilde{x} – среднее значение показателя для системы регионов: в случае объемного показателя это среднее арифметическое по регионам, а в случае удельного показателя – средневзвешенное по численности населения регионов, N – число регионов в системе.

Указанный индекс использовался и при анализе взаимосвязи развития рынков инвестиций и асимметрии регионального развития в разрезе регионов Юга России.

Ресурсные возможности рынка инвестиций в современных условиях обнажают проблему усугубляющейся асимметрии регионов Юга России и затрагивают аспект инвестиционной привлекательности российских регионов. Как было отмечено выше,

инвестиционное перераспределение в разрезе регионов Юга России происходит неравномерно. Инвестиции зачастую перераспределяются в регионы с доминирующим аграрным укладом и мелкотоварной экономикой (табл.2)

Таблица 2

Доля территорий в валовом накоплении основного капитала Юга России, %

Регион	2005 г.	2006 г.	2007 г.	2008 г.	2009 г.	2011 г.
Юг России	100	100	100	100	100	100
Края и области	85,78	79,62	76,74	78,77	77,83	78,8
Республики Северного Кавказа	9,31	19,36	22,28	20,40	21,21	19,6
Калмыкия	4,81	1,03	0,98	0,83	0,96	0,6

Благодаря общероссийской системе перераспределения трансфертов финансовые возможности южно-российских регионов на 47% превышают его фактическую производственную отдачу. Такое перераспределение благоприятствует оживлению экономической активности в периферийных регионах, повышает инвестиционную привлекательность региона. В то же время - таит скрытые риски, а именно: тормозит модернизационные процессы, усиливает периферизацию, расширяет пространство теневого бизнеса (Дружинин, Колесников, 2014).

В ситуации с валовым накоплением основного капитала складывается аналогичная ситуация. Во второй половине 2000-х гг. республики Северного Кавказа нарастили свою долю в масштабе регионов Юга России, однако, не за счет реального роста инвестиционной привлекательности, а за счет соответствующих правительственных решений. так. по итогам 2012 60-65% инвестиций в основной капитал на данных территориях состоят из бюджетных (федеральных) источников. при этом по всем регионам ЮФО - 20%, по РФ - 18,9% (табл.2) (Колесников, 54)

Таким образом, асимметрия развития российских регионов отражает не только количественную, но и качественную характеристику единства соответствующего социально-экономического пространства южно-российских регионов. По отдельным показателям данный аспект может быть детерминирован как структура периферизации.

Структура периферизации регионов – это комплексная характеристика дифференциации регионов внутри системы в отличие от единственной числовой характеристики, предполагающая раскрытие особенностей распределения неравномерности. Здесь возможны различные срезы в распределении регионов. Среди возможных вариантов можно выделить изучение распределения неравномерности в экономическом пространстве или изучение распределения неравномерности по региональным административным подсистемам (Лавровский. 2002).

Анализ структуры возможных направлений периферизации приобретает особую актуальность в условиях системного кризиса. На рис.3 представлены направления возможной периферизации за период 2006-2012 гг. по нескольким показателям: валовой региональный продукт (ВРП), объем промышленной продукции (ОПП), продукция сельского хозяйства (ПСХ), объем платных услуг населению (ОПУ), объем работ, выполненных по договорам строительного подряда (ОСП), денежные доходы населения (ДДН), измеренных в текущих ценах (рис.3).

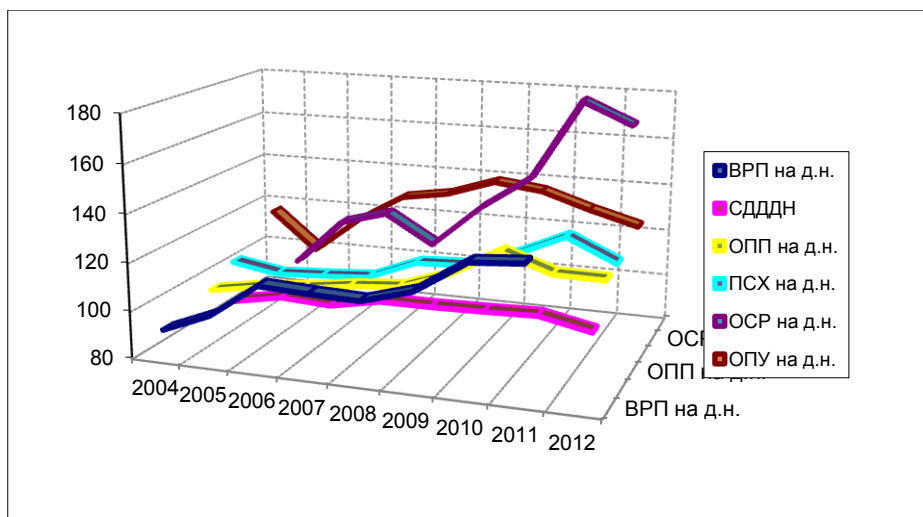


Рис. 3. Индекс асимметрии регионального развития в период 2004-2012 гг.

И, наконец, необходимо отметить роль ценового фактора как макроэкономического ограничителя при исследовании влияния неравномерности и асимметрии развития российских регионов на ресурсные возможности развивающихся рынков.

Расчеты и анализ проводились в текущих ценах, что обусловлено содержанием неравномерности экономического пространства, которая формируется в текущий момент времени и под влиянием текущих цен. Фиксация этих изменений оказывает перераспределение денежных потоков и является актуальной лишь в тот период времени, когда и производятся данные замеры. Измерение региональной асимметрии в постоянных ценах и освобождение, таким образом, от влияния цен текущих может использоваться при анализе технологических изменений.

В настоящее время фиксируется существенный рост асимметрии и региональной дифференциации в текущих ценах, что подтверждает их решающее влияние на формирование региональной асимметрии. Для некоторых регионов Юга России характерна ситуация, когда территория, имеющая в своем продукте существенную долю сырьевых ресурсов, идущих на экспорт, получает существенно (но неустойчивое) преимущество. Сравнение результатов измерения асимметрии развития регионов в текущих и постоянных ценах также подтверждает существенную зависимость динамики индикатора дифференциации от динамики одного показателя, который занимает существенную долю общего объема страны.

5. Заключение

Анализ развивающихся ресурсных рынков и важнейших показателей в контексте региональной асимметрии позволяет сделать вывод о том, что наиболее масштабным, значимым и обусловленным текущей фазой экономического цикла выступает процесс периферизации регионального пространства, происходящий на базе неравномерности и асимметрии территориального развития, интегрирующий и адаптирующий территории в выстраиваемую центром территориально-хозяйственную конструкцию.

Пространственные возможности для развития ресурсных рынков Юга России ограничены фрагментарностью, многоукладностью, мелкотоварностью экономических систем. В то же время развитие региональных рынков починается воздействием макроэкономической динамики. Данное противоречие провоцирует региональную асимметрию, общий спад и расслоение. Рост и развитие рынков становятся

возможными в условиях регионального выравнивания в заданных траекториях и в отсутствии макроэкономических шоков.

Важнейшим фактором, обеспечивающим сглаживание региональных диспропорций является инвестиционная составляющая. Испытываемые в настоящее время инвестиционные дефициты усугубляют региональную асимметрию, а трансфертный механизм регионального выравнивания провоцирует иждивенческие настроения.

Анализ региональных диспропорций и асимметрии развития в постоянных ценах дает значительно другую тенденцию изменения дифференциации по сравнению с анализом в текущих ценах и характеризует постоянство технологической структуры производства. Это свидетельствует о значительном влиянии ценового фактора на региональные диспропорции.

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Мингазова Рузалия,
Институт «Высшая Школа Менеджмента»,
Санкт-Петербургский государственный университет
r.mingazova@gsom.pu.tu

Теоретические основы и особенности ГЧП в сфере транспорта

Аннотация: Сфера транспорта в России не отвечает потребностям и перспективам развития страны, существует дефицит пропускной способности на всех видах транспорта, что в свою очередь требует строительства, реконструкции транспортной инфраструктуры, а также необходимости более эффективного управления как объектами транспортной системы, так и инвестируемыми в данную сферу финансовыми средствами. Все эти проблемы подкрепляются также недостаточностью финансирования, так как на уровне регионов бюджетные ограничения являются серьезным барьером на пути к развитию. Государственно-частное партнерство позволяет решить и ту, и другую проблему, что видно из опыта стран с развитым институтом ГЧП. Непосредственной реализации проектов и развитию ГЧП в любой стране предшествует рассмотрение его особенностей с теоретической точки зрения, в том числе подходов к понятию ГЧП, определений форм ГЧП и конкретных моделей в сфере транспорта, требований к проектам, преимуществ и недостатков ГЧП.

Ключевые слова: *понятие ГЧП, формы ГЧП, ГЧП в сфере транспорта, требования к проектам ГЧП, преимущества ГЧП*

1.1. Определение понятия государственно-частного партнерства

Существует множество подходов к определению понятия государственно-частного партнерства, как в зарубежной, так и в национальной научной литературе, в официальных документах и в законодательстве.

В России первоначальное развитие ГЧП получило в региональном законодательстве: в ряде законов субъектов Российской Федерации закреплено понятие ГЧП, но с определенными различиями и особенностями юридической трактовки в каждом регионе. Стоит отметить, что впервые в российском законодательстве понятие ГЧП появилось в Законе Санкт-Петербурга от 25.12.2006 №627-100 «Об участии Санкт-Петербурга в государственно-частных партнерствах». Примеру Санкт-Петербурга последовали многие регионы РФ и подобные законы в настоящее время существуют в 69 субъектах РФ, все они обладают схожим правовым содержанием, но не дают четкого определения понятия ГЧП и не согласованы с новым федеральным законодательством в сфере ГЧП.

Важное значение для дальнейшего развития и применения государственно-частного партнерства в России имеет принятие в 2015 году Федерального закона Российской Федерации от 13 июля 2015 г. N 224-ФЗ "О государственно-частном партнерстве, муниципально-частном партнерстве в Российской Федерации и внесении изменений в отдельные законодательные акты Российской Федерации". Данный закон устанавливает, что «государственно-частное партнерство, муниципально-частное партнерство - юридически оформленное на определенный срок и основанное на объединении ресурсов, распределении рисков сотрудничество публичного партнера, с одной стороны, и частного партнера, с другой стороны, которое осуществляется на основании соглашения о государственно-частном партнерстве, соглашения о муниципально-частном партнерстве, заключенных в соответствии с настоящим Федеральным законом в целях привлечения в экономику частных инвестиций, обеспечения органами государственной власти и органами местного самоуправления доступности товаров, работ, услуг и повышения их качества». Данное понятие наиболее полно характеризует суть взаимодействия данного вида и придает однозначность рассматриваемому понятию, определяя его как систему отношений между государством и бизнесом, при этом отклоняя вторую имеющуюся трактовку в качестве конкретных проектов, осуществляемых государственной и частной стороной.

Следует отметить, что данное понятие также соответствует мировой практике, что подтверждается схожестью особенностей, имеющих место в определении законопроекта и характеристик ГЧП, выделенных некоторыми международными организациями:

- Европейская экономическая комиссия ООН:
 - ▶ Долгосрочность обеспечения и предоставления услуг (иногда сроком до 30 лет),
 - ▶ Предоставление услуг государственного сектора,
 - ▶ Частное финансирование.
- Всемирный банк:

- ▶ Соглашения между публичной и частной сторонами,
- ▶ Производство и оказание инфраструктурных услуг,
- ▶ Цель соглашений - привлечение дополнительных инвестиций.
- «Зеленая книга ГЧП»:
 - ▶ Форма кооперации между общественными властями и бизнесом,
 - ▶ Цели обеспечения финансирования, строительства, модернизации, управления, эксплуатации инфраструктуры или оказания услуг.

Подводя итог, можно сказать, что понятие ГЧП охватывает совокупность различных форм взаимодействия частного сектора и государства, предусматривающих финансирование, строительство, реконструкцию, управление и эксплуатацию инфраструктуры, а также предоставление публичных услуг.

1.2. Формы ГЧП

Так же, как и с определением понятия ГЧП, ситуация с определением конкретных форм ГЧП в мировой и национальной практике остается недостаточно ясной, так как нет четко определенного закрытого перечня данных форм. Наиболее популярные формы в международной практике ГЧП представлены в Таблице 1.

Таблица 1 Формы ГЧП исходя из вида управления поставкой и контроля активов

«Управление поставкой услуг»	<i>Частное</i>	Контракт на управление, Франчайзинг, Контракт на эксплуатацию и техническое обслуживание	Договор аренды, Аффермаж	Частичная приватизация, Концессия, Аутсорсинг
	<i>Смешанное</i>	Контракты на оказание услуг, Акционирование	Совместное предприятие	BOT, BOOT, DBFO, DCMF, IPP, BOO
	<i>Публичное</i>	Результативный контракт (Региональные или муниципальные органы власти)	Кооперативы, Объединения	-
		<i>Публичный</i>	<i>Смешанный</i>	<i>Частный</i>
	Контроль активов			

Выше рассмотренные формы ГЧП многие исследователи склонны отделять от форм ГЧП, относя их к отдельной категории взаимоотношений государства и бизнеса. При такой квалификации к формам ГЧП относятся BOT, BOOT, DBFO, DCMF, IPP, BOO, схожие формы соглашений, различие которых состоит в выполняемых частной стороной функциях, распределении прав собственности, их передачи, финансовых обязательств партнеров. Формы ГЧП и их различия представлены в Таблице 2, где цифрами обозначен порядок осуществления частной стороной своих обязательств.

Таблица 2 Формы ГЧП, основанные на функциях частного партнера

Функции частного партнера	BOT	ROT	BTO	BOOT	BOO	BOMT	DBOOT
Design –осуществляет проектирование	-	-	-	-	-	-	1
Build –осуществляет строительство объекта	1	-	1	1	1	1	2

Operate – эксплуатирует объект в течение срока соглашения	2	2	3	3	3	2	4
Rehabilitate – осуществляет реконструкцию существующего объекта	-	1	-	-	-	-	-
Transfer – передает объект государству по истечению соглашения	3	3	2	4	-	4	5
Own – владеет объектом	-	-	-	2	2	-	3
Maintain – содержит объект в исправном состоянии	-	-	-	-	-	3	-

Стоит отметить, что некоторые источники, представленные формы относят к типам ГЧП или механизмам осуществления ГЧП, также существует квалификация, относящая данные формы ГЧП к разновидностям концессионных соглашений. Данные противоречия свидетельствуют о размытости и отсутствии единого подхода в определении форм ГЧП. В данной работе в качестве форм ГЧП будут рассматриваться все выше перечисленные, как отдельные единицы, в связи с особенностями изучаемой сферы транспорта.

1.3. Особенности ГЧП в сфере транспорта

Во многих странах мира механизм ГЧП в сфере транспорта в настоящее время широко распространен и со временем он получает все большую популярность. Связано это с тем, что необходимость повышения качества транспортной инфраструктуры и услуг вызывает увеличение государственных затрат в данную сферу, что при ограниченности бюджетных ресурсов вынуждает государство прибегать к контрактам с частными предприятиями.

В России необходимость увеличения затрат в сферу транспорта, как отмечается в Государственной программе «Развитие транспортной системы» связана с тем, что современное состояние транспортной системы не отвечает потребностям и перспективам развития Российской Федерации, и дефицит пропускной способности существует на всех видах транспорта. В Транспортной стратегии Российской Федерации на период до 2030 года, утвержденной распоряжением Правительства РФ от 22.11.2008 № 1734-р, выделены следующие общесистемные проблемы развития транспортной отрасли в России:

- наличие территориальных и структурных диспропорций в развитии транспортной инфраструктуры;
- недостаточный уровень доступности транспортных услуг для населения, мобильности трудовых ресурсов;
- недостаточное качество транспортных услуг;
- низкий уровень экспорта транспортных услуг, в том числе использования транзитного потенциала;
- недостаточный уровень транспортной безопасности;
- усиление негативного влияния транспорта на экологию.

В данном случае механизмы финансового управления бизнеса и частные инвестиции, которые будут получены при использовании ГЧП, станут отличной возможностью решения некоторых проблем сферы транспорта России.

В мировой практике в сфере транспорта применяются практически все формы ГЧП, перечисленные ранее. В таблице 3 приведена классификация Всемирного банка форм ГЧП, а также доля проектов ГЧП в сфере транспорта, которая приходится на каждую модель ГЧП.

Таблица 3 Механизмы реализации проектов ГЧП (1984-2011 гг.)

	Всего проекты, ед.	Доля, %	Проекты транспорта, ед.	Доля, %
ВСЕГО	5 314	100%	1 397	100%
Концессии	1 306	25%	795	57%
BROT	725	14%	463	33%
RLT	61	1%	50	4%
ROT	520	10%	282	20%
Приватизация	722	14%	69	5%
Полная	175	3%	12	1%
Частичная	547	10%	57	4%
Проекты нового строительства	3 029	57%	449	32%
BLT	15	0%	3	0%
ВОТ	1 434	27%	426	30%
ВОО	882	17%	8	1%
Merchant	645	12%	12	1%
Аренда	53	1%	0	0%
Контракты на управление и аренда	257	5%	84	6%
Аренда	102	2%	31	2%
Контракты на управление	155	3%	53	4%

Источник: WorldBank PPI Database [Электронный ресурс]. – Режим доступа: <http://ppi.worldbank.org/explore/Report.aspx?mode=1>

Как видно из таблицы, практически все проекты ГЧП в сфере транспорта (около 90%) реализуются по трем моделям ГЧП: BROT (вид концессии), ROT, а также ВОТ. Эти модели являются наиболее подходящими для реализации проектов ГЧП именно в транспортной сфере, так как в сокопуности по всем сферам модели BROT, ROT и ВОТ используются лишь в половине случаев. Также следует отметить, что использование данных моделей в сфере транспорта, по данным Всемирного банка, имеет следующую отраслевую специфику:

- Аэропорты: Концессия – 50% (BROT - 36%, ROT – 11%), ВОТ - 21%;
- Железные дороги: Концессия – 66% (ROT - 36%, RLT - 16%), ВОТ - 25%;

- Автодороги: Концессия – 64% (BROT – 46%, ROT – 17%), BOT - 30%;
- Порты: Концессия – 47% (ROT – 26%, BROT – 13%), BOT – 37%.

Стоит отметить, что не каждый проект создания и эксплуатации объекта транспортной инфраструктуры может реализовываться путем ГЧП. Напротив, эта форма сотрудничества государства и бизнеса должна использоваться только в тех случаях, когда это применимо, когда проект соответствует определенным критериям, можно даже сказать, определенным требованиям. Однако при указании данных требований, я считаю необходимым, в первую очередь, определить признаки ГЧП, которым должен соответствовать любой проект, претендующий на реализацию по принципу государственно-частного партнерства. Перечень данных характеристик также не является четко определенным, в связи с этим в данной работе представлен список наиболее часто встречающиеся в мировой практике признаков ГЧП:

- Длительные сроки действия соглашений о ГЧП,
- Определенная категория объектов соглашений о ГЧП и сфера ГЧП (связаны с обеспечением предоставления общественных услуг с применением объектов, находящихся в государственной или муниципальной собственности),
- Особые формы финансирования проектов (сочетание частных инвестиций с бюджетными средствами либо полное частное финансирование проекта),
- Конкурентная среда при выборе партнера соглашения,
- Особые сферы ответственности между партнерами (государственная сторона – определение целей, параметров проекта, его контроль; частная сторона – оперативная деятельность),
- Распределение рисков между участниками на основе соответствующих договоренностей сторон (некоторые исследователи настаивают на принятие рисков частной стороной).

Требования к проектам ГЧП рассматриваются в процессе подготовки решения о проведении конкурса на право заключения соглашения о государственно-частном партнерстве. Данные требования являются критериями первичной оценки проектов. Одним из видов требований к проектам ГЧП является технико-экономическое обоснование проекта, включающее в себя следующие аспекты:

1. **Коммерческая рентабельность:** показатели отдачи проекта, их оценка и прогнозы на предполагаемый срок эксплуатации исходя из предполагаемого спроса (например, прогноз на интенсивность движения по автодорогам) и ценообразования (например, размеры сборов).
2. **Инженерно-конструкторские решения и оперативная осуществимость:** приемлемость применяемых при осуществлении проектов технологий, методов, оборудования и процессов, их соответствие национальным, местным и экологическим условиям. Также при этом учитывается вероятность достижения необходимого уровня производительности, укладывания в графики работ. Данное требования касается как строительства объекта, так и его эксплуатацию.
3. **Финансовая жизнеспособность:** рассматриваются источники финансирования для этапов строительства и эксплуатации, доказательства намерения кредиторов

осуществлять финансирование проекта. Данное требование также включает оценку ожидаемой внутренней нормы окупаемости.

- 4. Экологическое воздействие:** требование учитывает предполагаемые негативные влияния реализации проекта на окружающую среду и корректировочные меры, необходимы для устранения данных неблагоприятных последствий, исходя из экологических стандартов.

Другой популярный в мировой практике вид требований включает в себя такие критерии как технологическая реализуемость; социально-экономическая эффективность; эффективность ГЧП. Под технологической реализуемостью понимается вероятность технологических рисков (является ли проект технически реализуемым), а также наличие нормативных ограничений по проекту (экспертные заключения и другие документы, подтверждающие техническую реализуемость проекта). Оценка социально-экономического эффекта предполагает сравнение плановых результатов по проекту с приоритетами программных документов (соответствие проекта приоритетам развития субъекта РФ, положительный социально-экономический и бюджетный эффект от проекта). Оценка эффективности реализации проекта в рамках ГЧП или «value for money» необходима для доказательства целесообразности проекта ГЧП в сравнении с другими видами соглашений, учитывает такие элементы, как экономия – совокупный объем затрат, результативность – прогнозные финансовые, экономические и социальные результаты проекта, эффективность – соотношение затрат и результатов по проекту (также здесь учитываются некоторые другие показатели эффективности, например, чистая приведенная стоимость по проекту – NPV, дисконтированный срок окупаемости проекта, в годах – DPP внутренняя норма доходности по проекту - IRR)

Данные требования или критерии оценки проектов являются наиболее популярными в мировой практике, однако следует учесть, что для каждого проекта добавляются свои определенные требования. Процесс отбора проектов ГЧП в каждом случае требует учета финансовой, технической и экономической эффективности реализации проекта по сравнению с другими видами проектов. Работа, проделанная государственной и частной стороной для воплощения проекта в реальность, довольно трудоемкая и длительная. Однако, приложенные усилия для реализации проектов государственно-частного партнерства оправдываются выгодами, которые получают оба партнера при успешном осуществлении соглашения.

1.4. Преимущества и недостатки государственно–частного партнерства

Из определения ГЧП ясно, что его сущность закрепляется в соглашении о ГЧП между государственным партнером и частным партнером, которое направлено на достижение общественных целей и задач государства с помощью технических, финансовых и управленческих ресурсов бизнеса. Каждая сторона преследует собственные выгоды, и среди исследователей нет определенной точки зрения, которая из сторон получает больше преимуществ. Анализ проектов ГЧП во всем мире говорит о следующих причинах участия государства в соглашениях данного вида:

1. Общественная полезность.
2. Привлечение финансовых ресурсов.

3. Привлечение управленческих и интеллектуальных ресурсов.
4. Передачи части рисков и ответственности частной стороне.
5. Отсутствие бюджетных затрат на эксплуатацию объекта
6. Возможность формирования стратегии развития страны.

Однако, интерес частного бизнеса к ГЧП не является меньшим. Основные причины, обуславливающие участие частного партнера в проектах ГЧП представлены в следующих пунктах:

1. Частичное финансирование со стороны государства.
2. Долгосрочное устойчивое развитие бизнеса.
3. Передача части рисков и ответственности государству.
4. Получение доступа к закрытым «сферам».
5. Содействие государства реализации проекта.

Подводя итог, можно сделать вывод, что при реализации проектов ГЧП наблюдается синергетический эффект, то есть объединение усилий частного бизнеса и государства в конечном итоге позволяет получить большую выгоду, чем каждая из этих сторон могла бы получить, действуя самостоятельно.

Среди недостатков ГЧП эксперты выделяют:

- Существенные временные и финансовые затраты на подготовку конкурса ГЧП и участия в нем,
- Недостаточность правовых норм в данной сфере, влекущая возможность признания сделки недействительной или ее переквалификации, а также непрозрачность процедур, коррупцию,
- Отсутствие достаточных гарантий прав частных партнеров при нестабильности политического отношения к ГЧП,
- Малый опыт и сложность накопления навыков частным партнером для активного участия в проектах ГЧП; отсюда - низкая конкуренция на рынке ГЧП.

Однако, как показывает практика, указанные минусы данного механизма существенно не влияют на его привлекательность и востребованность для государства и бизнеса.

Выводы

Государственно-частное партнёрство охватывает совокупность различных форм взаимодействия частного сектора и государства, предусматривающих финансирование, строительство, реконструкцию, управление и эксплуатацию инфраструктуры, а также предоставление публичных услуг. В сфере транспорта ГЧП характеризуется наиболее распространенными формами реализации проектов, наиболее популярными среди которых являются модели BROT, ROT и BOT. Каждая из этих форм ГЧП имеет свои особенности, которые отражаются в проекте, однако, проект ГЧП также должен обладать признаками ГЧП и соответствовать предъявляемым к нему требованиям технологической реализуемости, социально-экономической эффективности, эффективность ГЧП, по другой методологии – технико-экономическому обоснованию; а также требованиям, прописанным в законодательстве каждого региона. Несмотря на трудоемкость и длительность реализации проектов ГЧП, выгоды, получаемые

государственной и частной стороной от успешной реализации проекта ГЧП имеют синергетический характер и полностью компенсируют понесенные затраты.

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Новопашина А.Н.
Амурская лаборатория экономики и социологии
Института экономических исследований ДВО РАН, мл. науч. сотр.
Амурский государственный университет,
старший преподаватель каф. Международного бизнеса и туризма
alinanovopashina@gmail.com

Импорт прямых китайских инвестиций в Россию: куда они идут?

В последние годы Китай демонстрирует стремительный рост экспорта прямых инвестиций, однако Россия не смогла воспользоваться данным трендом, и объем поступления китайских инвестиций в ее экономику был низким. Результаты оценки факторов, определяющих импорт прямых инвестиций на субнациональном уровне, свидетельствуют, что в 2006-2012 гг. китайские инвесторы направляли капитал в российские регионы, обеспеченные лесными ресурсами территориально приближенные к Китаю, а также обладающие большим размером рынка. Стратегии китайских инвесторов в России и на мировом рынке схожи – получение доступа к рынку и ресурсам. Поступление китайских инвестиций в Россию сдерживают конфликт целей ее экономического развития и интересов инвесторов, барьеры ведения бизнеса на российском рынке.

Развивающиеся страны, прямые иностранные инвестиции, инвестиционное сотрудничество, факторы, Россия и Китай

Введение

Важнейшей задачей России на современном этапе является модернизация экономики и преодоление сырьевой зависимости. Одним из инструментов для решения этой задачи являются прямые иностранные инвестиции (ПИИ). ПИИ обеспечивают приток в страну не только капитала, но и технологий. Поэтому их стимулирование является одним из приоритетов внешнеэкономической политики России.

Долгое время основным источником ПИИ в Россию являлись развитые страны, а также оффшорные территории, такие как Кипр, Британские Виргинские острова, инвестиционные ресурсы которых представлены капиталом, ранее вывезенным из России. В то же время в последнее десятилетие наиболее быстрый рост вывоза капитала демонстрируют развивающиеся страны. Их доля в мировом экспорте ПИИ увеличилась с 12% в 2000 г. до 32% в 2013 г. Среди развивающихся стран наиболее быстрые темпы роста экспорта инвестиций характерны для Китая. В 2013 г. объем экспорта ПИИ Китая достиг 100 млрд долл. или 7,2% их мирового экспорта ПИИ, что позволило ему занять третье место в мире по объему прямого зарубежного инвестирования, уступив только США и Японии. Несмотря на длительную историю экономического сотрудничества, высокий уровень развития внешней торговли между странами, территориальную близость, объемы инвестиций из Китая в Россию низкие: доля России в экспорте прямых инвестиций из Китая, а также доля Китая в импорте ПИИ в Россию составляют около 1%. Поэтому интерес представляет исследование факторов, определяющих импорт прямых китайских инвестиций экономику России и выявление причин, сдерживающих их потоки.

В этой связи целью данного исследования явилась оценка факторов определяющих импорт прямых китайских инвестиций в Россию.

Для выявления факторов прямых инвестиций из Китая в России первой части исследования обобщены существующие подходы к выявлению факторов ПИИ, определяющие направления их потоков, а также эмпирические оценки факторов, воздействующих на импорт ПИИ в Россию. Во второй части на основе анализ структуры импорта прямых китайских инвестиций в Россию, а также регрессионной оценки воздействующих на них факторов выявлены характеристики российских регионов, способствующие привлечению капитала из Китая. В третьей части на основе анализа российского законодательства и совместных российско-китайских программ развития инвестиционного сотрудничества определены возможные барьеры импорта прямых китайских инвестиций в Россию. В заключении обобщены основные выводы исследования.

1. Факторы, определяющие направления потоков ПИИ

В рамках подхода к анализу ПИИ с позиции их пространственного распределения выделяется четыре основные стратегии инвесторов, определяющие выбор ими того или иного «места» для размещения капитала.

Прямые инвестиции, осуществляемые для получения доступа к рынку принимающей страны, – первая стратегия, позволяет инвестору создать производство вблизи конечных потребителей и тем самым сократить издержки, связанные с преодолением торговых барьеров, адаптировать производимую продукцию к вкусам и предпочтениям потребителей, а также организовать сбыт импортируемой в принимающую страну продукции. Ключевым фактором, определяющим направления потоков инвестиций ориентированных на получение доступа к рынку, является размер экономики принимающей страны (Kojima, 1982; Brainard, 1993, 1997; Markusen, 2002; Dunning & Lundan, 2008).

Прямые инвестиции, ориентированные на получение доступа к ресурсам принимающей страны, – вторая стратегия, позволяют снизить издержки производства путем организации на территории принимающей страны отдельных этапов производственно-

го процесса, требующих затрат относительно дефицитных в инвестирующей стране ресурсов, которыми обеспечена принимающая страна (Kojima, 1982; Helpman, 1984; Dunning & Lundan, 2008). Положительное воздействие на объемы инвестиций, ориентированных на получение доступа к природным ресурсам, также оказывает низкий уровень издержек в торговле с принимающей страной, что позволяет инвестору минимизировать издержки импорта продукции, произведенной при участии ПИИ.

Осуществление ПИИ для приобретения стратегических активов – третья стратегия, позволяет инвестору получить доступ к технологиям, которыми располагает принимающая страна (Dunning & Lundan, 2008). Результатом этого является усиление имеющихся у инвестора специфических преимуществ или ослабление данных преимуществ у его конкурентов.

Для повышения эффективности деятельности - четвертая стратегия, инвесторы размещают филиалы в тех странах, издержки производства в которых ниже, чем в инвестирующей стране (Bevan & Estrin, 2004; Dunning & Lundan, 2008).

Выводы теории неоднократно подтверждены эмпирическими работами, в которых проводилась оценка факторов, воздействующих на направления потоков прямых инвестиций между различными странами мира, а также исследование стратегий инвесторов на зарубежных рынках. Кроме того, существует ряд работ, в которых предпринята попытка оценка факторов, способствующих импорту ПИИ в Россию, на субнациональном уровне.

Результаты оценки воздействия размера регионального рынка на импорт ПИИ в России неоднозначны. Brock (1998), Manaenkov (2000) выявили положительную взаимосвязь между поступлением ПИИ в регионы России и размером их рынка. Buscillato & Santangelo (2009) со своей стороны такую взаимосвязь не обнаружили. Причиной отсутствия взаимосвязи между размером рынка и поступлением ПИИ может служить тот факт, что инвесторы при принятии решений об осуществлении ПИИ будут ориентироваться скорее на размер национального, чем субнационального рынка (Gonchar & Marek, 2014). Это «правило», однако, не будет работать, если уровень развития транспортной инфраструктуры между регионами страны низкий и межрегиональная торговля сталкивается с высокими неформальными барьерами. В этом случае размер рынка принимающего региона имеет для иностранного инвестора даже большее значение, чем размер рынка страны в целом (Amiti & Javorcik, 2008).

Другим фактором, определяющим импорт ПИИ в Россию, является обеспеченность ее отдельных регионов природными ресурсами. Для описания обеспеченности регионов природными ресурсами в имеющихся работах использованы различные показатели. Так, Iwasaki & Sukanuma (2007) использовали рейтинг природно-ресурсного потенциала регионов России, разрабатываемый агентством Эксперт, Ledyeva (2009) – объем производства нефти и газа, Gonchar & Marek (2014) – наличие в регионах месторождений нефти, природного газа, редкоземельных металлов, кварца, платины, алмазов и горного хрусталя. Несмотря на использование различных переменных, описывающих обеспеченность регионов природными ресурсами, результаты имеющихся оценок свидетельствуют в пользу того, что данный фактор оказывает положительное воздействие на импорт ПИИ.

Значимое отрицательное воздействие на импорт ПИИ в российские регионы оказывает расстояние (по железной или автомобильной дороге) от крупнейшего города принимающего региона России до экономического центра принимающей страны, которое многие авторы используют в качестве переменной, характеризующей уровень транспортных расходов в торговле (Manaenkov, 2000; Gonchar & Marek, 2014).

Помимо факторов, описывающих наличие у иностранных инвесторов основных описываемых в литературе инвестиционных стратегий, значимое воздействие на ПИИ

может оказывать объем поступающих в регион отечественных инвестиций, особенности институциональной среды региона, его географическое положение. Данные факторы определяют уровень прибыли и издержек инвестирования.

Таким образом, имеющиеся эмпирические работы доказывают, что факторы субнационального уровня оказывают значимое воздействие на поступление ПИИ в Россию. Наиболее значимыми из них являются размер регионального рынка, обеспеченность региона природными ресурсами и его территориальная близость к рынку инвестирующей страны. Выявленные факторы указывают, что стратегиями инвесторов в отдельных регионах России являются поиск рынков и доступ к природным ресурсам. Стратегии повышения эффективности деятельности иностранные инвесторы в России преимущественно не следуют. Об этом свидетельствуют результаты, полученные в работе Gonchar & Marek (2014). В соответствии с полученными ими оценками уровень заработных плат, описывающих производственные издержки, не оказывает значимого воздействия на поступление ПИИ в регионы России. Насколько можно судить, работы, в которых проводилось бы исследование наличия у иностранных инвесторов стратегии приобретения стратегических активов, на сегодняшний день отсутствуют.

Имеющиеся исследования посвящены выявлению факторов, определяющих импорт российскими регионами инвестиций в целом, без учета их страновой специфики. Оценки факторов, определяющих импорт прямых инвестиций в Россию из отдельных стран, в частности из Китая, отсутствуют. Выполнение такой оценки представляет значительный интерес для получения новых знаний об особенностях пространственного распределения инвестиций в условиях сотрудничества стран имеющих общую границу.

2. Оценка факторов, определяющих импорт прямых китайских инвестиций в Россию

Имеющиеся оценки факторов, определяющих направления экспорта капитала Китая на мировом рынке, свидетельствуют, что прямые инвестиции направляются в страны, обладающие большими размерами рынка, обеспеченные минеральными ресурсами, характеризующиеся территориальной близостью к рынку Китая, обладающие технологиями, подтвержденными патентами (Buckley et al., 2007; Zhang & Daly, 2011; Новопашина, 2014). Китайские инвесторы на территории принимающих стран реализуют стратегию поиска рынков путем осуществления инвестиций в создание дилерских сетей для сбыта импортируемой из Китая продукции, а также стратегии получения доступа к минеральным ресурсам и приобретения стратегических активов. Какие из этих стратегий инвесторы из Китая реализуют в России, и какие факторы определяют поступление прямых капиталовложений? Для поиска ответа на этот вопрос рассмотрим структуру поступающих из Китая в Россию прямых инвестиций и выполним оценку определяющих их факторов.

В структуре импорта прямых китайских инвестиций в Россию наибольший удельный вес занимает строительство, а также сфера услуг – финансовая деятельность и операции с недвижимостью (*табл. 1*). Инвестиции в данные виды деятельности участвуют в создании фирм, выполняющих соответствующие работы и оказывающих услуги на территории России. Высокий удельный вес инвестиций в эти виды деятельности позволяет сделать предположение, что стратегией инвестирования в Россию является поиск рынков. Также высокую долю занимают инвестиции в лесозаготовки, обработку древесины и добычу полезных ископаемых, что может свидетельствовать о том, что прямые китайские инвестиции в Россию поступают для получения доступа к лесным и минеральным ресурсам.

Таблица 1. Импорт прямых китайских инвестиций в Россию по видам экономической деятельности, %

Виды экономической деятельности	2006	2007	2008	2009	2010	2011	2012
Сельское и лесное хозяйство, в т.ч.:	2,70	6,17	5,73	9,01	4,72	1,35	6,24
лесозаготовки	2,33	6,10	5,58	8,72	4,05	0,46	1,14
Добыча полезных ископаемых, в т.ч.:	4,44	6,61	5,23	7,06	8,60	1,66	21,51
добыча полезных ископаемых, кроме топливно-энергетических	3,87	5,30	3,68	1,68	1,68	1,66	21,05
Обрабатывающие производства, в т.ч.:	0,84	0,93	5,99	1,04	8,09	8,75	17,95
обработка древесины и производство изделий из дерева	0,04	0,23	1,06	0,71	5,24	0,12	14,50
Строительство	2,06	0,70	14,53	3,43	45,84	5,92	25,61
Оптовая и розничная торговля	1,54	7,96	7,73	5,21	7,52	0,89	3,25
Финансовая деятельность	0,57	0,29	5,24	2,47	13,88	14,63	15,02
Операции с недвижимостью	87,44	77,11	54,73	71,70	11,19	66,76	8,15
Прочие	0,40	0,23	0,83	0,09	0,15	0,04	2,28
Всего	100,0	100,0	100,0	100,0	100,0	100,0	100,0

Источник: составлено автором на основе данных ЕМИСС.

Пространственная структура импорта прямых китайских инвестиций в Россию свидетельствует, что не во все регионы поступают ПИИ из Китая: в период с 2004 по 2012 гг. до 85% инвестиций импортировали только 3 российских региона, в 29 регионов прямые китайские инвестиции не поступали. Пространственная неоднородность прямых китайских инвестиций свидетельствует, что объемы их импорта в Россию зависят от факторов субнационального уровня.

Структура инвестиций из Китая в Россию позволила сформулировать следующую *гипотезу*: импорт прямых китайских инвестиций в Россию определяется обеспеченностью ее регионов природными ресурсами и размерами региональных рынков.

Для проверки гипотезы в работе выполнена оценка факторов, определяющих импорт прямых китайских инвестиций в Россию, на субнациональном уровне.

Пространственная неоднородность распределения инвестиций между регионами определила выбор эмпирической стратегии. Оценивание проводилось с использованием регрессионной модели бинарного выбора (логит модели), позволяющей оценить воздействие факторов на вероятность поступления ПИИ в i -регион. Зависимая переменная принимает значение 1, если ПИИ в i -ый регион в период t поступали, и 0 в ином случае. Оцениваемое уравнение имеет следующий вид:

$$\begin{aligned}
 P(FDI_{i(t+1)} = 1) &= 1/(1 + e^{-Z}), \\
 Z &= \beta_0 + \Sigma\beta_d Market_size_{it} + \Sigma\beta_f Resource_endowment_{it} + \beta_g Dist_i + \\
 &+ \Sigma\beta_h Controls_{it} + \varepsilon_{it},
 \end{aligned}
 \tag{1}$$

где $FDI_{i(t+1)}$ – поступление прямых инвестиций из Китая в i -ый регион в период $t+1$; $Market_size_{it}$ – размер рынка i -ого региона в период t , описываемый (1) логарифмом ВРП (в ценах 2005 г.) и (2) плотностью населения в i -ом регионе; $Resource_endowment_{it}$ – обеспеченность i -ого региона ресурсами в период t , описываемая (1) показателями обеспеченности минеральными ресурсами, а именно (1.1) фиктивными переменными, принимающими значение 1, если в период t i -ый регион включен в прогнозный пере-

чень участков недр нефти и газа, угля и металлических руд, по которым планируется провести аукцион в период t , и 0 – если i -ый регион не включен в указанный перечень, (1.2) объемом отгруженной продукции добычи топливно-энергетических и нетопливных полезных ископаемых, (1.3) долей добычи полезных ископаемых в i -ом регионе, а также (2) объемом производства древесины; $Dist_i$ – расстояние от экономического центра i -ого региона до экономического центра Китая (г. Пекин): (1) транспортное расстояние по автомобильной/железнодорожной дороге от экономического центра региона до г. Пекин, (2) взаимодействие обеспеченности лесными ресурсами и транспортного расстояния до Китая; $Controls_{it}$ – контрольные переменные; ε_{it} – стандартная ошибка. Контролировались следующие параметры: инвестиционная открытость, описываемая с помощью показателя объема импорта ПИИ в регион без учета инвестиций Китая, а также суммы инвестиций в основной капитал; внешнеторговая открытость – отношение внешнеторгового оборота региона к его ВРП; уровень инвестиционного риска в регионе по данным Эксперт РА; среднемесячная заработная плата в регионе; транспортное расстояние от административного центра региона до г. Москвы; средняя температура января, описывающая климатические условия в регионе.

В соответствии с выводами теоретических работ, если $\beta_d > 0$, то стратегией инвестирования является поиск рынков. Если $\beta_f > 0$ и $\beta_g < 0$, то стратегия инвестирования – получение доступа к ресурсам.

Оценивание проводилось на основе данных по 75 регионам России за период 2006-2012 гг. В табл. 2 представлены предельные эффекты факторов, определяющих импорт прямых китайских инвестиций в регионы России. Предельные эффекты показывают изменение вероятности поступления ПИИ Китая в регион России при изменении объясняющей переменной на 1 единицу.

Таблица 2. Предельные эффекты факторов, определяющих импорт прямых китайских инвестиций в регионы России в 2006-2012 гг.

Объясняющие переменные	Спецификации модели					
	(1)	(2)	(3)	(4)	(5)	(6)
Log ВРП	0,300 ^β	0,292 ^β	0,283 ^β	0,276 ^β	0,326 ^β	0,317 ^β
Плотность населения	0,065 ^γ	0,070 ^γ	0,065 ^γ	0,070 ^γ	0,053	0,058 ^γ
Доступ к нефти и газу	0,120	0,115				
Доступ к углю	0,023	0,031				
Доступ к металлическим рудам	-0,145	-0,144				
Log Пр-во топливно-энергетических ресурсов					-0,005	-0,004
Log Пр-во нетопливных ресурсов					-0,056 ^β	-0,060 ^β
Доля добычи полезных ископаемых в ВРП			-0,006	-0,006		
Log Пр-во лесных ресурсов	0,012	0,730	0,011	0,797	0,012	0,890 ^γ
Log Расстояние до Китая	-0,994 ^α	-0,465	-0,914 ^α	-0,341	-1,000 ^α	-0,351
Log Пр-во лесных ресурсов*Log Расстояние до Китая		-0,080		-0,087		-0,098 ^γ
Контроли/Константа	Да/Да					
Кол-во наблюдений	450					
Pseudo R ²	0,31	0,31	0,30	0,30	0,31	0,32

Примечание: γ - 10%, β - 5%, α - 1% уровни значимости. Все предельные эффекты представлены в виде средних значений. Зависимая переменная – фиктивная переменная для регионов, в которые поступают ПИИ из Китая.

Полученные результаты свидетельствуют, что наличие в регионах России минеральных ресурсов (нефти и природного газа, угля и металлических руд) не увеличивает

вероятность поступления в него ПИИ из Китая. На это указывает отсутствие статистической значимости предельных эффектов переменных, описывающих наличие в регионах доступа к нефти и газу, углю, металлическим рудам.

Объем отгруженной продукции добычи топливно-энергетических полезных ископаемых в регионе не оказывает статистически значимого воздействия на вероятность поступления в него ПИИ из Китая. В тоже время рост объема добычи нетопливных полезных ископаемых оказывает отрицательное воздействие на вероятность импорта китайских инвестиций. Уровень специализации регионов на добычи полезных ископаемых не оказывает значимого воздействия на вероятность осуществления инвесторами из Китая ПИИ в регионы России, о чем свидетельствует статистически незначимые предельные эффекты переменной доли минеральных ресурсов в экспорте российских регионов.

Положительное воздействие на принятие решение инвесторов из Китая об осуществлении ПИИ оказывает рост объема производства лесных ресурсов в регионе. Однако статистически значимые результаты воздействия объемов производства древесины в регионах России на вероятность поступления в них прямых китайских инвестиций получены только в одной из шести оцененных моделях, в которую в качестве объясняющей переменных включено взаимодействие расстояние и объема производства в регионах лесных ресурсов. Предельные эффекты этой переменной отрицательны, что указывает на то, что сокращение расстояния до обеспеченных лесными ресурсами регионов увеличивает вероятность поступления в них ПИИ из Китая, но значимы только в одной из трех моделей.

Предельные эффекты расстояния между крупнейшими городами регионов России и Китаем только в трех оцененных уравнениях статистически значимы и отрицательны. Данные результаты были получены, когда в оцениваемое уравнение не была включена переменная взаимодействия расстояние и объема производства в регионах лесных ресурсов. Полученные оценки свидетельствуют, что рост географического расстояния от крупнейшего города региона до Китая сопровождается сокращением ПИИ в регион.

Результаты оценки свидетельствуют, что рост ВРП и плотности населения в регионе увеличивает вероятность поступления в него ПИИ из Китая - предельные эффекты ВРП положительны и статистически значимы во всех моделях, предельные эффекты плотности населения положительны и статистически значимы в пяти из шести оцененных уравнений. Данный результат подтверждает выдвинутую гипотезу, что увеличение размера рынка сопровождается ростом ПИИ, импортируемых регионом.

Таким образом, положительное воздействие на вероятность поступления в регион ПИИ из Китая оказывает рост размера рынка принимающего региона, а отрицательное – увеличение расстояния от Китая до принимающего региона обеспеченного лесными ресурсами. Рост обеспеченности регионов минеральными ресурсами не увеличивает вероятность поступления в них ПИИ. Следовательно, полученные результаты частично подтверждают выдвинутую гипотезу и указывают на то, что путем осуществления ПИИ инвесторы стремятся к получению доступа к рынку российских регионов и их лесным ресурсам. Стратегии доступа к минеральным ресурсам инвесторы из Китая в России не следуют.

Факторы, определяющие поступление прямых китайских инвестиций в регионы России и в экономики зарубежных стран, а также стратегии инвесторов из Китая в России и на мировом рынке схожи. Однако объемы поступления ПИИ из Китая в Россию низкий. Об этом свидетельствует низкое значение коэффициента локализации ПИИ из Китая в Россию (0,27 в 2010 г.), рассчитанный как отношение доли страны в экспорте ПИИ из Китая к доле этой страны в мировом объеме импорта ПИИ. Коэффициент яв-

ляется показателем уровня развития инвестиционного сотрудничества между Китаем и зарубежной страной - значение меньше 1 указывает на то, что доля России в экспорте ПИИ Китая ниже, чем следует ожидать из ее доли в мировом импорте ПИИ. В 2010 г. доля России в мировом объеме импорта ПИИ составила 3%, а в экспорте ПИИ Китая – 0,08%.¹ Что является причиной низких объемов импорта прямых китайских инвестиций в Россию? Для ответа на этот вопрос рассмотрим содержание проектов, направленных на развитие инвестиционного сотрудничества между Россией и Китаем, а также нормы законодательства, регулирующие приток иностранных инвестиций в Россию.

3. Барьеры импорта прямых китайских инвестиций в Россию

Направления развития инвестиционного сотрудничества между Россией и Китаем определены в одобренной 23 сентября 2009 г. «Программе сотрудничества между регионами Дальнего Востока и Восточной Сибири Российской Федерации и Северо-востока Китайской Народной Республики (2009-2018 годы)» (далее – Программа). В соответствии с Программой на территории регионов Дальнего Востока и Восточной Сибири совместно с инвесторами из Китая предусмотрена реализация 91 проекта, большая часть из которых направлена на создание новых и развитие существующих производств в сфере деревопереработки (22 проекта), производств неметаллических продуктов (12 проектов, все в сфере производства строительных материалов), сельского хозяйства (6 проектов) и производств пищевых продуктов (6 проектов, все проекты на базе собственного сельскохозяйственного сырья).

Распределение совместных российско-китайских проектов по видам экономической деятельности отражает интерес инвесторов из Китая к получению доступа к природным ресурсам регионов Дальнего Востока и Восточной Сибири. Однако целями и задачами экономического развития России является переход экономики на инновационный путь развития, обеспечение высокого уровня благосостояния населения, развитие инфраструктуры, увеличение объема производства высокотехнологичных видов продукции. Получение доступа к крупным и экономически эффективным месторождениям полезных ископаемых сталкивается с рядом барьеров:

1) законодательные ограничения, препятствующие ПИИ в разработку крупных месторождений полезных ископаемых на территории России. Данный барьер препятствует реализации инвесторами из Китая стратегии доступа к природным ресурсам. Преодоление данного барьера возможно только при условии поддержки инвестора со стороны государства, которая у инвесторов из Китая в России отсутствует. В результате инвесторы из Китая имеют возможность осуществления ПИИ в разработку только небольших и низкорентабельных месторождений полезных ископаемых, что обуславливает низкие объемы инвестиций в этой сфере;

2) высокие административные барьеры ведения бизнеса в сфере добычи минеральных ресурсов и лесозаготовок, которые проявляются в больших транзакционных издержках, которые вынужден нести инвестор для получения всех документов, необходимых для начала лесозаготовки или добычи ресурсов, а также осуществления деятельности в этих отраслях. Если уровень издержек на создание зарубежного производства высокий и превышает издержки на преодоление торговых барьеров, то импорт является более предпочтительным вариантом получения доступа к зарубежному рынку по сравнению с инвестированием (Markusen, 2002). В случае с ПИИ из Китая это означает, что высокие административные барьеры ведения бизнеса в добывающем секторе и лесозаготовках сдерживают ПИИ, но стимулируют экспорт природных ресурсов из

¹ Рассчитано на основе данных UNCTAD.

России в Китай. Данный вывод подтверждается высокими объемами экспорта топливных и лесных ресурсов из России в Китай.

Кроме того, перечень проектов, включенных в Программу, свидетельствует о намерениях китайской стороны участвовать в переработке имеющихся здесь ресурсов. Однако инвесторам предлагается инвестировать в уже реализуемые на территории восточных регионов России проекты. Создание новых производств, в которых могли бы участвовать инвесторы из Китая и выступать в качестве единственного собственника созданного предприятия, Программой не предусмотрено. Это увеличивает риски прямого инвестирования, связанные с незащищенностью прав собственности инвесторов.

Выделенные барьеры ведут к росту издержек, которые вынужден нести иностранный инвестор при организации производства на территории России. Высокая зависимость экономики России от внешней торговли с Китаем, которая позволяет Китаю обеспечивать наиболее выгодные для себя условия торговли, сделала данную форму экономического взаимодействия с Россией более эффективной по сравнению с осуществлением ПИИ.

Заключение

Полученные результаты доказывают, что в период 2006-2012 гг. импорт прямых китайских инвестиций в Россию зависел от факторов субнационального уровня, а именно размеров региональных рынков и обеспеченности лесными ресурсами территориально приближенных к Китаю регионов. Несмотря на высокую обеспеченность России минеральными ресурсами, их наличие в регионах России не являлось фактором, определяющим импорт прямых китайских инвестиций.

Оценка факторов, воздействующих на поступление прямых китайских инвестиций в регионы России, позволяет выделить группы регионов в зависимости от характеристик регионов, определяющих их привлекательность для инвесторов из Китая: (а) регионы, привлекательность которых для китайских ПИИ определялась наличием лесных ресурсов при условии их территориальной близости к Китаю; (б) регионы, привлекательность которых определялась их территориальной близостью к китайским экспортерам продукции, (в) российские центральные регионы с наибольшими размерами рынка.

Выявленные факторы свидетельствуют, что инвесторы из Китая на территории регионов России получают доступ к рынкам сбыта, а также лесным ресурсам регионов. Стратегии инвестирования в Россию в целом соответствуют приоритетам Китая при экспорте ПИИ. Однако, в отличие от мирового рынка, в России китайские инвесторы не следуют стратегии получения доступа к минеральным ресурсам инвесторы. Реализации этой стратегии препятствует, во-первых, противоречие привлечения ПИИ в сырьевые товары целям и задачам экономического развития России; во-вторых, законодательные ограничения иностранных инвестиций в разработку крупных месторождений полезных ископаемых; в-третьих, высокие барьеры ведения бизнеса в России, особенно в сравнении с другими развивающимися странами. В результате получение доступа к топливно-энергетическим и не топливным полезным ископаемым Китай преимущественно обеспечивает за счет их импорта (доля минеральных продуктов в российском экспорте в Китай в 2012 г. составила 74,6%), что усиливает зависимость России от экспорта сырьевых ресурсов.

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Новопашина А.Н.
Амурская лаборатория экономики и социологии
Института экономических исследований ДВО РАН, мл. науч. сотр.
Амурский государственный университет,
старший преподаватель каф. Международного бизнеса и туризма
alinanovopashina@gmail.com

Импорт прямых китайских инвестиций в Россию: куда они идут?

В последние годы Китай демонстрирует стремительный рост экспорта прямых инвестиций, однако Россия не смогла воспользоваться данным трендом, и объем поступления китайских инвестиций в ее экономику был низким. Результаты оценки факторов, определяющих импорт прямых инвестиций на субнациональном уровне, свидетельствуют, что в 2006-2012 гг. китайские инвесторы направляли капитал в российские регионы, обеспеченные лесными ресурсами территориально приближенные к Китаю, а также обладающие большим размером рынка. Стратегии китайских инвесторов в России и на мировом рынке схожи – получение доступа к рынку и ресурсам. Поступление китайских инвестиций в Россию сдерживают конфликт целей ее экономического развития и интересов инвесторов, барьеры ведения бизнеса на российском рынке.

Развивающиеся страны, прямые иностранные инвестиции, инвестиционное сотрудничество, факторы, Россия и Китай

Введение

Важнейшей задачей России на современном этапе является модернизация экономики и преодоление сырьевой зависимости. Одним из инструментов для решения этой задачи являются прямые иностранные инвестиции (ПИИ). ПИИ обеспечивают приток в страну не только капитала, но и технологий. Поэтому их стимулирование является одним из приоритетов внешнеэкономической политики России.

Долгое время основным источником ПИИ в Россию являлись развитые страны, а также оффшорные территории, такие как Кипр, Британские Виргинские острова, инвестиционные ресурсы которых представлены капиталом, ранее вывезенным из России. В то же время в последнее десятилетие наиболее быстрый рост вывоза капитала демонстрируют развивающиеся страны. Их доля в мировом экспорте ПИИ увеличилась с 12% в 2000 г. до 32% в 2013 г. Среди развивающихся стран наиболее быстрые темпы роста экспорта инвестиций характерны для Китая. В 2013 г. объем экспорта ПИИ Китая достиг 100 млрд долл. или 7,2% их мирового экспорта ПИИ, что позволило ему занять третье место в мире по объему прямого зарубежного инвестирования, уступив только США и Японии. Несмотря на длительную историю экономического сотрудничества, высокий уровень развития внешней торговли между странами, территориальную близость, объемы инвестиций из Китая в Россию низкие: доля России в экспорте прямых инвестиций из Китая, а также доля Китая в импорте ПИИ в Россию составляют около 1%. Поэтому интерес представляет исследование факторов, определяющих импорт прямых китайских инвестиций экономику России и выявление причин, сдерживающих их потоки.

В этой связи целью данного исследования явилась оценка факторов определяющих импорт прямых китайских инвестиций в Россию.

Для выявления факторов прямых инвестиций из Китая в России первой части исследования обобщены существующие подходы к выявлению факторов ПИИ, определяющие направления их потоков, а также эмпирические оценки факторов, воздействующих на импорт ПИИ в Россию. Во второй части на основе анализ структуры импорта прямых китайских инвестиций в Россию, а также регрессионной оценки воздействующих на них факторов выявлены характеристики российских регионов, способствующие привлечению капитала из Китая. В третьей части на основе анализа российского законодательства и совместных российско-китайских программ развития инвестиционного сотрудничества определены возможные барьеры импорта прямых китайских инвестиций в Россию. В заключении обобщены основные выводы исследования.

1. Факторы, определяющие направления потоков ПИИ

В рамках подхода к анализу ПИИ с позиции их пространственного распределения выделяется четыре основные стратегии инвесторов, определяющие выбор ими того или иного «места» для размещения капитала.

Прямые инвестиции, осуществляемые для получения доступа к рынку принимающей страны, – первая стратегия, позволяет инвестору создать производство вблизи конечных потребителей и тем самым сократить издержки, связанные с преодолением торговых барьеров, адаптировать производимую продукцию к вкусам и предпочтениям потребителей, а также организовать сбыт импортируемой в принимающую страну продукции. Ключевым фактором, определяющим направления потоков инвестиций ориентированных на получение доступа к рынку, является размер экономики принимающей страны (Kojima, 1982; Brainard, 1993, 1997; Markusen, 2002; Dunning & Lundan, 2008).

Прямые инвестиции, ориентированные на получение доступа к ресурсам принимающей страны, – вторая стратегия, позволяют снизить издержки производства путем организации на территории принимающей страны отдельных этапов производственно-

го процесса, требующих затрат относительно дефицитных в инвестирующей стране ресурсов, которыми обеспечена принимающая страна (Kojima, 1982; Helpman, 1984; Dunning & Lundan, 2008). Положительное воздействие на объемы инвестиций, ориентированных на получение доступа к природным ресурсам, также оказывает низкий уровень издержек в торговле с принимающей страной, что позволяет инвестору минимизировать издержки импорта продукции, произведенной при участии ПИИ.

Осуществление ПИИ для приобретения стратегических активов – третья стратегия, позволяет инвестору получить доступ к технологиям, которыми располагает принимающая страна (Dunning & Lundan, 2008). Результатом этого является усиление имеющихся у инвестора специфических преимуществ или ослабление данных преимуществ у его конкурентов.

Для повышения эффективности деятельности – четвертая стратегия, инвесторы размещают филиалы в тех странах, издержки производства в которых ниже, чем в инвестирующей стране (Bevan & Estrin, 2004; Dunning & Lundan, 2008).

Выводы теории неоднократно подтверждены эмпирическими работами, в которых проводилась оценка факторов, воздействующих на направления потоков прямых инвестиций между различными странами мира, а также исследование стратегий инвесторов на зарубежных рынках. Кроме того, существует ряд работ, в которых предпринята попытка оценки факторов, способствующих импорту ПИИ в Россию, на субнациональном уровне.

Результаты оценки воздействия размера регионального рынка на импорт ПИИ в России неоднозначны. Brock (1998), Manaenkov (2000) выявили положительную взаимосвязь между поступлением ПИИ в регионы России и размером их рынка. Buscillato & Santangelo (2009) со своей стороны такую взаимосвязь не обнаружили. Причиной отсутствия взаимосвязи между размером рынка и поступлением ПИИ может служить тот факт, что инвесторы при принятии решений об осуществлении ПИИ будут ориентироваться скорее на размер национального, чем субнационального рынка (Gonchar & Marek, 2014). Это «правило», однако, не будет работать, если уровень развития транспортной инфраструктуры между регионами страны низкий и межрегиональная торговля сталкивается с высокими неформальными барьерами. В этом случае размер рынка принимающего региона имеет для иностранного инвестора даже большее значение, чем размер рынка страны в целом (Amiti & Javorcik, 2008).

Другим фактором, определяющим импорт ПИИ в Россию, является обеспеченность ее отдельных регионов природными ресурсами. Для описания обеспеченности регионов природными ресурсами в имеющихся работах использованы различные показатели. Так, Iwasaki & Sukanuma (2007) использовали рейтинг природно-ресурсного потенциала регионов России, разрабатываемый агентством Эксперт, Ledyeva (2009) – объем производства нефти и газа, Gonchar & Marek (2014) – наличие в регионах месторождений нефти, природного газа, редкоземельных металлов, кварца, платины, алмазов и горного хрусталя. Несмотря на использование различных переменных, описывающих обеспеченность регионов природными ресурсами, результаты имеющихся оценок свидетельствуют в пользу того, что данный фактор оказывает положительное воздействие на импорт ПИИ.

Значимое отрицательное воздействие на импорт ПИИ в российские регионы оказывает расстояние (по железной или автомобильной дороге) от крупнейшего города принимающего региона России до экономического центра принимающей страны, которое многие авторы используют в качестве переменной, характеризующей уровень транспортных расходов в торговле (Manaenkov, 2000; Gonchar & Marek, 2014).

Помимо факторов, описывающих наличие у иностранных инвесторов основных описываемых в литературе инвестиционных стратегий, значимое воздействие на ПИИ

может оказывать объем поступающих в регион отечественных инвестиций, особенности институциональной среды региона, его географическое положение. Данные факторы определяют уровень прибыли и издержек инвестирования.

Таким образом, имеющиеся эмпирические работы доказывают, что факторы субнационального уровня оказывают значимое воздействие на поступление ПИИ в Россию. Наиболее значимыми из них являются размер регионального рынка, обеспеченность региона природными ресурсами и его территориальная близость к рынку инвестирующей страны. Выявленные факторы указывают, что стратегиями инвесторов в отдельных регионах России являются поиск рынков и доступ к природным ресурсам. Стратегии повышения эффективности деятельности иностранные инвесторы в России преимущественно не следуют. Об этом свидетельствуют результаты, полученные в работе Gonchar & Marek (2014). В соответствии с полученными ими оценками уровень заработных плат, описывающих производственные издержки, не оказывает значимого воздействия на поступление ПИИ в регионы России. Насколько можно судить, работы, в которых проводилось бы исследование наличия у иностранных инвесторов стратегии приобретения стратегических активов, на сегодняшний день отсутствуют.

Имеющиеся исследования посвящены выявлению факторов, определяющих импорт российскими регионами инвестиций в целом, без учета их страновой специфики. Оценки факторов, определяющих импорт прямых инвестиций в Россию из отдельных стран, в частности из Китая, отсутствуют. Выполнение такой оценки представляет значительный интерес для получения новых знаний об особенностях пространственного распределения инвестиций в условиях сотрудничества стран имеющих общую границу.

2. Оценка факторов, определяющих импорт прямых китайских инвестиций в Россию

Имеющиеся оценки факторов, определяющих направления экспорта капитала Китая на мировом рынке, свидетельствуют, что прямые инвестиции направляются в страны, обладающие большими размерами рынка, обеспеченные минеральными ресурсами, характеризующиеся территориальной близостью к рынку Китая, обладающие технологиями, подтвержденными патентами (Buckley et al., 2007; Zhang & Daly, 2011; Новопашина, 2014). Китайские инвесторы на территории принимающих стран реализуют стратегию поиска рынков путем осуществления инвестиций в создание дилерских сетей для сбыта импортируемой из Китая продукции, а также стратегии получения доступа к минеральным ресурсам и приобретения стратегических активов. Какие из этих стратегий инвесторы из Китая реализуют в России, и какие факторы определяют поступление прямых капиталовложений? Для поиска ответа на этот вопрос рассмотрим структуру поступающих из Китая в Россию прямых инвестиций и выполним оценку определяющих их факторов.

В структуре импорта прямых китайских инвестиций в Россию наибольший удельный вес занимает строительство, а также сфера услуг – финансовая деятельность и операции с недвижимостью (*табл. 1*). Инвестиции в данные виды деятельности участвуют в создании фирм, выполняющих соответствующие работы и оказывающих услуги на территории России. Высокий удельный вес инвестиций в эти виды деятельности позволяет сделать предположение, что стратегией инвестирования в Россию является поиск рынков. Также высокую долю занимают инвестиции в лесозаготовки, обработку древесины и добычу полезных ископаемых, что может свидетельствовать о том, что прямые китайские инвестиции в Россию поступают для получения доступа к лесным и минеральным ресурсам.

Таблица 1. Импорт прямых китайских инвестиций в Россию по видам экономической деятельности, %

Виды экономической деятельности	2006	2007	2008	2009	2010	2011	2012
Сельское и лесное хозяйство, в т.ч.:	2,70	6,17	5,73	9,01	4,72	1,35	6,24
лесозаготовки	2,33	6,10	5,58	8,72	4,05	0,46	1,14
Добыча полезных ископаемых, в т.ч.:	4,44	6,61	5,23	7,06	8,60	1,66	21,51
добыча полезных ископаемых, кроме топливно-энергетических	3,87	5,30	3,68	1,68	1,68	1,66	21,05
Обрабатывающие производства, в т.ч.:	0,84	0,93	5,99	1,04	8,09	8,75	17,95
обработка древесины и производство изделий из дерева	0,04	0,23	1,06	0,71	5,24	0,12	14,50
Строительство	2,06	0,70	14,53	3,43	45,84	5,92	25,61
Оптовая и розничная торговля	1,54	7,96	7,73	5,21	7,52	0,89	3,25
Финансовая деятельность	0,57	0,29	5,24	2,47	13,88	14,63	15,02
Операции с недвижимостью	87,44	77,11	54,73	71,70	11,19	66,76	8,15
Прочие	0,40	0,23	0,83	0,09	0,15	0,04	2,28
Всего	100,0	100,0	100,0	100,0	100,0	100,0	100,0

Источник: составлено автором на основе данных ЕМИСС.

Пространственная структура импорта прямых китайских инвестиций в Россию свидетельствует, что не во все регионы поступают ПИИ из Китая: в период с 2004 по 2012 гг. до 85% инвестиций импортировали только 3 российских региона, в 29 регионов прямые китайские инвестиции не поступали. Пространственная неоднородность прямых китайских инвестиций свидетельствует, что объемы их импорта в Россию зависят от факторов субнационального уровня.

Структура инвестиций из Китая в Россию позволила сформулировать следующую *гипотезу*: импорт прямых китайских инвестиций в Россию определяется обеспеченностью ее регионов природными ресурсами и размерами региональных рынков.

Для проверки гипотезы в работе выполнена оценка факторов, определяющих импорт прямых китайских инвестиций в Россию, на субнациональном уровне.

Пространственная неоднородность распределения инвестиций между регионами определила выбор эмпирической стратегии. Оценивание проводилось с использованием регрессионной модели бинарного выбора (логит модели), позволяющей оценить воздействие факторов на вероятность поступления ПИИ в i -регион. Зависимая переменная принимает значение 1, если ПИИ в i -ый регион в период t поступали, и 0 в ином случае. Оцениваемое уравнение имеет следующий вид:

$$\begin{aligned}
 P(FDI_{i(t+1)} = 1) &= 1/(1 + e^{-Z}), \\
 Z &= \beta_0 + \sum \beta_d Market_size_{it} + \sum \beta_f Resource_endowment_{it} + \beta_g Dist_i + \\
 &+ \sum \beta_h Controls_{it} + \varepsilon_{it},
 \end{aligned}
 \tag{1}$$

где $FDI_{i(t+1)}$ – поступление прямых инвестиций из Китая в i -ый регион в период $t+1$; $Market_size_{it}$ – размер рынка i -ого региона в период t , описываемый (1) логарифмом ВРП (в ценах 2005 г.) и (2) плотностью населения в i -ом регионе; $Resource_endowment_{it}$ – обеспеченность i -ого региона ресурсами в период t , описываемая (1) показателями обеспеченности минеральными ресурсами, а именно (1.1) фиктивными переменными, принимающими значение 1, если в период t i -ый регион включен в прогнозный пере-

чень участков недр нефти и газа, угля и металлических руд, по которым планируется провести аукцион в период t , и 0 – если i -ый регион не включен в указанный перечень, (1.2) объемом отгруженной продукции добычи топливно-энергетических и нетопливных полезных ископаемых, (1.3) долей добычи полезных ископаемых в i -ом регионе, а также (2) объемом производства древесины; $Dist_i$ – расстояние от экономического центра i -ого региона до экономического центра Китая (г. Пекин): (1) транспортное расстояние по автомобильной/железнодорожной дороге от экономического центра региона до г. Пекин, (2) взаимодействие обеспеченности лесными ресурсами и транспортного расстояния до Китая; $Controls_{it}$ – контрольные переменные; ε_{it} – стандартная ошибка. Контролировались следующие параметры: инвестиционная открытость, описываемая с помощью показателя объема импорта ПИИ в регион без учета инвестиций Китая, а также суммы инвестиций в основной капитал; внешнеторговая открытость – отношение внешнеторгового оборота региона к его ВРП; уровень инвестиционного риска в регионе по данным Эксперт РА; среднемесячная заработная плата в регионе; транспортное расстояние от административного центра региона до г. Москвы; средняя температура января, описывающая климатические условия в регионе.

В соответствии с выводами теоретических работ, если $\beta_d > 0$, то стратегией инвестирования является поиск рынков. Если $\beta_f > 0$ и $\beta_g < 0$, то стратегия инвестирования – получение доступа к ресурсам.

Оценивание проводилось на основе данных по 75 регионам России за период 2006-2012 гг. В табл. 2 представлены предельные эффекты факторов, определяющих импорт прямых китайских инвестиций в регионы России. Предельные эффекты показывают изменение вероятности поступления ПИИ Китая в регион России при изменении объясняющей переменной на 1 единицу.

Таблица 2. Предельные эффекты факторов, определяющих импорт прямых китайских инвестиций в регионы России в 2006-2012 гг.

Объясняющие переменные	Спецификации модели					
	(1)	(2)	(3)	(4)	(5)	(6)
Log ВРП	0,300 ^β	0,292 ^β	0,283 ^β	0,276 ^β	0,326 ^β	0,317 ^β
Плотность населения	0,065 ^γ	0,070 ^γ	0,065 ^γ	0,070 ^γ	0,053	0,058 ^γ
Доступ к нефти и газу	0,120	0,115				
Доступ к углю	0,023	0,031				
Доступ к металлическим рудам	-0,145	-0,144				
Log Пр-во топливно-энергетических ресурсов					-0,005	-0,004
Log Пр-во нетопливных ресурсов					-0,056 ^β	-0,060 ^β
Доля добычи полезных ископаемых в ВРП			-0,006	-0,006		
Log Пр-во лесных ресурсов	0,012	0,730	0,011	0,797	0,012	0,890 ^γ
Log Расстояние до Китая	-0,994 ^α	-0,465	-0,914 ^α	-0,341	-1,000 ^α	-0,351
Log Пр-во лесных ресурсов*Log Расстояние до Китая		-0,080		-0,087		-0,098 ^γ
Контроли/Константа	Да/Да					
Кол-во наблюдений	450					
Pseudo R ²	0,31	0,31	0,30	0,30	0,31	0,32

Примечание: γ - 10%, β - 5%, α - 1% уровни значимости. Все предельные эффекты представлены в виде средних значений. Зависимая переменная – фиктивная переменная для регионов, в которые поступают ПИИ из Китая.

Полученные результаты свидетельствуют, что наличие в регионах России минеральных ресурсов (нефти и природного газа, угля и металлических руд) не увеличивает

вероятность поступления в него ПИИ из Китая. На это указывает отсутствие статистической значимости предельных эффектов переменных, описывающих наличие в регионах доступа к нефти и газу, углю, металлическим рудам.

Объем отгруженной продукции добычи топливно-энергетических полезных ископаемых в регионе не оказывает статистически значимого воздействия на вероятность поступления в него ПИИ из Китая. В тоже время рост объема добычи нетопливных полезных ископаемых оказывает отрицательное воздействие на вероятность импорта китайских инвестиций. Уровень специализации регионов на добычи полезных ископаемых не оказывает значимого воздействия на вероятность осуществления инвесторами из Китая ПИИ в регионы России, о чем свидетельствует статистически незначимые предельные эффекты переменной доли минеральных ресурсов в экспорте российских регионов.

Положительное воздействие на принятие решение инвесторов из Китая об осуществлении ПИИ оказывает рост объема производства лесных ресурсов в регионе. Однако статистически значимые результаты воздействия объемов производства древесины в регионах России на вероятность поступления в них прямых китайских инвестиций получены только в одной из шести оцененных моделях, в которую в качестве объясняющей переменных включено взаимодействие расстояние и объема производства в регионах лесных ресурсов. Предельные эффекты этой переменной отрицательны, что указывает на то, что сокращение расстояния до обеспеченных лесными ресурсами регионов увеличивает вероятность поступления в них ПИИ из Китая, но значимы только в одной из трех моделей.

Предельные эффекты расстояния между крупнейшими городами регионов России и Китаем только в трех оцененных уравнениях статистически значимы и отрицательны. Данные результаты были получены, когда в оцениваемое уравнение не была включена переменная взаимодействия расстояние и объема производства в регионах лесных ресурсов. Полученные оценки свидетельствуют, что рост географического расстояния от крупнейшего города региона до Китая сопровождается сокращением ПИИ в регион.

Результаты оценки свидетельствуют, что рост ВРП и плотности населения в регионе увеличивает вероятность поступления в него ПИИ из Китая - предельные эффекты ВРП положительны и статистически значимы во всех моделях, предельные эффекты плотности населения положительны и статистически значимы в пяти из шести оцененных уравнений. Данный результат подтверждает выдвинутую гипотезу, что увеличение размера рынка сопровождается ростом ПИИ, импортируемых регионом.

Таким образом, положительное воздействие на вероятность поступления в регион ПИИ из Китая оказывает рост размера рынка принимающего региона, а отрицательное – увеличение расстояния от Китая до принимающего региона обеспеченного лесными ресурсами. Рост обеспеченности регионов минеральными ресурсами не увеличивает вероятность поступления в них ПИИ. Следовательно, полученные результаты частично подтверждают выдвинутую гипотезу и указывают на то, что путем осуществления ПИИ инвесторы стремятся к получению доступа к рынку российских регионов и их лесным ресурсам. Стратегии доступа к минеральным ресурсам инвесторы из Китая в России не следуют.

Факторы, определяющие поступление прямых китайских инвестиций в регионы России и в экономики зарубежных стран, а также стратегии инвесторов из Китая в России и на мировом рынке схожи. Однако объемы поступления ПИИ из Китая в Россию низкий. Об этом свидетельствует низкое значение коэффициента локализации ПИИ из Китая в Россию (0,27 в 2010 г.), рассчитанный как отношение доли страны в экспорте ПИИ из Китая к доле этой страны в мировом объеме импорта ПИИ. Коэффициент яв-

ляется показателем уровня развития инвестиционного сотрудничества между Китаем и зарубежной страной - значение меньше 1 указывает на то, что доля России в экспорте ПИИ Китая ниже, чем следует ожидать из ее доли в мировом импорте ПИИ. В 2010 г. доля России в мировом объеме импорта ПИИ составила 3%, а в экспорте ПИИ Китая – 0,08%.¹ Что является причиной низких объемов импорта прямых китайских инвестиций в Россию? Для ответа на этот вопрос рассмотрим содержание проектов, направленных на развитие инвестиционного сотрудничества между Россией и Китаем, а также нормы законодательства, регулирующие приток иностранных инвестиций в Россию.

3. Барьеры импорта прямых китайских инвестиций в Россию

Направления развития инвестиционного сотрудничества между Россией и Китаем определены в одобренной 23 сентября 2009 г. «Программе сотрудничества между регионами Дальнего Востока и Восточной Сибири Российской Федерации и Северо-востока Китайской Народной Республики (2009-2018 годы)» (далее – Программа). В соответствии с Программой на территории регионов Дальнего Востока и Восточной Сибири совместно с инвесторами из Китая предусмотрена реализация 91 проекта, большая часть из которых направлена на создание новых и развитие существующих производств в сфере деревопереработки (22 проекта), производств неметаллических продуктов (12 проектов, все в сфере производства строительных материалов), сельского хозяйства (6 проектов) и производств пищевых продуктов (6 проектов, все проекты на базе собственного сельскохозяйственного сырья).

Распределение совместных российско-китайских проектов по видам экономической деятельности отражает интерес инвесторов из Китая к получению доступа к природным ресурсам регионов Дальнего Востока и Восточной Сибири. Однако целями и задачами экономического развития России является переход экономики на инновационный путь развития, обеспечение высокого уровня благосостояния населения, развитие инфраструктуры, увеличение объема производства высокотехнологичных видов продукции. Получение доступа к крупным и экономически эффективным месторождениям полезных ископаемых сталкивается с рядом барьеров:

1) законодательные ограничения, препятствующие ПИИ в разработку крупных месторождений полезных ископаемых на территории России. Данный барьер препятствует реализации инвесторами из Китая стратегии доступа к природным ресурсам. Преодоление данного барьера возможно только при условии поддержки инвестора со стороны государства, которая у инвесторов из Китая в России отсутствует. В результате инвесторы из Китая имеют возможность осуществления ПИИ в разработку только небольших и низкорентабельных месторождений полезных ископаемых, что обуславливает низкие объемы инвестиций в этой сфере;

2) высокие административные барьеры ведения бизнеса в сфере добычи минеральных ресурсов и лесозаготовок, которые проявляются в больших транзакционных издержках, которые вынужден нести инвестор для получения всех документов, необходимых для начала лесозаготовки или добычи ресурсов, а также осуществления деятельности в этих отраслях. Если уровень издержек на создание зарубежного производства высокий и превышает издержки на преодоление торговых барьеров, то импорт является более предпочтительным вариантом получения доступа к зарубежному рынку по сравнению с инвестированием (Markusen, 2002). В случае с ПИИ из Китая это означает, что высокие административные барьеры ведения бизнеса в добывающем секторе и лесозаготовках сдерживают ПИИ, но стимулируют экспорт природных ресурсов из

¹ Рассчитано на основе данных UNCTAD.

России в Китай. Данный вывод подтверждается высокими объемами экспорта топливных и лесных ресурсов из России в Китай.

Кроме того, перечень проектов, включенных в Программу, свидетельствует о намерениях китайской стороны участвовать в переработке имеющихся здесь ресурсов. Однако инвесторам предлагается инвестировать в уже реализуемые на территории восточных регионов России проекты. Создание новых производств, в которых могли бы участвовать инвесторы из Китая и выступать в качестве единственного собственника созданного предприятия, Программой не предусмотрено. Это увеличивает риски прямого инвестирования, связанные с незащищенностью прав собственности инвесторов.

Выделенные барьеры ведут к росту издержек, которые вынужден нести иностранный инвестор при организации производства на территории России. Высокая зависимость экономики России от внешней торговли с Китаем, которая позволяет Китаю обеспечивать наиболее выгодные для себя условия торговли, сделала данную форму экономического взаимодействия с Россией более эффективной по сравнению с осуществлением ПИИ.

Заключение

Полученные результаты доказывают, что в период 2006-2012 гг. импорт прямых китайских инвестиций в Россию зависел от факторов субнационального уровня, а именно размеров региональных рынков и обеспеченности лесными ресурсами территориально приближенных к Китаю регионов. Несмотря на высокую обеспеченность России минеральными ресурсами, их наличие в регионах России не являлось фактором, определяющим импорт прямых китайских инвестиций.

Оценка факторов, воздействующих на поступление прямых китайских инвестиций в регионы России, позволяет выделить группы регионов в зависимости от характеристик регионов, определяющих их привлекательность для инвесторов из Китая: (а) регионы, привлекательность которых для китайских ПИИ определялась наличием лесных ресурсов при условии их территориальной близости к Китаю; (б) регионы, привлекательность которых определялась их территориальной близостью к китайским экспортёрам продукции, (в) российские центральные регионы с наибольшими размерами рынка.

Выявленные факторы свидетельствуют, что инвесторы из Китая на территории регионов России получают доступ к рынкам сбыта, а также лесным ресурсам регионов. Стратегии инвестирования в Россию в целом соответствуют приоритетам Китая при экспорте ПИИ. Однако, в отличие от мирового рынка, в России китайские инвесторы не следуют стратегии получения доступа к минеральным ресурсам инвесторы. Реализации этой стратегии препятствует, во-первых, противоречие привлечения ПИИ в сырьевые товары целям и задачам экономического развития России; во-вторых, законодательные ограничения иностранных инвестиций в разработку крупных месторождений полезных ископаемых; в-третьих, высокие барьеры ведения бизнеса в России, особенно в сравнении с другими развивающимися странами. В результате получение доступа к топливно-энергетическим и не топливным полезным ископаемым Китай преимущественно обеспечивает за счет их импорта (доля минеральных продуктов в российском экспорте в Китай в 2012 г. составила 74,6%), что усиливает зависимость России от экспорта сырьевых ресурсов.

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Серова Л.С., доцент кафедры операционного менеджмента, Институт «Высшая школа менеджмента» Санкт-Петербургского Государственного университета.
Электронный адрес serovals@gsom.spbu.ru

Чуракова И.Ю., старший преподаватель кафедры операционного менеджмента, Институт «Высшая школа менеджмента» Санкт-Петербургского Государственного университета. Электронный адрес churakova@gsom.spbu.ru

Применение экспертных оценок на стадии инициации процесса управления логистическими проектами

Аннотация: Процессы инициации логистического проекта авторизуют проект и в большей степени определяют его будущую успешность в решении проблем логистики. Задачи стадии инициации проекта являются наиболее сложными для формализации и плохо поддающимися автоматизации, что объективно обуславливает применение методов экспертного оценивания при их решении. В отечественной и зарубежной литературе внимание уделяется в основном специфическим методам и инструментам управления проектами, экспертные методы только упоминаются. Отсюда цель исследования заключается в выделении задач экспертного оценивания по этапам (процессам) принятия решений на стадии инициации логистических проектов и разработке рекомендаций по применению конкретных экспертных методов на каждом этапе.

Ключевые слова: *управление проектами, логистические проекты, инициация проекта, экспертные оценки*

1. Введение: место логистических проектов в системе менеджмента

Управление проектами давно считается во всем мире признанным способом ведения бизнеса. Методология управления проектами стала фактическим стандартом управления и методологией инвестиционной деятельности многих компаний, так как проектный подход способен улучшить результативность деятельности любой организации, независимо от её размера и отрасли. Все большее количество руководителей приходит к мысли о том, что бизнес развивается, совершенствуется именно через проекты, и недооценивать важность проектного механизма довольно опасно. По результатам международного исследования целей использования проектного управления ведущими компаниями, проводимого PwC Global Project Management survey, 30,1% организаций используют проектное управление для получения прибыли; 40,2% организаций - для повышения эффективности бизнеса; 10% организаций - для сокращения расходов (Убийственная эффективность).

Единого определения понятия «проект» нет. В различных источниках (учебниках, статьях, стандартах и регламентах) используются разные определения термина «проект», в зависимости от выделяемых авторами аспектов этой сложной категории (Товб и Ципес, 2005). Наибольшее распространение получило определение из Свода знаний по управлению проектами (PMBOK, The Guide to the Project Management Body of Knowledge), разработанного Институтом Управления Проектами США (PMI, Project Management Institute). Проект – это временное предприятие, предназначенное для создания уникальных продуктов, услуг или результатов (PMBOK, 2010). В этом определении отмечаются некоторые характеристика проекта – уникальность и временная ограниченность – и выходные данные проекта – продукты, услуги, результаты. Но не ясно, что же представляет собой утверждаемый и реализуемый документ Проект.

Наиболее полно и комплексно сущность понятия «проект», отражающая взгляд на проект, как на форму целевого управления, на процесс достижения цели и комплект документов, необходимых для реализации целей проекта, раскрыта в определении, данном в книге Основы инновационного менеджмента. Проект – это система взаимоувязанных целей и путей их достижения, представляющих собой комплекс мероприятий, работ, задач, увязанных по ресурсам, срокам и исполнителям и оформленных комплектом проектной документации, обеспечивающих эффективное решение конкретной задачи (проблемы), выраженной в количественных показателях и приводящей к достижению бизнес целей проекта (Основы, 2004).

Методы и средства управления проектами (проектный подход к управлению) из таких классических «проектных сфер», как строительство, информационные технологии переходят и в другие области деятельности. В зависимости от объекта проектной разработки выделяются разные виды проектов - инновационные проекты, инвестиционные проекты, образовательные проекты, логистические проекты и т.д.

Практически любая российская бизнес-компания выполняет логистические проекты, направленные на создание, преобразование или развитие ее логистической системы, для достижения максимальной адаптации компании к изменяющейся рыночной обстановке, расширению рыночного сегмента компании в стране и за ее пределами и получения преимуществ перед конкурентами в условиях глобализации мировой экономики. Исходя из приведенного определения проекта, специфика различных видов проекта, в том числе логистического, проявляется в разработке конкретных мероприятий (проектных работ), выполнение которых необходимо для достижения поставленных целей создания, преобразование или развития логистической системы организации.

Логистические проекты инициируются в силу возникновения потребности бизнеса в решении ее логистических проблем, как внутренних, так и выдвигаемых внешней средой. По опыту консалтинговых компаний наиболее распространенными и требующими проектного решения логистическими проблемами (бизнес-потребностями) компаний являются следующие (Логистический консалтинг):

- отгруженные заказы не поступают клиентам вовремя;
- заказы выполняются с ошибками по количеству и ассортименту;
- увеличивается количество отказов в заказах клиентов;
- клиенты не довольны уровнем логистического сервиса;
- складской запас превышает нормативы;
- транспорт простаивает;
- поиск информации об отгруженном заказе отнимает много сил и времени у сотрудников;
- руководство не владеет всей необходимой информацией о товарных запасах
- логистические издержки увеличиваются;
- большая текучка персонала на складе;
- существуют проблемы с работой филиальной сети.

Однако, в условиях дефицита ресурсов невозможно удовлетворить все потребности без исключения. Приходится делать выбор проекта (проектов) для реализации. Отсюда первым этапом инициации проекта является его выбор из нескольких (если существует несколько бизнес-идей решения проблемы), основываясь на сравнительной оценке проектов, определении приоритетности для компании и очередности выполнения. Место проекта в системе менеджмента организации приведено на рис. 1.

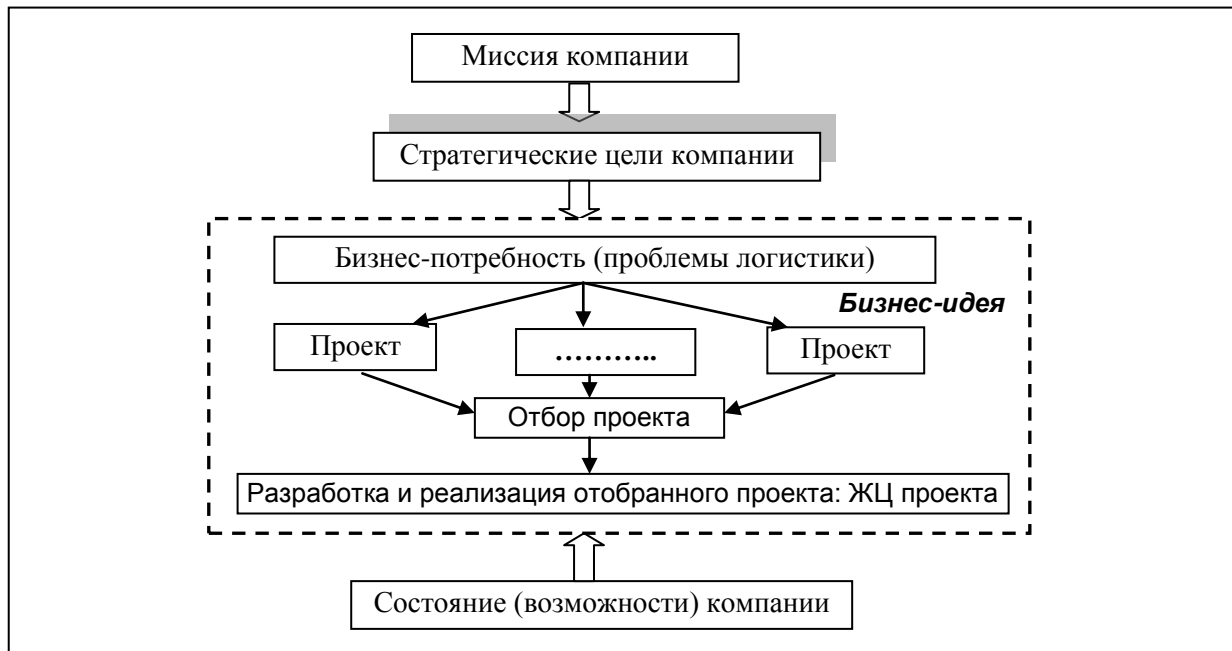


Рис. 1 Место логистического проекта в системе менеджмента

2. Инициация как залог успешной реализации проекта.

Проект в области логистики, как и любой другой проект, в процессе его формирования и реализации проходит различные стадии (фазы), называемые в совокупности жизненным циклом (ЖЦ) или циклом управления проектом. Понятие

«жизненный цикл проекта» можно трактовать следующим образом – это период времени от зарождения идеи проекта до его завершения, который можно разделить на соответствующие стадии.

Согласно Руководству к своду знаний по управлению проектами (PMBOK, 2010), проект, рассматриваемый как процесс, совершающийся во времени, охватывает четыре типовые стадии (группы процессов) жизненного цикла проекта:

1. Процессы инициации проекта – принятие решения о начале выполнения проекта, укрупненное планирование.
2. Процессы планирования – создание плана проекта: определение и уточнение целей проекта, детальное планирование проектных работ.
3. Процессы исполнения – координация людей и других ресурсов для выполнения плана проекта.
4. Процессы завершения – официальное подтверждение и оформление результатов проекта.

Каждая стадия включает выполнение определенных процессов и характеризуется получением одного или нескольких результатов, достигаемых в заданное время (рис. 2).

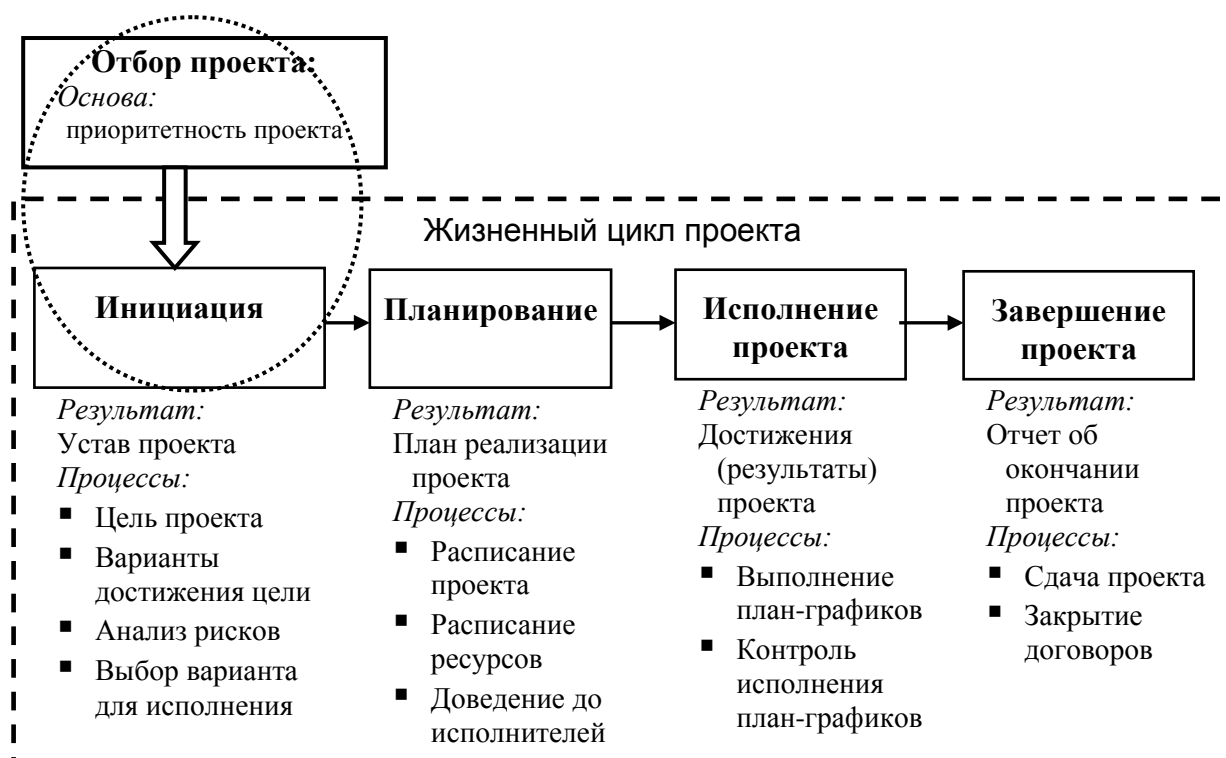


Рис. 2 Стадии (фазы) жизненного цикла логистического проекта

После того как отобран проект, подлежащий реализации для решения логистической проблемы компании, приступают ко второму этапу и первой существенной стадии его жизненного цикла – инициации. Именно эффективные процессы инициации проекта минимум наполовину определяют его будущую успешность (Кук и Тейт, 2007). Недостаточное внимание этой стадии проекта неизбежно приводит к существенным проблемам при его планировании, реализации и завершении.

Для логистического проекта характерны достаточно большие затраты на их реализацию, поэтому хорошая организация и предварительная подготовка, т.е. отбор и

оценка инвестиционной привлекательности конкретного проекта (процессы инициации), являются очень важными факторами для обеспечения успешной его реализации. Инициация состоит из следующих последовательно выполняемых процессов, способствующих формальной авторизации начала нового проекта:

- формирование бизнес идеи (первый этап стадии), определение цели проекта и ожидаемых конечных результатов проекта (продукт проекта);
- структуризация проекта и определение альтернативных вариантов достижения целей проекта;
- анализ рисков каждого варианта реализации проекта;
- выбор варианта для реализации проекта;

Результатом стадии инициации является документ Устав проекта и, если он одобряется, проект официально авторизуется и определяет первые шаги в проекте. Устав проекта составляется инициатором проекта или спонсором, имеющим достаточные полномочия для финансирования проекта.

После утверждения и одобрения (подписей) документа проект переходит на стадию планирования (детальное планирование). И, хотя последовательность стадий проекта выглядит довольно простой, именно стадия инициации вызывает у заинтересованных лиц (стейкхолдеров) и менеджеров проекта весьма существенные разногласия и сложности, по ряду причин:

- a) инициация проекта зачастую начинается за рамками проекта, когда команда проекта еще не сформирована;
- b) инициация – единственная стадия проекта, практически не поддающаяся формализации и автоматизации. Решения принимаются чаще всего в условиях внешней и внутренней неопределенности и носят прогнозный характер. Можно вести автоматический прием заявок и идей, но нельзя автоматически определить, как именно из идеи возникает проект.

Так как, инициация проекта происходит тогда, когда команда проекта еще не сформирована, заказчиком (будущими владельцами и пользователями результатов проекта в своей деловой активности) создается специальная группа, состоящая из специалистов по маркетингу, операционной деятельности, финансистов. Специалисты по анализу внешней среды и маркетингу собирают необходимую информацию об окружении проекта, определяют потребность в результатах проекта и возможную цену на эти результаты. Операционалисты определяют содержание проекта (необходимые действия по созданию результата), оценивают вероятную стоимость результата. Финансисты оценивают итоговые затраты на проект и определяют источники и размеры финансирования. Ключевым фактором при иницировании проекта является компетентность специалистов.

Как уже было сказано, стадия инициации проекта является наиболее сложной для формализации и плохо поддающейся автоматизации. Именно поэтому объективно обусловлено применение методов и инструментальных средств экспертных оценок при решении задач стадии инициации.

Большинство авторов, специалистов в области управления проектами, основываясь на стандарте PMI в качестве основных инструментов и методов, используемых в управлении проектами, выделяют только специфические методы и инструменты. А именно: иерархические структуры работ, анализ критического пути и управление освоенным объемом. Если и выделяются экспертные оценки (Кук и Тейт, 2007; Товб и Ципес, 2010; Ньютон, 2011; Харрингтон и Макнеллис, 2007; РМВОК, 2010), то только одной строчкой, без расшифровки и привязки методов экспертного оценивания к конкретным задачам, решаемым по этапам стадии инициации.

Целью данного исследования является выделение задач экспертного оценивания по этапам (процессам) принятия решений на стадии инициации логистических проектов и разработка рекомендаций по применению конкретных экспертных методов на каждом этапе.

3. Задачи и методы экспертного оценивания на стадии инициации

Под экспертным оцениванием авторы понимают совокупность методов получения и обработки мнений экспертов таким образом, чтобы полученная информация могла служить основой для принятия решения или построения эвристического прогноза.

Рассмотрим задачи экспертного оценивания по этапам стадии инициации.

1. Формирование бизнес идеи, определение цели проекта и ожидаемых конечных результатов проекта (продукт проекта).

Возникновение бизнес-идеи для «удовлетворения» потребностей бизнеса и решения приоритетной логистической бизнес проблемы является отправной точкой, с которой начинается непосредственно разработка проекта. Она должна быть выражена в форме определенных видов деятельности, реализация которых обеспечит решение имеющейся проблемы. Решить проблему можно разными способами, следовательно, можно предложить разные проектные подходы к решению проблемы. Бизнес идея может возникнуть спонтанно или явиться результатом длительного процесса, может быть результатом «коллективной экспертизы» или индивидуального анализа. При выстраивании приоритетов и отборе проектного решения бизнес проблемы экспертиза проводится на основе сравнительного анализа.

Предусматриваются несколько уровней экспертизы (Туккель, 2005). Первый уровень – предварительное рассмотрение предложений экспертным советом и решение об отборе проектов для участия в экспертизе второго уровня. На втором уровне экспертами устанавливается рейтинг каждого проекта по основным его характеристикам. На третьем этапе экспертный совет дает заключение по выбору проекта. Приоритет любого проекта рекомендуется определять на основе оценки трех его характеристик:

- Финансовая ценность.
- Стратегическая ценность.
- Уровень рисков.

В процессе проработки идея принимает конкретное очертание в виде целей проекта (project objectives), представляющих желаемые результаты деятельности, достигаемые при реализации проекта в заданных условиях. Результаты, получаемые при достижении цели, должны быть измеримы, а заданные ограничения – выполнимы. При управлении проектами область допустимых решений обычно ограничивается временем, бюджетом, ресурсами и требуемым качеством получаемых результатов. Разработка генеральной цели может осуществляться различными способами. Часто для этого приглашаются заинтересованные лица и в процессе совместной работы формируется единое рабочее направление.

Таким образом, *задача экспертных оценок при решении проблем, относящихся к формированию бизнес-идеи и постановке цели проекта, состоит в организации процесса генерирования бизнес идей и уточнении параметров проекта.*

2. Структуризация проекта и определение альтернативных вариантов достижения целей проекта.

После определения цели приступают к поиску и оценке альтернативных способов ее достижения. Целью структуризации проекта является разработка содержания проекта, т.е. перечня мероприятий (заданий, тем, проектных работ),

выполнение которых необходимо для обеспечения достижения в установленные сроки целевых значений проекта по каждому из возможных вариантов его реализации. Результатом структуризации проекта является вариант структурной декомпозиции работ (WBS-диаграмма, Work Breakdown Structure, иерархическая структура работ). В пределах установленных ограничивающих параметров проекта допустимые варианты его реализации могут различаться: технологическими способами получения результата проекта, видами используемых сырья и материалов, качественными характеристиками целевого результата, принятыми способами удовлетворения потребности в нем, составом мероприятий и т.п.

Для структуризации проекта используется метод «дерево целей». Это метод, основанный на принципе разделения общей цели системы управления на подцели, которые, в свою очередь, делятся на цели нижележащих уровней. Реализуется метод «дерева целей» специальными группами экспертов. Соответственно, результат и качество построенной иерархической совокупности целей зависит в основном от квалификации специалистов, составляющих дерево целей.

Таким образом, *задача экспертных оценок при решении проблем, относящихся к структуризации проекта, состоит в разработке альтернативных способов достижения целей проекта.*

3. Анализ рисков каждого варианта реализации проекта.

Риск представляет собой неопределенное событие или условие, которое может повлиять как положительно, так и отрицательно на результаты и цели проекта. Результат анализа рисков при разработке проекта выражается в определении вероятности реализации различных его альтернативных вариантов и подлежит учету в расчетах эффективности проекта. Чем сложнее бизнес-модель проекта, тем тщательнее необходимо оценивать риски (Дубинин, 2015).

Анализ риска по каждому альтернативному варианту реализации проекта включает выполнение двух этапов: выявление и идентификация риска (тип, степень и источники) и оценка величины риска. Величина риска определяется как произведение вероятности возникновения на степень влияния. Вероятность возникновения показывает, сколько шансов того, что риск произойдет. Степень влияния показывает, насколько губительным будет этот риск для проекта, если все же он произойдет. Вероятность возникновения и степень влияния оценивается экспертно или по статистике, накопленной в прошлых проектах.

Таким образом, *задача экспертных оценок при решении проблем, относящихся к анализу рисков, состоит в оценке величины риска и сравнительном анализе альтернатив проектов.*

4. Выбор варианта для реализации проекта.

Выбор из альтернативных вариантов проекта наиболее жизнеспособного представляет собой одну из наиболее ответственных процедур разработки проекта. Существуют различные методы сравнения различных вариантов проекта и выбора лучшего варианта для реализации. Наряду с количественными методами (такими, как расчет показателей период окупаемости, чистая приведенная стоимость, внутренняя норма доходности, расчет точки безубыточности) используются методы экспертной оценки проектов, позволяющие учесть количественные и качественные характеристики проектов.

Таким образом, *задача экспертных оценок при решении проблем, относящихся к выбору жизнеспособного варианта проверка для реализации, состоит в оценке величины риска и сравнительном анализе альтернатив проектов.*

Анализ решаемых задач и выполняемых процессов на стадии инициации позволяет выделить два класса задач, которые могут эффективно решаться с помощью

экспертного оценивания: генерирование идей, оценка альтернатив и отдельных параметров; ранжирование альтернатив и выбор альтернативы. Выделенные задачи экспертного оценивания могут решаться разными экспертными методами:¹

- Методы генерирования идей и оценки альтернатив, параметров: метод Дельфи, мозговой штурм, метод большинства, метод комиссий, SWOT-анализ.

- Методы ранжирования (выбор) альтернатив решений по существенным характеристикам: парные бинарные сравнения, ABC-анализ, метод взвешенной суммы рангов, метод последовательной оценки альтернатив по критериям.

Каждый из этих методов экспертного оценивания обладает своими преимуществами и недостатками, определяющими рациональную область применения. Во многих случаях наибольший эффект дает комплексное применение нескольких видов экспертизы. В табл. 1 представлена классификация методов экспертной оценки по процессам инициации.

Таблица 1

Соответствие методов экспертной оценки этапу инициации

Процессы (этапы) инициации	Ожидаемый результат	Проблемы, характерные для данной стадии	Метод получения экспертного мнения
Формирование бизнес идеи, определение ожидаемых конечных результатов проекта	Концепция проекта: бизнес-идея, продукт проекта, критерии выбора проекта	Генерация идей происходит спонтанно, бессистемно, идеи не отвечают стратегии компании, продукт проекта не сформирован, критерии выбора не определены	Мозговой штурм, метод большинства, метод Дельфи
Постановка целей проекта	Цели проекта, бизнес-выгоды, целевые показатели результатов проекта	Цели неконкретны, неизмеримы, недостижимы, не соотносятся со стратегией развития компании, бизнес-выгоды неочевидны, показатели результатов не определены	Метод комиссий, метод большинства, SWOT-анализ
Структуризация проекта и определение альтернативных вариантов достижения целей проекта	Альтернативные варианты достижения целей: дерево целей, перечень проектных работ, оценка каждой работы (сроки, затраты, качество, ограничения)	Нереалистичные оценки альтернатив по времени, бюджету и качеству, отсутствие жизнеспособной альтернативы	Мозговой штурм, метод парных сравнений

¹ Более подробно о классификации экспертных методов см. доклад Чуракова И.Ю.. Серова Л.С. Подходы к классификации методов экспертных оценок в управлении логистическими проектами

Процессы (этапы) инициации	Ожидаемый результат	Проблемы, характерные для данной стадии	Метод получения экспертного мнения
Анализ рисков каждого варианта проекта	Оценка величины риска по каждому варианту проекта	Не все риски выявлены и оценены	Метод комиссий, метод Дельфи, метод парных сравнений
Выбор варианта для реализации проекта, переход к следующей стадии (планированию)	Выбор одной из альтернатив проекта, разработка устава проекта, одобренного всеми стейкхолдерами проекта	Выбрана не лучшая альтернатива, устав не соответствует требованиям стейкхолдеров. Субъективные предпочтения одной из альтернатив ЛПР	Метод большинства

При использовании методов экспертных оценок возникают свои проблемы. Основными из них являются: подбор экспертов, проведение опроса экспертов, обработка результатов опроса, организация процедур экспертизы. При этом первым этапом организации работ по применению экспертного оценивания при иницировании проекта должен быть анализ проблемы, требующий решения: внутриорганизационная или внешняя; сложная или простая; масштаб проблемы (уровень требуемого финансирования). Эти характеристики и будут предъявлять требования к подбору экспертов.

4. Выводы

Специфика логистического проекта проявляется в разработке конкретных мероприятий (проектных работ), выполнение которых необходимо для достижения поставленных целей создания, преобразование или развития логистической системы организации. В условиях дефицита ресурсов невозможно удовлетворить все бизнес потребности логистики без исключения, приходится делать выбор логистического проекта для реализации.

Инициация – это первая стадия жизненного цикла управления проектом, состоящая из последовательно выполняемых этапов (процессов), способствующих формальной авторизации начала нового проекта. Стадия инициации проекта является наиболее сложной для формализации и плохо поддающейся автоматизации, что объективно обуславливает применение методов и инструментальных средств экспертных оценок при решении задач стадии инициации.

Предложенное выделение задач экспертного оценивания по этапам стадии инициации логистического проекта и рекомендации по применению конкретных методов экспертного оценивания на каждом этапе может иметь практическое значение для разработки и реализации эффективных, инвестиционно привлекательных и осуществимых проектов, а также являться основой для дальнейших исследований и разработки рекомендаций по применению экспертного оценивания при инициации проекта в зависимости от типам решаемых проблем логистики.

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Л.И. Смирных
НИУ ВШЭ Москва
lsmirnykh@hse.ru

Влияние срочных трудовых договоров на инновации: опыт российских предприятий¹

Аннотация: Используя модели двойственного и бинарного пробита, осуществив корректировку по Хекману, применив пробит модели с непрерывным эндогенным регрессором, в данном исследовании выполнено оценивание влияния срочных трудовых договоров на вероятность внедрения предприятиями инноваций. Результаты, полученные впервые для России на данных по предприятиям за 2014 год, свидетельствуют, что предприятия, которые используют срочные трудовые договоры, часто относятся к инновационным предприятиям. При этом срочные трудовые договоры не являются основной причиной роста инноваций. Влияние срочных трудовых договоров на инновации снижается, если на предприятиях есть инвестиции. С ростом количества работников со срочными трудовыми договорами вероятность инноваций на предприятиях снижается.

Ключевые слова: *Срочные трудовые договоры, инновации, рынок труда, Россия*

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1. Введение

По уровню инновационной активности Россия (10,1%) заметно уступает не только ведущим индустриальным странам (Германия – 66,9%), но и большинству государств Центральной и Восточной Европы, где этот показатель находится на уровне от 20% до 60% (Индикаторы инновационной деятельности: 2015, 2015).

Одновременно с этим российские масштабы использования срочных трудовых договоров сопоставимы с другими странами, например с Великобританией, США, Канадой, Японией, Германией, Францией и Италией (Фара, Иодиче, 2013). В этих странах в 2008–2013 гг. доля срочных трудовых договоров была в среднем на уровне 9%. В России она была на уровне 14% в 2008 г., снизившись в 2013 году до 9%. Срочные трудовые договоры используются 1/3 российских предприятий (Смирных, 2014). Они помогают предприятиям адаптироваться к колебаниям спроса; проводить отбор работников на рабочие места; формировать буфер для защиты постоянных рабочих мест при низких (почти нулевых) издержках.

Кроме того, срочные трудовые договоры могут способствовать внедрению инноваций, поскольку обеспечивают для предприятий снижение рисков увеличения трудовых издержек, повышают гибкость трудовых отношений, создают экономию при использовании труда. Вместе с тем, срочные трудовые договоры могут уменьшать инвестиции в человеческий капитал, приводя к сокращению производительности труда работников и снижать вероятность внедрения инноваций. Какой из эффектов будет доминировать – среди исследователей не существует единого мнения, и является предметом изучения и научного анализа.

Одни исследователи, опираясь на полученные ими результаты, утверждают, что срочные трудовые договоры оказывают отрицательное влияние на вероятность внедрения предприятиями инноваций (Franceschi & Mariani, 2014; Bentolia & Dolado, 1994; Autor et al., 2007; Dolado et al., 2012; Cappellari et al., 2012).

Другие исследователи, наоборот, приводят подтверждения, что срочные трудовые договоры имеют положительное влияние на вероятность инноваций на предприятиях (Malgarini et al., 2011; Bassanini & Ernst, 2002a, 2002b; Scarpetta & Tressel, 2004; Zhou et al, 2011; Jacob, 2010; Ichino & Riphahn, 2005; Zhou et al, 2010; Bartelsman, et al., 2012; Nicoletti & Scarpetta, 2003).

Исследования о влиянии срочных трудовых договоров на внедрение предприятиями инноваций на российских данных до сих пор не проводились. В этой связи нет сведений о том, какое значение для повышения уровня инновационной активности предприятий имеют срочные трудовые договоры. Данное исследование, выполненное на данных опроса предприятий в России за 2014 год, восполняет образовавшийся пробел. В нём с использованием моделей двойственного (biprobit) и бинарного пробита (probit), а также путём корректировки смещения результатов по причине селекции (heckprob) оценивается вероятность внедрения предприятиями инноваций при использовании ими срочных трудовых договоров. Кроме того, с применением пробит модели с непрерывным эндогенным регрессором (ivprobit) выполняется контроль эндогенности и определяется величина изменения вероятности внедрения инноваций при увеличении доли работников со срочными трудовыми договорами. Используемая методология исследования является традиционной для исследований по данной тематике и позволяет сравнивать результаты, полученные для России, с другими странами.

2. Обзор литературы

Влияние срочных трудовых договоров на инновационную активность предприятий проявляет себя по-разному в разные временные периоды и в разных странах. Среди исследователей нет до сих пор единого мнения на счёт характера этого влияния. Одни

авторы научных публикаций считают, что увеличение срочных трудовых договоров на предприятиях приводит к снижению их инновационной активности. И, наоборот, только при использовании бессрочных трудовых договоров предприятия чаще внедряют инноваций (Franceschi & Mariani, 2014; Bentolia & Dolado, 1994).

Аргументы такой точки зрения базируются, главным образом, на том, что предприятия не заинтересованы (мало заинтересованы) инвестировать средства в обучение временных работников со срочными трудовыми договорами. В результате происходит снижение накоплений человеческого капитала, способствуя в свою очередь, уменьшению инновационной активности. Считается, что отдача от обучения работника увеличивается только в условиях длительных трудовых отношений, а при срочных трудовых договорах с низкой защитой занятости отдача от обучения падает (Wood & de Menezes, 1998).

Ещё одним аргументом негативного влияния срочных трудовых договоров на инновации является низкая производительность работников (Autor et al., 2007; Dolado et al., 2012; Cappellari et al., 2012). Производительность снижается в данном случае из-за низкой защиты занятости, при которой уменьшается преданность и лояльность работников по отношению к предприятию (Spender, 1996).

Однако не все исследователи считают, что срочные трудовые договоры оказывают отрицательное влияние на инновации. Есть и другая точка зрения. Она состоит в том, что срочные трудовые договоры могут приводить к росту инновационной активности предприятий. При этом считается, что препятствием для инновационной активности предприятий являются, наоборот, стандартные трудовые договоры (Malgarini et al., 2011; Норенхаун & Рогерсон, 1993; Bassanini & Ernst, 2002a).

Авторы такой позиции полагают, во-первых, что жесткое трудовое законодательство с высокой защитой работников от увольнений, снижает трудовую мобильность и перераспределение работников и рабочих мест из стагнирующих и «падающих» секторов экономики в новые и динамично-развивающиеся сектора экономики (Nickell & Layard, 1999). Сложная или дорогостоящая процедура увольнения при жестком регулировании трудовых отношений препятствует сокращению трудозатрат при внедрении предприятиями инноваций (Bassanini & Ernst, 2002б; Scarpetta & Tressel, 2004). При этом срочные трудовые договоры снижают для предприятий издержки увольнения работников, повышают трудовую мобильность и способствуют достижению лучшего соответствия между работниками и работой (job matches). При высокой гибкости рынка труда индивиды с большей вероятностью найдут работу, на которой будут более продуктивны. Кроме того, высокий уровень трудовой мобильности обеспечивает приток новых кадров на предприятия, а, следовательно, и новых идей для инноваций.

Во-вторых, результативность деятельности предприятий зависит во многом от скорости реакции на экономические шоки (циклы), а также сезонные колебания спроса. Исходя из этого, жесткое регулирование рынка труда (высокая защита занятости, ограничения по высвобождению и (или) замещению работников), сокращают уровень продуктивности предприятий (Норенхаун & Рогерсон, 1993), и как следствие, приводят к снижению их инновационной активности (Bassanini & Ernst, 2002a).

В-третьих, ряд авторов считает, что только низкий уровень защищенности работников способствует росту производительности труда и, как следствие, инновационной активности предприятий за счёт сокращения абсентеизма со стороны работников. Данный эффект возникает по причине боязни работников стать безработными (Jacob, 2010; Ichino & Riphahn, 2005). Если же рынок труда жестко регулируется и издержки увольнения для работодателя высокие, то работники, занятые на бессрочной основе и имеющие высокую защиту занятости, могут требовать от работодателей повышения

уровня заработной платы и дополнительных выплат. Это негативно отразится на финансовом положении предприятий и уменьшит их возможности инвестировать в инновации (Malcomson, 1997; Zhou et al, 2011). К тому же, если работники имеют высокий уровень влияния на распределение прибыли (например, сильные профсоюзы), то результаты внедрения инноваций могут быть перераспределены в их пользу (например, путём повышения заработной платы), что снижает для работодателя стимулы вкладывать средства в инновации (Malcomson, 1997).

В-четвертых, разработка и внедрение инноваций сопровождаются для предприятий высоким уровнем неопределенности. По этой причине работодатели склонны нанимать работников с высокой квалификацией на временной основе или на условиях частичной занятости (Zhou et al, 2011). Предприятия с большей вероятностью будут финансировать инновации, если уверены, что в случае неудачи проекта они смогут сократить персонал (Bartelsman et al., 2012). Таким образом, если у предприятий имеется возможность для обеспечения высокой функциональной гибкости, то происходит рост их инновационной активности, повышается производительность труда, увеличивается количество новых продуктов и объемы продаж (Nicoletti & Scarpetta, 2003). К тому же не все предприятия могут позволить себе содержать весь штат работников для осуществления полного цикла создания конечного продукта. Часто они привлекают внешних работников. Особенно актуальным это становится при создании новых продуктов (услуг) и внедрении различных видов инноваций. Внешние работники могут привлекаться временно для выполнения отдельных проектов, связанных с внедрением инноваций (Kodama, 1995).

3. Данные и методика исследования

Анализ проводился на данных, полученных в ходе опроса 2003 предприятий, проведенного в 2014 году Лабораторией исследований рынка труда (ЛИРТ) НИУ ВШЭ². В выборку вошли предприятия семи отраслей экономики (добыча полезных ископаемых, промышленность, строительство, транспорт и связь, торговля, финансы, бизнес услуги) с числом работников более 100 человек. В ней содержится как текущая (2014 г.), так и ретроспективная информация (2013 г.) по основным показателям, характеризующим деятельность предприятий.

Анализ проводился в несколько этапов. Первоначально проверялась гипотеза о том, что предприятия, использующие срочные трудовые договоры, внедряют и инновации. Для этого по методу «seemingly unrelated regressions» рассчитывалась система одновременных уравнений следующего вида:

$$\begin{aligned} y_{i1} &= \beta X_{i1} + \varepsilon_{i1} \\ y_{i2} &= \beta X_{i2} + \delta Z_{i2} + \varepsilon_{i2} \end{aligned} \quad (1)$$

где y_{i1} - бинарная переменная (1=да, 0=нет), характеризующая использование предприятиями инноваций; y_{i2} - бинарная переменная (1=да, 0=нет), характеризующая использование предприятиями срочных трудовых договоров. X_{i1} и X_{i2} - контрольные переменные (размер, возраст, форма собственности, вид деятельности предприятий); Z_{i2} - переменные, которые коррелируют с y_{i2} , но не коррелируют с y_{i1} (доля женщин, доля рабочих)³. β, δ - коэффициенты, характеризующие влияние объясняющих переменных; $\varepsilon_{i1}, \varepsilon_{i2}$ - случайные ошибки; $i = 1, \dots, N$ - количество наблюдений (предприятий).

² Выборка является репрезентативной для России в целом.

³ Данные переменные не коррелируют с инновациями, но коррелируют со срочными трудовыми договорами. Женщины и рабочие часто заняты на условиях срочных трудовых договоров, поэтому с увеличением их количества доля срочных трудовых договоров на предприятиях тоже растёт.

Далее проверялось предположение о смещённости оценок под влиянием инвестиций, и проводилось оценивание пробит модели с самоотбором (heckprob). Предприятия, имеющие инвестиции, с большой вероятностью будут внедрять инновации, но при этом менее заинтересованы использовать срочные трудовые договоры, что должно снижать влияние срочных трудовых договоров на инновации. Кроме того, предприятия, которые имеют инвестиции, могут использовать такой тип инноваций (например, с минимальным риском роста трудовых издержек), который не требует использования срочных трудовых договоров. Исходя из этого, предполагалось, что существует ненаблюдаемая величина:

$$y_i^* = \beta X_i + u_{i1}, \quad (2)$$

при которой зависимая переменная (наличие инноваций) не всегда наблюдаема, и может быть наблюдаема при выполнении следующего условия:

$$y_i^{probit} = (y_i^* > 0) \quad (3)$$

$$y_i^{select} = (\gamma z_i + \beta X_i + u_{i2} > 0), \quad (4)$$

где y_i^* - ненаблюдаемая вероятность инноваций, X_i - контрольные переменные (размер, возраст, форма собственности, вид деятельности предприятий, наличие срочных трудовых договоров); β, γ - коэффициенты, характеризующие влияние объясняющих переменных; z_i - наличие на предприятии инвестиций; u_{i1} - случайная ошибка; $i = 1, \dots, N$ - количество наблюдений (предприятий).

На заключительном этапе проводилась оценка влияния увеличения доли срочных трудовых договоров на инновации. При этом учитывалось, что срочные трудовые договоры являются эндогенным регрессором в уравнении инноваций. Для получения оценок с эндогенным регрессором рассчитывалась система уравнений (модель бинарного пробита с непрерывным эндогенным регрессором (ivprobit))⁴ следующего вида:

$$y_{i1}^* = \beta y_{i2} + \gamma X_{i1} + u_i \quad (5)$$

$$y_{i2} = \Pi_1 X_{i1} + \Pi_2 X_{i2} + v_i$$

При этом величина y_{i1}^* является ненаблюдаемой, а наблюдаемой является величина y_{i1} , для которой выполняется:

$$y_{i1} = \begin{cases} 0 & y_{i1}^* < 0 \\ 1 & y_{i1}^* > 0 \end{cases}, \quad (6)$$

где $i = 1, \dots, N$ - количество наблюдений (предприятий); y_{i2} - вектор эндогенного регрессора (доли срочных трудовых договоров); X_{i1} - вектор $1 \times k_1$ экзогенных контрольных переменных (размер, возраст, форма собственности, вид деятельности предприятий); X_{i2} - вектор $1 \times k_2$ инструментов (доля женщин, доля рабочих), которые коррелируют с y_{i2} , но не коррелируют с y_{i1}^* . β, γ - векторы структурных параметров, а Π_1, Π_2 - матрицы параметров в сокращённом виде; u_i, v_i - случайные ошибки.

4. Результаты

Результаты анализа показали, что около 42% предприятий в России имеют инновации. При этом российский рынок отличается от рынков развитых стран. В развитых странах инновации встречаются чаще на малых и средних по размеру предпри-

⁴ Это рекурсивная модель, в которой y_{i2} вставляется в уравнение для y_{i1}^* , но y_{i1}^* не может быть вставлено в уравнение для y_{i2} .

ях, а в России предприятия с инновациями чаще представлены среди крупных, чем среди малых предприятий. Более половины крупных предприятий (58%) в России имеют инновации, в то время как среди малых предприятий их насчитывается гораздо меньше (39%). Не намного больше предприятий с инновациями и среди средних по размеру предприятий (численность работников от 101 до 500 человек) – 44%⁵.

Предприятия со срочными трудовыми договорами встречаются на российском рынке довольно часто (37%). Среднее количество работников, занятых по срочным трудовым договорам, постоянно увеличивается. Так в 2014 году доля работников со срочными трудовыми договорами составила в среднем относительно численности работников всех предприятий 13%, а на предприятиях со срочными трудовыми договорами почти 37%.

Предприятия со срочными трудовыми договорами приблизительно одинаково представлены как среди крупных, так и среди малых и средних предприятий. Хотя работники со срочными трудовыми договорами заняты чаще на малых (40%), чем на крупных (27%) и средних (33%) предприятиях.

Результаты дескриптивного анализа показали, что если на предприятиях есть срочные трудовые договоры, то на них выше вероятность инноваций. Так в 2014 году вероятность инноваций на предприятиях со срочными трудовыми договорами составляла 51%, а на предприятиях, которые не использовали срочные трудовые договоры, вероятность инноваций была 37%.

Результаты регрессионного анализа подтвердили, что если предприятия используют срочные трудовые договоры, то для них высока вероятность внедрения инноваций. Значимость теста Вальда (38,72***) для модели двойственного пробита (biprobit) указывает, что модель одновременного оценивания двух уравнений: инноваций и срочных трудовых договоров, даёт более состоятельные оценки, чем стандартная пробит модель инноваций. Коррелированность остатков в двух уравнениях свидетельствует, что предприятия, использующие срочные трудовые договоры и предприятия, которые внедряют инновации, обладают схожими ненаблюдаемыми характеристиками.

Средняя вероятность инноваций на предприятиях в России при наличии на них срочных трудовых договоров и контроле основных характеристик составила в 2014 году 19%. Гораздо чаще (42%) предприятия в России не имеют ни инноваций, ни срочных трудовых договоров. Меньше половины всех предприятий в России либо имеют инновации, но не используют срочные трудовые договоры (22%), либо используют срочные трудовые договоры, но не внедряют инноваций (17%).

Влияние срочных трудовых договоров на инновации снижается, если на предприятиях есть инвестиции. Согласно результатам модели бинарного пробита вероятность инноваций с ростом доли срочных трудовых договоров на 1% увеличивается на 0,14 п.п., а при корректировке на смещение под влиянием селекции (heckprob) она становится меньше, снижаясь до уровня 0,04 п.п. Срочные трудовые договоры являются для предприятий не только способом повышения гибкости, но и способом экономии ресурсов для инноваций. Поскольку предприятия, имеющие инвестиции, демонстрируют меньшее влияние срочных трудовых договоров на инновации (0,07), чем предприятия, на которых нет инвестиций (0,18) (табл. 1).

Таблица 1. Предельные значения влияния срочных трудовых договоров на инновации: результаты оценивания с учётом селекции

Модели	Предельное значение dy/dx	Стандартная ошибка
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⁵ Чем объясняется данный феномен, в данной работе не рассматривается, и является предметом для изучения в дальнейших исследованиях.

Probit ⁶	0,14***	0,02
Heckprobit ⁷	0,04**	0,02
Probit if invest==1	0,07*	0,04
Probit if invest==0	0,18***	0,03

Уровни значимости: * – $p < 10\%$; ** – $p < 5\%$; *** – $p < 1\%$.

Доля срочных трудовых договоров может увеличивать и снижать вероятность инноваций. Результаты анализа показали, что с ростом количества работников со срочными трудовыми договорами вероятность инноваций на предприятиях в России снижается (табл.2).

Таблица 2. Вероятность инноваций в зависимости от количества срочных трудовых договоров, предельные значения (ivprobit)

Название переменных	предельное значение (dy/dx)	стандартная ошибка
Доля срочных трудовых договоров, %	-0,01***	0,00
Уровни по количеству срочных трудовых договоров на предприятиях (1<=1%; 5>40%)	-0,15***	0,04

Уровни значимости: * – $p < 10\%$; ** – $p < 5\%$; *** – $p < 1\%$.

Увеличение доли срочных трудовых договоров на 1% вероятность инноваций снижается на 0,01 п.п., а с каждым более высоким уровнем доли срочных трудовых договоров она падает на 0,15 п.п. (табл. 8).

5. Заключение

Результаты исследования, выполненного на данных опроса предприятий за 2014 год, указывают, что около 42% предприятий в России имеют инновации. Полученный результат отличается от уровня инновационной активности предприятий, на который часто ссылаются исследователи (10%). Объясняется это тем, что наша выборка по предприятиям, используемая для анализа, охватывает не только обрабатывающие отрасли, а более широкий их перечень. Кроме того, она представляет субъективную оценку руководителей предприятий не только о технико-технологических инновациях, а о более широком спектре инноваций (маркетинговые, инновационные разработки, продуктовые и др.).

По результатам анализа установлено, что российский рынок отличается от рынков развитых стран. Если в развитых странах инновации встречаются чаще на малых и средних, то в России на крупных предприятиях. Среди крупных предприятий было значительно больше инновационных предприятий (58%), чем среди малых предприятий (39%).

Среди предприятий со срочными трудовыми договорами количество инновационных предприятий встречается чаще (51%), чем среди предприятий без срочных трудовых договоров (37%). Результаты регрессионного анализа также подтверждают, что предприятия, которые используют срочные трудовые договоры, часто относятся к инновационным предприятиям (19%). При этом использование предприятиями срочных трудовых договоров без внедрения инноваций встречается реже (17%).

Наряду с этим было также выявлено, что в России существует значительное количество предприятий (41,46%), на которых нет ни инноваций, ни срочных трудовых договоров. Также было установлено, что срочные трудовые договоры не являются ос-

⁶ Контрольные переменные: размер предприятия, форма собственности, вид деятельности, возраст предприятия, технико-технологический уровень.

⁷ Уравнение селекции: инвестиции = изменение финансового положения в текущем году, возраст предприятия.

новой причиной роста инноваций. Внедрение инноваций часто происходит и на предприятиях, которые не имеют срочные трудовые договоры (22%).

Влияние срочных трудовых договоров на инновации снижается, если на предприятиях есть инвестиции. Предприятия, имеющие инвестиции, демонстрируют меньшее влияние срочных трудовых договоров на инновации (0,07), чем предприятия, на которых инвестиций нет (0,18). Таким образом, срочные трудовые договоры являются для предприятий способом экономии ресурсов при внедрении инноваций. Это вполне согласуется с результатами исследований о факторах, препятствующих инновациям на предприятиях, полученными для российских предприятий (Кузнецова, Рудь, 2011). Препятствиями для инновационных предприятий являются «дефицит собственных денежных средств» (75%) и «недостаток финансовой поддержки со стороны государства» (47%). Кроме того, основным мотивом для инноваций является необходимость выживания (Кузнецова, Рудь, 2011). В этих условиях срочные трудовые договоры могут рассматриваться предприятиями не только как способ повышения гибкости и снижения рисков при внедрении инноваций, но и как средство экономии расходов по труду для их проведения.

Однако возможности такой экономии ограничены. С ростом количества работников со срочными трудовыми договорами вероятность инноваций на предприятиях снижается, хотя и незначительно (на 0,01 п.п.). Экономия за счёт привлечения всё большего числа работников на условиях срочных трудовых договоров лишает предприятия накоплений человеческого капитала (подходящих кадров), необходимых для осуществления инноваций. Инновации требуют не только для предприятий не только свободы адаптации и гибкости труда, но и высокой квалификации работников, приобретаемой, в том числе, в процессе обучения на рабочем месте, то есть при длительных трудовых отношениях. В этой связи, постоянно увеличивая долю работников со срочными трудовыми договорами, предприятия лишают себя в дальнейшем возможностей для внедрения инноваций, поскольку на них не происходит накопление необходимого человеческого капитала. Согласно полученным результатам, малые предприятия в России с высокой долей работников со срочными трудовыми договорами имеют низкий уровень инновационной активности.

Результаты, полученные в ходе исследования, имеют значение не только для разработки политики гибкости на рынке труда, но представляют интерес и с точки зрения повышения производительности труда в России. Мероприятия, которые разрабатываются органами власти для повышения гибкости рынка труда за счёт снижения барьеров для заключения с работниками и, таким образом, для увеличения доли срочных трудовых договоров, не всегда могут оборачиваться ростом инноваций. Вместе с тем, сдерживать использование срочных трудовых договоров предприятиями, которые внедряют инновации, является пагубным для развития экономики. Исходя из этого, необходимо нахождение сбалансированного решения. Для выработки более обоснованных рекомендаций необходимо в дальнейшем продолжить исследования по данному направлению.

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**Е. В. Соколова, к.э.н., старший преподаватель,
Кафедра государственного и муниципального управления,
Институт «Высшая школа менеджмента»,
Санкт-Петербургский государственный университет
sokolova@gsom.spbu.ru**

Роль вертикальной интеграции в формировании цен на розничном рынке бензина в РФ

Обсуждается роль вертикальной интеграции в нефтяной промышленности в формировании цен на розничном рынке бензина в РФ. Анализ проводится на основании данных об уровне конкуренции на различных стадиях производства в российской нефтяной промышленности. Делаются выводы о том, что наличие независимых АЗС на розничном рынке бензина в РФ не может стать причиной установления конкурентных цен без вмешательства дополнительных факторов.

Ключевые слова: *нефтяная промышленность, вертикальная интеграция, цены на бензин, конкуренция.*

Современное экономическое регулирование исходит из предпосылки о преимуществах конкуренции. Однако необходимость конкуренции в нефтяной промышленности не всегда очевидна в силу целого ряда причин.

Целью данной работы становится оценка возможности установления конкурентных цен на бензин на внутреннем рынке в Российской Федерации в условиях высокой степени вертикальной интеграции.

1. Состояние конкуренции в нефтяной промышленности Российской Федерации

Международное сообщество часто рассматривает российскую нефтяную промышленность как аналог картеля ОПЕК в семидесятые годы XX века (Grace, 2005, p. 218). Это объясняется сопоставимыми с ОПЕК объемами добычи и экспорта нефти, а также ролью национального правительства в определении стратегии развития отрасли. Однако не стоит забывать, что, если ОПЕК является официально заявленным картелем, то в российской нефтяной промышленности работают 11 формально независимых вертикально-интегрированных нефтяных компаний (ВИНК).

Тем не менее, аналогия с картелем имеет весьма весомые основания. В первую очередь, следует обратить внимание на то, что уровень конкуренции в нефтяной промышленности РФ крайне невысок. По состоянию на 2013 год объем добычи сырой нефти 180 независимых от ВИНК нефтяных компаний составил 14,4% от объема добычи ВИНК и 12,59% от всего российского объема добычи¹. Таким образом, конкурентная борьба даже если и возможна, то это будет конкуренция олигополистического типа с барометрическим лидерством ВИНК. Независимые нефтяные компании, как правило, берут на себя роль последователей, принимая правила игры коллективно доминирующих ВИНК. Более того, можно предположить, что, так как ценовая конкуренция на нефтяном рынке практически отсутствует, а объем добычи нефтяной компании влияет не только на ее положение внутри страны, но и на положение на мировых рынках нефти, то результаты конкурентной борьбы в большей степени будут соответствовать модели конкуренции по Штакельбергу при одновременном определении объемов производства – модели преимущества первого хода. Так, несмотря на произошедшее в российской нефтяной промышленности серьезное перераспределение прав собственности (банкротство «ЮКОС», поглощение «НК «Роснефть» ТНК-ВР и перераспределение акций «Башнефти»), ситуация на рынке после введения западных санкций в отношении отрасли близка к теоретической ситуации, описываемой в модели Штакельберга. Нефтяная компания, успевшая первой установить объемы добычи (а в нашей ситуации – начать разработку месторождений, требующую использование определенных технологий), скорее всего, останется лидером отрасли на достаточно длительное время. Таким образом, учитывая неопределенность в развитии технологической базы, дальнейший анализ проводится на основании предпосылки о стабильности положения игроков на внутреннем рынке, что упрощает формирование перспективного сценария развития отрасли. Сложившийся баланс рыночных сил на текущем этапе развития может быть нарушен только при вмешательстве государства.

Наиболее конкурентным этапом производственного цикла в настоящее время является розничная продажа автомобильного топлива – 55-60% рынка обслуживается независимыми от ВИНК розничными продавцами бензина, продающими около 33% всего топлива на розничном рынке (Подобедова, Галактионова, Дзядко, 2014). Однако в связи с практически полным отсутствием независимых от ВИНК оптовых продавцов бензина (см. таблицу 1), зависимость розничных продавцов от ВИНК оказывается

¹ Нефтяной комплекс [Электронный ресурс] // Министерство энергетики РФ. – Режим доступа: <https://minenergo.gov.ru/activity/oilgas/> (дата обращения 23.03.2015).

весьма значительной. Подобная ситуация на розничном рынке бензина в РФ не является уникальной – в мировой практике встречаются различные формы взаимодействия игроков – от полной вертикальной интеграции до полной независимости розничных продавцов (OECD, 2010). При этом можно говорить как о реально существующей вертикальной интеграции, так и о вертикальных ограничивающих контрактах, заключаемых между нефтеперерабатывающими заводами (НПЗ) и розничными продавцами автомобильного топлива.

В зависимости от целого ряда дополнительных факторов, высокий уровень вертикальной интеграции, сочетающийся с высоким уровнем рыночной концентрации, может оказывать как положительное, так и отрицательное влияние на результаты функционирования конечных рынков. Именно наличие достаточно большого количества независимых розничных продавцов бензина дает возможность говорить о неоднозначном исходе рыночного взаимодействия с точки зрения установления цен для конечных потребителей. На рынке могут быть установлены как конкурентные цены вследствие высокой доли независимых автозаправочных станций (АЗС), так и монопольно высокие цены, обусловленные существованием доминирующих ВИНК.

2. Влияние вертикальной интеграции на условия конкуренции в российской нефтяной промышленности

То, насколько велика заинтересованность российских ВИНК в интеграции независимых АЗС, зависит от степени их контроля за установлением цен и получаемых вследствие этого выгод.

В настоящее время в России розничные цены на нефтепродукты не регулируются напрямую государством, однако проводится их постоянный мониторинг Федеральной антимонопольной службой (ФАС). Результатом проведения контрольных мероприятий стало, в частности, возбуждение после 2007 года целого ряда антимонопольных дел, в рамках которых доминирующие ВИНК обвинялись как в прямом монопольном завышении цен, так и в изъятии нефтепродуктов с рынка, что также приводило к росту цен на бензин.

Обвинения со стороны ФАС не могут рассматриваться однозначно, что объясняется особенностями структуры рынка в нефтяной промышленности. Так, обвинение ВИНК в установлении монопольно низких цен может оказаться несостоятельным вследствие того, что крупные производители, как правило, более эффективны, чем их небольшие конкуренты. В этом случае низкий уровень цены будет отражать уровень средних затрат ВИНК, а не их желание вытеснить конкурентов с рынка. В свою очередь, монопольно высокие цены могут устанавливаться в двух случаях. Во-первых, это доминирование независимых розничных операторов на локальном рынке, которое приводит к установлению двойной монопольной надбавки, и в этом случае роль ВИНК в завышении цен неочевидна. Во-вторых, это вертикальные ограничивающие соглашения с независимыми АЗС, фиксирующими минимальную стоимость бензина на внутреннем рынке – здесь уже более понятна позиция обвинения.

3. Уровень цен на бензин на внутреннем розничном рынке в РФ

Так как стоимость одного литра бензина на внутреннем рынке в РФ более чем на половину (51,24% до 1 января 2015 года, 55,79% - после 1 января 2015 года) складывается из экспортной цены бензина за вычетом пошлины, то следует понимать, что значительную роль в формировании цены играет политика оптовых продавцов экспортируемых нефтепродуктов – ВИНК. В этом случае цена сырой нефти и нефтепродуктов для внутреннего рынка устанавливается добывающей компанией

независимо от фактора спроса на данное сырье – на первое место выходит проблема загрузки собственных мощностей и цена продажи готового нефтепродукта.

Существует мнение, что в условиях снижения мировых цен на нефть у ВИНК могли появиться стимулы к реализации политики перекрестного субсидирования за счет повышения стоимости нефтепродуктов на внутреннем рынке. Однако данный тезис может быть поставлен под сомнение в силу двух причин. Во-первых, с января 2015 года вступили в силу новые правила налогообложения в нефтяной промышленности, значительно сократившие рентабельность продаж нефти и нефтепродуктов на внутреннем рынке по сравнению с экспортными операциями. Во-вторых, изучение структуры цены на бензин (см. Таблицу 3) показывает, что при столь высокой доле налогов (65%) даже незначительное повышение цены бензина на розничном рынке должно быть связано (при неизменности прочих факторов) со значительными манипуляциями со стороны оптовых и розничных продавцов.

Таблица 3.

Структура цены автомобильного бензина в США и РФ

Составляющая цены	Доля составляющей в США	Доля составляющей в РФ
Сырая нефть	64%	7%
Переработка	14%	10%
Налоги	12%	65%
Транспортировка и продажа	10%	18%

Составлено по: Российский топливный союз (2015) Структура цены. Сравнение Россия и США/ URL: <http://www.rfu.ru/images/docs/analitika>.

Так как еще до введения налогового маневра в разных субъектах федерации в 2014 году наблюдались разные темпы прироста цен на бензин марки АИ-92, то можно предположить, что они были связаны с ценовой политикой продавцов оптового или розничного рынка. Так, самые высокие темпы прироста по данным на конец ноября относительно цен конца января (22,31%) были в Тыве, а самые низкие за тот же период времени – в Чукотском АО (4,06%) и Камчатском (1,51%). Рост цен на бензин марки АИ-92 более чем на 20%, был зафиксирован в 8 субъектах федерации (включая Тыву). Прирост цен ниже официально зарегистрированного в РФ уровня инфляции (11,36% по данным Госкомстата) – в 35 регионах.

Несмотря на столь значительные темпы прироста цен на бензин, невозможно однозначно сказать, соответствует ли цена бензина на розничном рынке конкурентному уровню. Внутрикорпоративные продажи углеводородов, осуществляемые ВИНК, не дают регулятору возможности получить достоверные данные о стоимости бензина, обусловленной потребностями рынка. Поэтому дальнейшие выводы, сделанные в данной работе будут основываться на предположении о необходимости сокращения информационной асимметрии в отношениях между НПЗ, оптовыми продавцами бензина и розничными сетями.

4. Приближение цен на бензин к конкурентному уровню в условиях вертикальной интеграции

Проблема установления цен, приближенных к конкурентному уровню, исходит из проблемы взаимоотношений между независимыми розничными продавцами бензина и ВИНК. До недавнего времени фактически отсутствовали единые правила формирования цены при заключении договоров купли-продажи между подконтрольными ВИНК нефтеперерабатывающими заводами и независимыми АЗС.

Это создавало дополнительные стимулы к созданию вертикальных ограничений в отношении последних.

В декабре 2014 года в Минэнерго обсуждались возможные изменения в условиях поставки топлива от ВИНК на АЗС. В том числе рассматривались следующие способы определения цены (Подобедова, Галактионова, Дзядко, 2014):

1. На основании средневзвешенной биржевой цены на Санкт-Петербургской международной товарно-сырьевой бирже (СПБМТСБ) за пять рабочих дней с учетом затрат на транспортировку и хранение на нефтяной базе и фиксированной маржи для мелкого опта.
2. На основании отпускной цены нефтеперерабатывающего завода на дату поставки с учетом тех же затрат, что и в первом случае, за исключением того, что маржу предлагается пересматривать дважды в неделю.
3. На основании средних цен на топливо на АЗС компании-продавца в регионе минус дифференциал (фиксированный в рублях за тонну).

Независимым АЗС предлагается заключать долгосрочные контракты как на условиях 100-ной предоплаты, так и на условиях товарного кредитования – отсроченным платежом. Однако в последнем случае независимые покупатели автомобильного топлива должны брать на себя обязательства по покупке фиксированного объема – контракты типа «бери-или-плати». Данные условия заключения контрактов на поставку нефтепродуктов в полной мере отражают доминирование ВИНК в отношениях с независимыми АЗС².

В втором и третьем вариантах ценообразования цена полностью зависит от решения ВИНК. В первом случае существует вероятность того, что на уровень розничных цен в большей степени будут оказывать влияние рыночные факторы спроса и предложения.

В результате проведенных согласований в конце марта 2015 года «НК «Роснефть» и ФАС был согласован Стандарт, регламентирующий принципы ценообразования и порядок реализации компанией моторного топлива на внутреннем рынке РФ. Согласно подписанному документу, «НК «Роснефть» «обязуется реализовывать моторное топливо всем контрагентам на внутреннем рынке, включая дочерние и зависимые общества, по единым крупнооптовым ценам, рассчитанным на основе цен собственных биржевых продаж с учетом рыночных ценовых индикаторов, в том числе экспортной альтернативы, а также не допускать дискриминации всех участников рынка»³.

Подобный метод контроля розничных цен, устанавливаемых лидером рынка, с одной стороны, является серьезным шагом в сторону формирования прозрачных правил формирования закупочных цен – лидирующее положение «НК «Роснефть» позволяет предположить, что и другие ВИНК присоединятся к новым правилам торговли. С другой стороны, все то же лидирующее положение «НК «Роснефть» может поставить под угрозу добросовестность поведения участников биржевых торгов, обязательное проведение которых в РФ было введено сравнительно недавно.

Решение об обязательной продаже ВИНК нефти и нефтепродуктов на товарных биржах было принято ФАС и Министерством энергетики РФ в 2013 году.⁴

² Обсуждение особенностей контрактных обязательств розничного рынка не является предметом анализа данной статьи, поэтому более детальное рассмотрение последствий предлагаемых контрактных нововведений здесь не приводится.

³ «Роснефть» и ФАС согласовали принципы ценообразования и порядок реализации продуктов в РФ// Источник: http://fas.gov.ru/fas-news/fas-news_36382.html. Дата обращения: 16.04.2015.

⁴ Приказ Федеральной антимонопольной службы и Министерства энергетики РФ от 30 апреля 2013 г. № 313/13/225 “Об утверждении минимальной величины продаваемых на бирже нефтепродуктов и требований к биржевым торгам, в ходе которых заключаются сделки с нефтепродуктами хозяйствующим субъектом, занимающим доминирующее положение на соответствующих товарных рынках”

Предполагалось, что регулярное проведение биржевых торгов должно привести к формированию информационной базы для расчета индексов цен на нефть и нефтепродукты на внутреннем рынке, которые бы базировались в большей степени на балансе спроса и предложения, нежели чем на стоимости нефти на мировых биржах.⁵ Так, согласно проекту федерального закона «О рыночном ценообразовании на нефть и нефтепродукты в РФ» цены на нефть и нефтепродукты на внутреннем оптовом рынке следует определять исходя из трех индексов цен: индексы цен сопоставимых рынков, индексы цен внебиржевых сделок и индексы биржевых сделок. Основной целью использования индексов цен стало определение цен, по которым нефть и нефтепродукты будут закупаться на внутрироссийском рынке, в первую очередь – государственными организациями и органами государственной власти. Цены для государственных закупок, в свою очередь, будут оказывать влияние на розничные цены для конечных потребителей.

Несмотря на кажущуюся простоту очевидность механизма ценообразования, проведение биржевых торгов нефтью и нефтепродуктами в РФ имеет целый ряд ограничений.

Во-первых, высокая степень вертикальной интеграции в нефтяной промышленности становится причиной того, что порядка 85% сделок заключаются на условиях внебиржевых контрактов. Это и внутрикорпоративные продажи нефти, и долгосрочные контракты, предусматривающие продажи излишков добываемого сырья независимым нефтеперерабатывающим заводам. При этом, так как объем обязательных продаж нефтепродуктов, устанавливаемый Приказом №313/13/225, не превышает 10% совокупного месячного объема производства, то в случае повышения цен на этом сегменте рынка, ВИНК смогут неконтролируемо и без значительного ущерба понизить цены внебиржевых сделок. Это, в свою очередь, повысит конкурентоспособность их аффилированных лиц и, следовательно, может привести к росту рыночной концентрации на смежных рынках как за счет роста относительных объемов продаж дочерними компаниями ВИНК, так и за счет поглощения ими независимых мелких конкурирующих фирм. В случае же сокращения цены на биржевых торгах по сравнению с официальной мировой ценой снова могут пострадать конкурирующие независимые компании, но уже те, которые работают на более ранних стадиях производственного процесса – на стадии добычи или переработки, и выступают на биржевых торгах в роли продавцов.

Таким образом, относительная незначительность объема продаж для ВИНК, при этом оказывающаяся значительной в сопоставлении с объемами продаж независимых компаний, становится стимулом для манипуляции ценами со стороны доминирующих ВИНК. При этом ВИНК получают возможность компенсировать убытки, возникающие на одной стадии производственного процесса, за счет изменения конкурентного поведения на другой. Аналогичные проблемы (однако значительно усиленные технологическими особенностями транспортировки газа) возникли при проведении в РФ свободных торгов газом на электронной торговой площадке (ЭТП) в период с 2006 по 2008 год (Соколова, 2014). На свободных торгах газом доминировал один продавец – ОАО «Газпром», чей объем продаж, согласно правилам регулирования, был равен совокупному объему продаж независимых (от ОАО «Газпром») продавцов газа.

Кроме того, относительно небольшой объем биржевых продаж нефти может привести к тому, что рост цен будет связан не с характеристиками спроса, а с «придерживанием» ресурсов в периоды пикового спроса с целью продажи их с большим превышением выручки над затратами впоследствии (Trebling, 2008, p. 470). В

⁵ Проект федерального закона «О рыночном ценообразовании на нефть и нефтепродукты в РФ».

настоящее время, в условиях сокращения поставок бензина из Белоруссии, нефтяные компании уже показывают тренд к увеличению объемов запасов бензина при сохранении дефицита поставок топлива на внутренний рынок⁶.

Во-вторых, при продаже товара в условиях высокой концентрации продавцов на рынке высока вероятность ценового сговора между участниками биржевых торгов. Возможность предотвращения сговора при продаже нефти и нефтепродуктов на бирже ограничена, но все же существует. Так, механизм биржевой торговли позволяет это сделать в том случае, когда сделка автоматически заключается по лучшей цене с учетом затрат на транспортировку топлива к месту назначения (Западаев, 2010, стр. 7.). Кроме того, участники рынка не должны получать информации, которая бы позволила идентифицировать продавца и покупателя. В частности, если доступна информация о базисах НПЗ или станциях отправления НПЗ, то участника рынка определить несложно. Однако ограниченный круг участников рынка и ограниченное количество торговых площадок затрудняют использование принципов анонимности при проведении торгов.

На практике обязательные биржевые торги нефтью и нефтепродуктами привели к неоднозначным с точки зрения конкуренции результатам. С одной стороны, была формально достигнута цель получения информации о ценах на нефть и нефтепродукты на свободных торгах. С другой стороны, по данным Российского топливного союза, участились манипуляции оптовыми ценами на биржевых торгах со стороны ВИНК с целью их завышения. На фоне снижения производства бензина и сокращения отгрузки бензина на внутренний рынок, нефтяные компании активно скупали бензины друг у друга на биржевых торгах и снижали объемы реализации бензина на бирже. Целью подобной практики может быть повышение биржевых цен до уровня экспортного паритета. Это стало возможным, так как внутренний рынок не является приоритетным для производителей нефтепродуктов.⁷

Заключение

Таким образом, получается, что существование независимых АЗС в условиях неполной интеграции ВИНК создает стимулы и условия для злоупотребления доминирующим положением. Целью возможных злоупотреблений становится или вытеснение небольших АЗС рынка (через монополю низкие цены на сетевых АЗС) или завышение оптовых цен на бензин для предотвращения конкуренции со стороны небольших АЗС и дальнейшего установления высоких цен на бензин на сетевых АЗС.

В условиях высокой степени вертикальной интеграции в отрасли существование цены, приближенной к конкурентной, возможно только при условии повышения рыночной силы независимых розничных продавцов бензина. Для этого необходимо выполнение хотя одного из двух условий:

- обеспечение высокой степени концентрации независимых АЗС на отдельных географических рынках по сравнению с сетевыми АЗС;
- выход на рынок розничной продажи топлива непрофильных вертикально интегрированных компаний.

Появление относительно крупных независимых от ВИНК игроков розничного рынка позволит сократить объем манипуляций с оптовой ценой нефтепродуктов не только за счет усиления роли покупателя, но и за счет обмена информацией об оптовой цене бензина между независимыми АЗС.

⁶ Дмитрий Махонин о самом актуальном на рынке бензинов [Электронный ресурс] // ФАС РФ. – Режим доступа: http://fas.gov.ru/fas-news/fas-news_36446.html (дата обращения: 15.04.2015).

⁷ Структура цены. Сравнение Россия и США [Электронный ресурс] // Российский топливный союз. – Режим доступа: <http://www.rfu.ru/images/docs/analitika/> (дата обращения: 23.06.2015).

Существующая структура розничного рынка бензина не дает возможности установления цен, приближенных к конкурентным, даже при условии использования регуляторами квазиконкурентных механизмов ценообразования.

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Э.В.Страхович,
Высшая школа менеджмента СПбГУ
e.strakhovich@spbu.ru

Разработка фрагмента онтологии по стандарту Project Management Institute

Аннотация: Проектное управление твердо занимает ведущие позиции в инновационной сфере, в сфере информационных и высоких технологий и других областях. Широкое распространение проектного управления и периодические обновления стандартов управления проектами вызывают потребность в обучении и в создании специализированных информационно-технологических систем как инструментов работы менеджеров проектов. Решение указанных задач требует описания соответствующей предметной области. В статье обсуждается использование онтологий как инструмента структурирования и передачи знаний о предметной области.

Ключевые слова: онтология, проект, стандарт PMI

1. Развитие стандартов управления проектами

Проектное управление твердо занимает ведущие позиции во многих областях человеческой деятельности, особенно в инновационной сфере, в сфере информационных и высоких технологий. Project Management Institute (PMI) как ведущий институт в области проектного менеджмента поддерживает, обновляет и издает стандарт по управлению проектами, который так же положен в основу международного стандарта по управлению проектами ISO 21500. Руководство к стандарту PMI публикуется как Project Management Body of Knowledge (PMBoK) и выдержало уже пять изданий. Стандарт PMI поддерживается всеми известными методологиями управления проектами, такими как Projects In Controlled Environments (PRINCE-2), Agile, Capability Maturity Model (CMM), Capability Maturity Model Integration (CMMI) и многими другими, получившими свое развитие из перечисленных методологий (PMBoK, 2012). Постоянная доработка и улучшение стандарта проводится на основе анализа и отбора лучших практик в управлении проектами, на их основе уточняются и совершенствуются ключевые области знаний управления проектами (терминология PMI). Так, по сравнению с предыдущими версиями в пятой версии стандарта выделена в отдельную область знаний область управления заинтересованными лицами проекта. Выпуск новых версий руководства к стандарту с периодичностью раз в четыре года указывает на интенсивность развития этой области, а также динамику изменений и совершенствования этой области менеджмента, о влиянии знаний из смежных областей (например, знаний по общему управлению, технических или отраслевых знаний и знаний из вспомогательных дисциплин) на управление проектами. С расширением областей применения проектного управления и при условии постоянного развития этой области менеджмента существует перманентная потребность в обучении новых менеджеров, дополнительном консультировании опытных менеджеров и в создании все более сложных информационных систем, применяемых как в обучении (Контоставлакис & Эмирис, 2011), так и в работе менеджеров проектов.

2. Применение онтологий в управлении проектами

Для обучения и для разработки информационных систем важно выявить и четко описать структуру и взаимосвязи соответствующей предметной области. Одним из способов отображения структуры и взаимосвязей любого сложного предмета, в том числе и управления проектами, является его описание с помощью инструментов онтологического инжиниринга, например, таксономии как вида онтологий.

Инструментарий, используемый в инженерии знаний, позволяет структурировать информацию и выявлять зависимости в таких сложных и развивающихся областях (Гаврилова и др., 2011), какой является на настоящий момент управление проектами. Методы инженерии знаний часто используются отдельно взятом проекте при анализе предметной области разработки, сборе требований, разработке плана проекта, то есть для тех областей, где важно структурировать, выделить составляющие элементы в области, от правильного знания о которой зависит успех проекта. Особенно часто при проектировании и планировании проектов используются онтологии, то есть можно выделить две области использования этого инструмента: во-первых, разработка продукта или сервиса, создание которого является результатом проекта (Yimin Zhu & Shu-Ching Chen, 2004), во-вторых, собственно планирование управления проектом, включая все соответствующие процессы. Описание процесса управления проектом с помощью онтологий вносит вклад в развитие стандартов и процессов этой области менеджмента и в развитие теории управления. Использование онтологического моделирования в описании процессов проекта (Hughes, 2010; Chan Cheah, 2007) способствует:

- созданию внутренней согласованности в описании процессов;
- ускоренному доступу к процессам, которые имеют отношение к ситуации;
- использованию понятных и четких средств, с помощью которых стандартные процедуры управления проектом могут быть адаптированы для удовлетворения условий конкретного проекта;
- выравниванию процессов управления проектами с другими, дополнительными (вспомогательными) процессами, как те, которые используются для руководства разработки программного обеспечения;
- определению соответствующих информационных структур и систем, которые содержат оперативные данные проектов, таких как сроки, продолжительность и распределение ресурсов.

Надо также отметить взаимное влияние областей управления проектами и управления знаниями, при котором методы управления проектами в свою очередь переносятся в область управления знаниями. Интересны работы, трактующие процесс разработки проекта и жизненный цикл продукта, как жизненный цикл информации или знания (Missikoff & Navigli, 2005). Действительно, стадии разработки проекта, определения целей проекта и сбора требований к продукту близки по своим целям и активностям к фазе порождения и добычи информации или знаний в системах управления знаниями. Стадии проектирования и разработки продукта в проекте можно сопоставить с фазами обработки информации или знания. В течение жизни продукта происходит, как правило, сопровождение или поддержка продукта, в управлении знаниями это соответствует фазе активного использования знаний, а переход к новым продуктам и отказ от поддержки старого продукта соответствует забыванию или ликвидации знаний. Наиболее ярко такая аналогия проявляется в тех проектах, где результатом является информационный продукт или услуга.

Тенденция использования подходов из области управления знаниями к анализу методологий управления проектами распространяется также на проекты уровня организаций, где рассматривается собственно процесс создания знаний организации в ходе выполнения отдельных проектов (Aramo-Immonen, 2009).

Как уже упоминалось выше, онтологии представляют удобный и понятный инструмент для структурирования и передачи знаний, что играет особую роль при обучении (Гаврилова и др., 2011; Gavrilova et al, 2014). Для обучения в области проектного менеджмента были разработаны и представлены онтологии как самого курса управления проектами, так и отдельных тем, например, управления рисками проекта (Gavrilova et al, 2010b). Следуя современной тенденции развития электронных систем обучения, разрабатываются Интернет-порталы с обучающими сервисами, спроектированные с использованием методов онтологического инжиниринга как проекте PM-pedia (Контоставлакис & Эмирис, 2011), который объединяет обучение стандарту (что должно быть сделано) в элементами методологий (как должно быть сделано).

3. Создание онтологии управления проектом

Для анализа предметной области предлагается использовать инструменты онтологического инжиниринга, позволяющие наилучшим образом выявить сущность понятий через их связи с другими концептами и отражающие структуру предметной области. При построении онтологии используется метод построения неформальной или легковесной (lightweight) онтологии, который поддерживает построение структуры естественным для участников процесса образом, позволяет достаточно просто включать в процесс разработки онтологии новых исследователей и расширять структуры, используя аналитический и дидактический подходы в их создании.

Последний упомянутый факт особенно важен в условиях постоянного развития и совершенствования рассматриваемой предметной области.

Онтология как сущность, разрабатываемая в области информационных технологий и с помощью ИТ методов представляет собой иерархическую древовидную структуру предметной области, содержащую связи между ее концептами или категориями (Sarantis & Askounis, 2010). Онтологический инжиниринг включает достаточно много способов построения онтологий, существуют специальные программные продукты как Protégé, например, созданные для упрощения создания онтологических структур. В данной статье используется подход, основанный на методе, предложенном Т.А. Гавриловой, и проверенный в многих предметных областях, в том числе в областях, связанных с управлением проектами (Gavrilova et al, 2010a; Gavrilova et al, 2014) и образованием (Гаврилова и др., 2011). Надо отметить, что построение онтологии – область динамическая, и для достижения результата, на основе которого можно делать выводы и умозаключения, распространяющиеся на всю предметную область и затрагивающие широкие ее аспекты, иногда требуется несколько итераций, что можно проследить и на примере работах по созданию онтологии понятия «проект» (Gavrilova et al, 2010a; Gavrilova et al, 2014) .

Используемый алгоритм построения онтологии состоит из нескольких шагов (Gavrilova et al, 2014). Построенный на знаниях из области переработки информации человеком, алгоритм содержит элементы анализа и синтеза информации. Кроме того, шаги алгоритма отражают уровни владения информацией индивидуумами. Стоит отметить простоту и прозрачность данного алгоритма.

По определению, приведенному в РМВоК, проект представляет временное предприятие для создания уникальных продуктов, услуг или результатов (РМВоК, 2012). Концепты предметной области для создания онтологии «проект» выбраны из глоссария управления проектами, представленного в приложении к РМВоК. Отношения между концептами определены на основе стандарта PMI и собственного опыта управления проектами.

Выбор концептов предметной области происходит на первом шаге примененного алгоритма построения онтологии. На первом шаге также выбираются понятия, ассоциируемые с определяемым понятием, для которого строится онтология. Затем на втором шаге последовательно подключаются понятия из словаря предметной области следующим образом: в первую очередь выбираются слова, ассоциирующие с выбранными на первом уровне концептами, затем на следующем уровне выбираются слова, наиболее ассоциирующие со словами на втором уровне концептов. Предполагается, что при этом не создаются горизонтальные связи и результатом является древовидная структура. Результатом выполнения второго шага алгоритма является плоский граф, представленный на рис. 1. Когда все понятия выбранного словаря предметной области включены в указанную структуру, переходим к третьему шагу выполнения алгоритма, на котором к работе подключается эксперт в области управления проектами. Эксперт производит анализ на предмет возможного склеивания узлов по горизонтали. То есть склеиваются узлы, находящиеся на вертикальных структурах, относящихся к разным концептам предметной области. При этом новый узел, получившийся в результате операции склеивания, может получить новое именование. В результате получается онтология, представленная на рис.2 и структурирующая предметную область, выделяя наиболее существенные ее концепты. Такая онтология уже достаточна как для обучения или передачи знаний по управлению проектом, так и для разработки базы данных информационной системы, создаваемой как инструмент менеджера проекта.



Рис. 1 Детализация первого уровня категоризации

Подключение эксперта в области управления знаниями на следующем шаге алгоритма позволяет внести в онтологию содержание, которое способствует наилучшей категоризации с точки зрения законов обработки информации и с точки зрения восприятия и категоризации предметной области. Соответствующая результирующая онтология представлена на рис. 3.

Обсуждая в результате построенную онтологию, мы можем выделить следующие категории или концепты, связанные с проектом: процессы, содержание, ресурсы и окружение (или среда). Выделенная категория «процессы» раскрывается через процессное управление и соответствующие методы и методологии. Например, в области разработки информационных систем и сервисов методологией с высокими требованиями к формализацией процессов управления проектов является SW-CMM, разработанная Engineering Software Institute (ESI), и ее развитие CMMI. Особое внимание к разработке продукта (категория «содержание» на созданной онтологии) уделяет методология PRINCE2, а ставку на команду проекта (или человеческие ресурсы) делает Agile. Среде проекта уделяется особое место в методологии Project and Program Management for Enterprise Innovation (P2M), применяемой для управления инновационными проектами. Перечисленное выше подчеркивает специфику указанных методологий и никак не отрицает, что все перечисленные категории учитываются всеми методологиями.

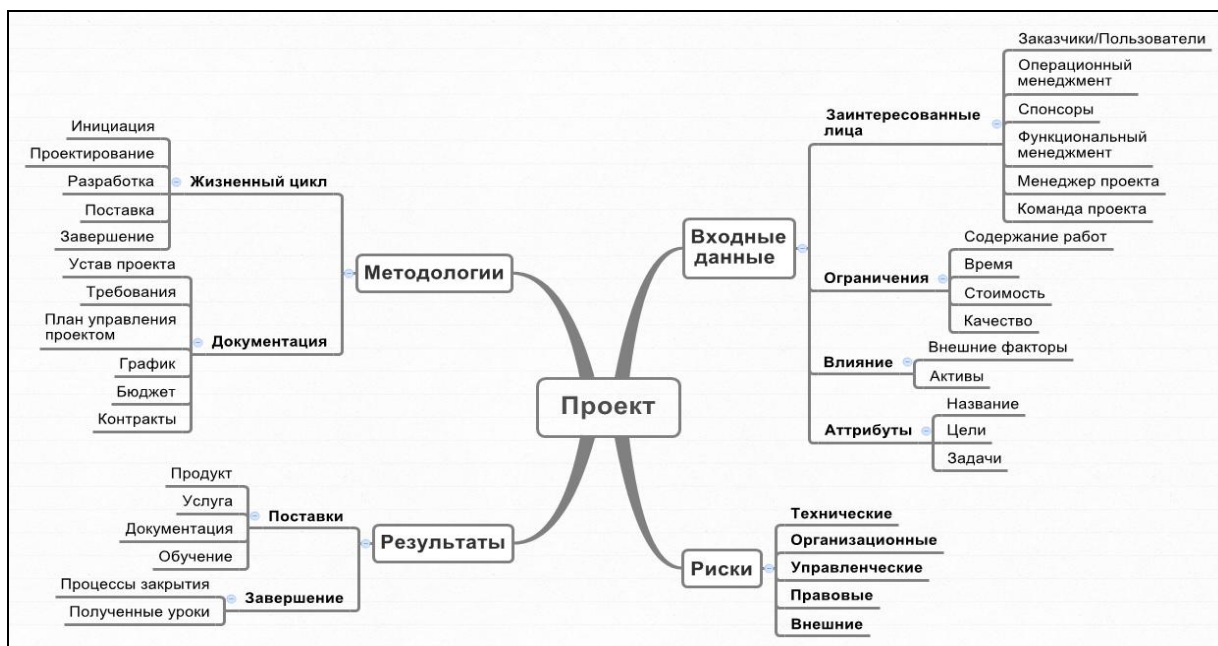


Рис.2 Общая онтология



Рис 3. Финальная онтология «проект»

Таким образом, анализ конкретного проекта с позиций оценивания его характеристик, определяемых выделенными концептами построенной выше онтологии, и определение сильных и слабых сторон проекта могут быть применены при принятии решения о выборе методологии управления проектом.

4. Заключение

Онтологии, созданные согласно описанному алгоритму, имеют личностную окраску и могут различаться в зависимости от знаний и опыта создателя конкретной онтологии. Такие онтологии успешно используются в обучении как инструмент структурирования, визуализации и передачи знаний. При изучении такой развивающейся предметной

области, как управление проектами, прозрачность алгоритма и легкость изменения онтологии являются положительной характеристикой для преподавателя, использующего эти инструменты.

Онтология проекта по стандарту PMI может быть использована при проектировании и создании баз данных информационно-технологических систем, например, обучающих сервисов порталов знаний управления проектами или баз знаний проектной организации, а также программных систем как инструментов управления проектами.

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Vitaly Cherenkov
Graduate School of Management, St. Petersburg State University
cherenkov@gsom.pu.ru

Marketing-Driven Addictive Consumer Behavior: Etiology and Treatment

(Countermarketing – Its Essentials and Tasks in the Consumer Society)

Abstract: The present paper has partly a retrospective nature that is predefined by needs to study the etiology of the phenomenon under consideration. It is shown that the main difference of the emergence of marketing as the key business function in Russia is its revolutionary but not evolutionary feature. Such abrupt emergence of marketing in Russia resulted in the explicit asymmetry (in Porter's terms) between bargaining power of suppliers and bargaining power of buyers – in favor of the first ones. Russian consumers have received the necessary immunity to neither aggressive advertising nor other tools of promotion.

The development of irrational and addictive consumer behavior in Russia is considered to be the most negative consequence for both individuals and society as a whole. The consumer addictions inspired/intensified by marketing activities are classified. The vicious circle model proving the inevitability for any culture to be degraded under impact of market forced is given. The counter marketing concept is considered as the foundation stone for government/public politics correcting the negative effects of “socially irresponsible marketing” enhancing the consumer behavior addictions. The “*similia similibus curantur*” principle gives the idea to apply the marketing toolkit for achieving rational consumptions and social corrections. Dissimilarities between demarcating and countermarketing are shown. Some data of case studies on applying the counter marketing politics on markets of smoking and computer games are presented.

One of outputs is the contradiction between the individual freedom and public/government intrusions/controls. Banning or devaluating the products that are the objects of addictive consumption – this dilemma is presented as one of items to be under consideration in Russia infected by diseases of contemporary society of consumption. The conclusion concerning necessary arrangements of future studying foreign experiences in the field of counter marketing applications is made. Besides, it is shown that the evidently interdisciplinary nature of the addictive consumption problem should be taken into account in composing appropriate research teams.

Keywords: *addictions, addiction product stakeholders, consumer behavior, countermarketing, demarketing, product devaluation, “vice” products*

АДДИКТИВНОЕ ПОВЕДЕНИЕ ПОТРЕБИТЕЛЕЙ ПОД ВОЗДЕЙСТВИЕМ МАРКЕТИНГА: ЭТИОЛОГИЯ И ЛЕЧЕНИЕ

(тезисы о сущности и задачах контрмаркетинга по коррекции аддиктивного поведения в обществе потребления)

В.И. Черенков

Институт «Высшая школа менеджмента», СПбГУ

1. Своеобразие текущего момента в России состоит в состоявшемся четверть века назад *революционном переходе* к капитализму, что не позволило российскому покупателю выработать «маркетинговый иммунитет» в отличие от западного покупателя (кстати, обретшего Закон о защите прав потребителя в США еще в 1961 г.), который *эволюционным путем* «зрел» вместе с корпорациями-продавцами по мере развития капитализма. Свидетельством тому, *в частности*, российские финансовые пирамиды (МММ, «Хопер», «Московская недвижимость» и иже с ними), а *в целом* – вся лихорадочно-скоропостижная программа российской приватизации. Таким образом, традиционная социо-культурная резистивность российского покупателя оказалась (в терминах М. Портера) в условиях *крайней асимметрии отношений* «власть продавца» – «власть покупателя»; разумеется, в пользу продавца, поскольку покупатель (воспитанный в наивной советской вере печатному слову и телевизионному кадру) прямо с туземным восторгом воспринял и первую – столь ненавидимую всеми сегодня – рекламу на телевидении (кто не помнит – *KitKat*) и, признаваемые сегодня даже в США нездоровыми такие товары как *CocaCola* и фаст-фуд *McDonalds*.
2. Маркетинговый инструментарий по управлению покупательским поведением создается и применяется (без поставленного еще в древнем Риме вопроса – *Cui produst?*) в полном соответствии с социально нейтральным определением маркетинга:
 - а. «Маркетинг - это процесс управления, включающий в себя определение, прогнозирование и удовлетворение запросов потребителей с получением прибыли» [Чартерный институт маркетинга, Великобритания]
 - б. Минимум два неудобных вопроса:
 - і. Каких запросов? – Здесь, сразу же, появляется весьма обширная группа товаров/услуг, которые находят в информационной и научной сфере – при оценке потребления и спроса на них – такие прилагательные как «нездоровые» (*unhealthy*), «порочные» (*vice*), «вредные» (*harmful*), «опасные» (*dangerous*) и т.д. Есть и научный медицинский термин аддиктивные (*unhealthy*) товары/услуги, в котором заложена самая опасная сторона этих товаров/услуг – *привыкаемость* (часто, стыдливо прячущаяся за хорошо известной в маркетинговом сообществе и активно искомой/создаваемой продавцами *лояльностью* товару/бренду)

Аддикция (*addiction*) – навязчивая потребность, ощущаемая человеком, подвигающая к определенной деятельности. Традиционно – табак, алкоголь, азартные игры, наркотики; в 21 веке – фаст-фуд, порнография, шопинг, проституция и т.д. наконец, Интернет-аддикция – навязчивое желание подключиться к Интернету и болезненная неспособность вовремя отключиться от Интернета (крайнее проявление – он-лайн игры).

Аддиктивное поведение – это одна из форм деструктивного поведения, выражающаяся в стремлении уйти от реальности, изменив свое психическое состояние посредством аддиктивного товара/услуги. Выделяют [Худяков, 2003] четыре критерия аддиктивного поведения: социальный, пси-

хологический, физиологический и клинический. Как раз здесь, заложена потребность именно в интердисциплинарных исследованиях (командах исследователей) теоретических и прикладных вопросов контрмаркетинга как инструментария коррекции аддиктивного поведения.

- ii. *Cui produst?* – На последнем ли месте, как в определении, стоит «получение прибыли»? – ответ можно искать в преданном забвению основном законе капитализма, но можно найти и в существующей в западных учебниках по международному маркетингу концепции «мегамаркетинга ТНК» [Terpstra, Sarathy, 1997; Черенков, 2003, с.525] – N.B.! не путать с мегамаркетингом по Котлеру [Kotler, 1986]? Где показано, что не имеющие равных в «силе продавца» ТНК не адаптируются под условия каждой национальной/региональной маркетинговой среды, а модифицируют эту среду посредством а) модификации покупательских предпочтений/поведения – методы интегрированной маркетинговой коммуникации; и б) модификации политико-правового поля – посредством лоббирования и, иногда – как бы странно это ни могло прозвучать – посредством программ корпоративной социальной ответственности.
3. В отношении академической общественности – а также российского государства и российского общества в целом – к аддиктивному потреблению и его социально-экономическим последствиям наблюдается неопределенность и двойственность.
 - a. С одной стороны, на уровне бытового сознания и общего понимания ценностей общества, аддиктивное потребление имеет явный, но преимущественно декларативно-публицистический негативный акцент.
 - b. С другой стороны, серьезных исследований в этой области в России не наблюдается (сравнение с откликами англофонных и русскоязычных доменов Интернета на корневые термины:
 - i. Демаркетинг/*demarketing* = 16500/17800 = 0,09%
 - ii. Контрмаркетинг/*countermarketing* – 1390/79300 = 1,7%

Демаркетинг — это разновидность маркетинга, направленная на временное или постоянное уменьшение спроса. Пример и цель применения таких мер. Например, компании производители электроэнергии нередко испытывают трудности в периоды пиковых нагрузок.

Демаркетинг -

www.grandars.ru/student/marketing/demarketing.html

Demarketing – Efforts aimed at discouraging (not destroying) the demand for a product which

- (1) a firm cannot supply in large-enough quantities, or
- (2) does not want to supply in a certain region where the high costs of distribution or promotion allow only a too little profit margin.

Common demarketing strategies include higher prices, scaled-down advertising, and product redesign.

Demarketing - <http://www.businessdictionary.com/definition/demarketing.html>

Демаркетинг – дефект, репутация, активность, изготовитель

(Интернет - Визуальный словарь)

Контр-маркетинг – деятельность государственных и общественных организаций по ограничению, подавлению нерационального спроса на некоторые товары и услуги (алкоголь, табак, наркотики).

N.B.!

Контр-маркетинг – это деятельность производителя, посредника, любого конкурента или общественности по дебрэндингованию своих конкурентов и их продукции, по снижению до нуля ее потребительской полезности и ценности, стоимости человеческого, организационного и потребительского капитала фирм, прекращению выпуска товаров, их изъятию из торговой сети.

Панкрухин А. (2008) Контр-маркетинг. Дебрэндинг и разрушение имиджа территории // Корпоративная имеджелогия - <http://www.ci-journal.ru/article/207/200803counter-marketing>

Контрмаркетинг – дискредитация, спрос, демаркетинг, общество, влияние
(Интернет - Визуальный словарь)

Counter marketing involves advertising techniques which try to reduce the demand of a product being used. Counter marketing typically uses negative messages to stop people from using a product.

Tobacco [“vice” product] counter-marketing is defined as the use of commercial marketing tactics to reduce the prevalence of [“vice” product] tobacco use.

Overview of Counter-Marketing Programs - http://www.cdc.gov/tobacco/stateandcommunity/counter_marketing/manual/pdfs/chapter1.pdf

4. Таким образом, на фоне понятной теоретико-концептуальной невнятности, заметной даже в приведенных выше самых популярных определениях, должно быть ясно, что хотя теоретически, в задачи **здорового общества** (в лице его общественных институтов и социально ответственных корпораций), когда оно сталкивается с вредоносным спросом (*unwholesome demand*) входит управленческая задача маркетера заняться демаркетингом и контрмаркетингом – решение этой задачи не столь повсеместно и не столь результативно, как этого могло бы хотеться.
5. В обществе отмечаются действия в рамках демаркетинга и контрмаркетинга и, соответствующее, **понимание различий** этих феноменов в контексте науки и практики социального маркетинга [Gundlach et al., 2010], а именно:
 - a. Под демаркетингом понимается сбой спроса вообще или части определенного класса потребителей, либо временный, либо на постоянной основе.
 - b. Контрмаркетинг считается более сильной стратегией, которая влечет полное аннулирование соответствующего спроса как в случае избавления от нежелательных покупателей (*в России, например, судебное преследование наркоманов, вовлекающих в наркопотребление иных лиц*), или же предупреждения осуществления определенных сделок (*в России, например, запрет на продажу табачных изделий и алкогольных товаров лицам до 18 лет*). Такие действия государства не всегда однозначно воспринимаются всеми членами общества. Однако, любому либеральному борцу, например, за права курильщиков можно было бы привести 40-летней давности слова Котлера: **«решение не продавать имеет столь же сильное социальное оправдание в условиях демократии, как и решение, продавать»**.
6. Проблема, стоящая в центре настоящего доклада интердисциплинарна уже по формулировке центрального вопроса – **аддиктивное потребление как функция и последствия корпоративной маркетинговой деятельности**. Поскольку маркетинг – в силу первичности и всеобщности категории обмена для всей жизнедеятельности – пронизывает все сферы общественной жизни: от прагматики институтов хозяйствующих до эзотерики институтов религиозных, то в инструментарии маркетинга следует искать и инструменты контрмаркетинга.
7. Признание факта, что в большинстве случаев государственные запретительные и

пенитенциарные меры оказываются не очень эффективными и, в значительном числе переводят аддиктивное поведение «в тень», а не снижают его, не говоря уже об уничтожении – например, горбачевская антиалкогольная компания – подталкивает исследования для решения этого вопроса в сторону **поиска мер по девальвации ценности аддитивных продуктов/услуг**.

8. Не усиление государственного диктата в сфере потребления, – возвращение к нему от принципов свободного рынка было бы шагом назад, — а усиление значения социально-позитивных движений, ревальвация традиционных ценностей (патриотизм, любовь, семья, религия, знания и т.п.) в рамках концепции здорового консерватизма [Путин ..., 2014] по всей стране, снизу доверху составляет идеологическую основу [не побоимся этого слова в контексте настоящего доклада, несмотря на Ст. 23 Конституции РФ] разработки и внедрения мероприятий контрмаркетинга социально и индивидуально вредных товаров/услуг.
9. Не должна вызывать сомнения необходимость тесной связи контрмаркетинга и таких сфер хозяйственной и общественной деятельности как социальный маркетинг, корпоративная ответственность и здравоохранение [Gundlach et al., 2010]. Однако, отмечаемый нами *интердисциплинарный* (если не *пандисциплинарный* в пространстве общественных наук) характер **феномена аддиктивного потребления** требует включения в исследовательскую деятельность – причем на равных правовых – медицинского сообщества, которому, несмотря на массу релевантных работ и призывов к профилактике, приходится заниматься скорее последствиями (например, алкоголики, наркоманы, маньяки, раковые и душевнобольные), чем превентивными мерами. Кстати, одна из моделей – так называемая, [Prochaska et. Al., 2008] **транстеоретическая модель** (ТТМ) изменения поведения (*transtheoretical model of behavior change*), позволяющая оценивать готовность индивидуумов к изменению своего поведения в сторону более здорового образа жизни (читай – ограничения/отказа от аддиктивного потребления), показывающая – при переходе от линейной модели (рис. 1) к циклической (рис. 2) – почти неизбежность рецидивов аддиктивного поведения личности без внешнего вмешательства как раз служит сильнейшим аргументом для вмешательства общества индивидуальное потребление, последствия которого имеют сильнейший отрицательный социальный эффект. Образ «вращающейся двери», подталкивающей аддикта, пытающегося вернуться к нормальной жизни, к рецидиву аддикции можно найти и в своеобразной – детализированной и хорошо и убедительно комментируемой – 10-фазной вербальной модели рецидива запоя [Мороз, Цыганков, 2015, с.89-113]. Вывод – без стороннего позитивного вмешательства рецидивы неизбежны (например, по истечении одного года ремиссия наблюдалась лишь у 9-12% прошедших курс лечения алкоголиков [Менделевич, 2003])

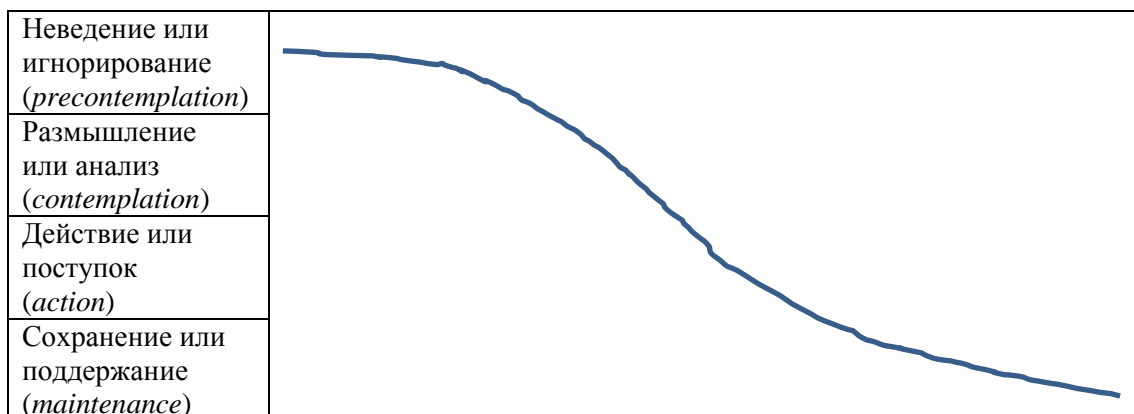


Рис. 1. Оценка поведения аддиктивного покупателя/потребителя в рамках линейной ТТМ-модели изменения поведения

10. Следует также сказать несколько слов о **стейкхолдерах аддикции** злонамеренных и незлонамеренных, без которых аддиктивное потребление не могло бы существовать:
- а. К *злонамеренным стейкхолдерам* следует отнести тех, кто получает *прямой выигрыш* от существования и развития аддиктивного потребления, причем разделить их следует на две подгруппы:
 - i. *легальные* – производители легальных аддиктивных товаров/услуг (алкогольная и табачная продукция, фаст-фуд, он-лайнные игры и т.п.)
 - ii. *нелегальные* – криминальные организации и их спонсоры («крыши» и лоббисты), получающие прямой или косвенный доход от наркоторговли, порнографии, проституции.
 - б. К *незлонамеренным стейкхолдерам*, чья выгода от аддиктивного потребления неоднозначна (кратковременный выигрыш от налоговых поступления надо сравнивать от долгосрочных проигрышей в терминах потерь человеческого капитала) следует отнести государство (например, бюджет пополняется как от акцизов на табак/алкоголь, так и от налогов на предпринимательскую деятельность при производстве аддиктивных товаров/услуг), а также (как бы это не показалось странным) специализированные (в первую очередь, частные) учреждения, благополучие которых определятся, в конечном итоге, наличием пациентов и их готовностью платить.

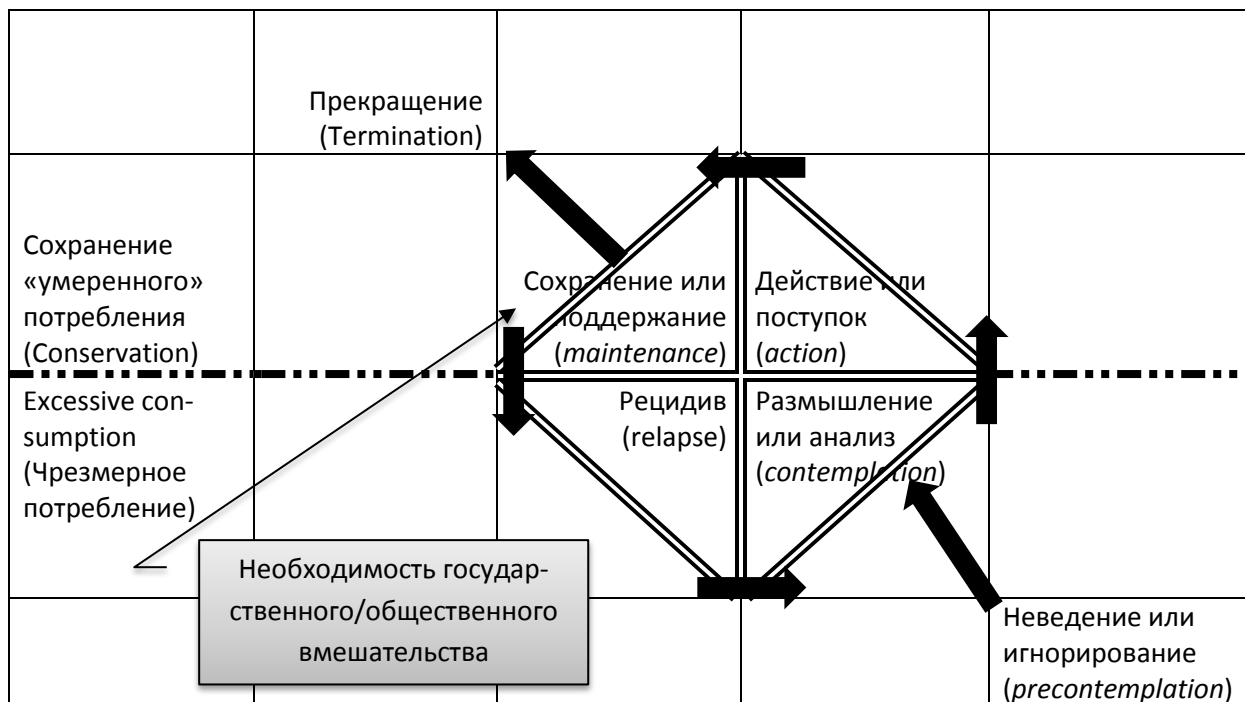


Рис. 2. Оценка поведения покупателя/потребителя в рамках циклической ТТМ-модели изменения поведения

В заключение автор хотел бы отметить, что рассматривает свое выступление не как результаты завершённой работы, а скорее как попытку обрисовать состояние дел и подчеркнуть остроту вопроса в современной России, где имеют место весьма противоречивые отношения в обществе к собственно упомянутым аддикциям и к последствиям аддиктивного потребления. Наконец, цель этого выступления – привлечь внимание к остро необходимому и **требующему срочного развития направления исследований** в области теоретического и практического маркетинга, затрагивающего жизненно важные стороны современного российского (да и не только российского) общества.

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**Чуракова И.Ю., старший преподаватель кафедры операционного менеджмента,
Институт «Высшая школа менеджмента» Санкт-Петербургского
Государственного университета
churakova@gsom.pu.ru**

**Серова Л.С., доцент кафедры операционного менеджмента
Институт «Высшая школа менеджмента» Санкт-Петербургского
Государственного университета
serovals@gsom.pu.ru**

Подходы к классификации методов экспертных оценок в управлении логистическими проектами на стадии инициации

Аннотация: Экспертные оценки в управлении проектами на этапе инициации играют важную роль, способствуя построению качественных прогнозов и решению слабо структурированных проблем, что позволяет решить задачи инициации наиболее продуктивно. В отечественной литературе существует множество подходов к классификации методов, применяющихся в экспертном оценивании, базирующихся на выделении существенного частного признака. Таким образом, методы сбора, обработки экспертных мнений, а также методы ранжирования с участием эксперта оказываются в одной категории, что не способствует их востребованности менеджерами проектов. Авторы предлагают функциональный подход к классификации экспертных методов, подразделяя их на классы в соответствии с задачами экспертизы на разных процессах стадии инициации.

Ключевые слова: *экспертные оценки, методы классификации, управление проектами, инициация*

1. Введение

В современных условиях особое место в управленческой деятельности занимает проектный подход. Деятельность многих компаний реализуется в форме проектов. В то же время бизнес сталкивается с резким повышением степени неопределенности внешней и внутренней среды, с увеличением количества и многообразия факторов, которые необходимо учесть в процессе принятия решений.

Любой проект, в том числе и логистический¹ в процессе его формирования и реализации, проходит различные фазы (стадии), называемые в совокупности жизненным циклом проекта. В таком процессе можно выделить ряд последовательных по времени фаз, различающихся по видам деятельности, обеспечивающих его осуществление: инициация (или концепция проекта), планирование, реализация проекта (или исполнение проекта), завершение проекта (окончание, ликвидация). Первой фазой жизненного цикла любого проекта является его инициация. На стадии инициации принимается решение о начале выполнения проекта.

Именно эффективные процессы инициации проекта минимум наполовину определяют его будущую успешность. По оценкам специалистов американского сайта *MyManagementGuide*, созданного для поддержки и распространения лучших практик в управлении проектами, до 65% проектов оканчиваются провалом именно из-за проблем, возникших на стадии инициации (McConnell). Недостаточное внимание этой стадии проекта неизбежно приводит к существенным проблемам при его планировании, реализации и завершении. Так как одной из отличительных особенностей логистических проектов является их высокая стоимость и необходимость увязывания интересов нескольких участников, основной целью экспертизы на стадии инициации является определение инвестиционной привлекательности и осуществимости проекта, а также детальный анализ рисков и разделение зон ответственности участников за результат (продукт) проекта. На рис.1 представлены четыре основные фазы стадии инициации, которые приводят к формальному началу нового проекта.



Рис.1 Процессы стадии инициации логистического проекта

После полного завершения стадии инициации и утверждения документа проект переходит на стадию планирования. Последовательно реализуемые процессы стадии инициации проекта довольно просты, но именно они вызывают у участников проекта и менеджеров проекта весьма существенные разногласия и сложности. Это происходит в

¹ См. доклад Серова, Чуракова «Применение экспертных оценок на стадии инициации процесса управления логистическими проектами».

силу того, что, во-первых, зачастую трудно предсказать на довольно длительный срок параметры внешней среды (наличие конкурентов, курсы валют и даже наличие на рынке отдельных услуг и материалов, необходимых для реализации проекта); во-вторых, инициация – единственная стадия проекта, практически не поддающаяся формализации и автоматизации. Внешняя и внутренняя неопределенность на последующих стадиях проекта неизбежно ведет к повышению рисков составляющей проекта. При этом традиционные методы управления рисками на этапе часто инициации не могут быть применены в силу отсутствия релевантных данных до начала проекта.

Именно поэтому стадия инициации представляется авторам наиболее перспективной нишей для использования эвристических методов, таких, как экспертные оценки.

2. Практические задачи организации экспертизы в управлении проектами

Экспертиза или экспертное оценивание представляет собой совокупность методов получения и обработки мнений экспертов таким образом, чтобы полученная информация могла служить основой для принятия решения или построения эвристического прогноза. Научный и практический интерес к экспертным оценкам переживал уже несколько подъемов и спадов, связанных в первую очередь с разработкой нового метода оценивания или ростом технической вооруженности специалистов, осуществляющих обработку результатов оценивания. Так в США пик популярности эвристических оценок пришелся на 60-е годы прошлого века, в связи с разработкой метода Дельфи. Экспертиза по новому алгоритму использовалась при принятии решений в военной сфере и бизнесе, политике и прогнозировании. В СССР подъем пришелся на 70 годы прошлого века в связи с развитием математической кибернетики и АСУ.

В настоящее время экспертное оценивание является признанным методом формирования базы для принятия квалифицированных управленческих решений, так как «...позволяет не только рассмотреть множество аспектов и факторов, но и объединить различные подходы, с помощью которых ученый, инженер, экономист, руководитель и математик находят наилучшее решение» (Спицнадель). Особенно эффективны экспертные оценки при решении ряда задач, связанных с новыми объектами оценивания, по которым еще отсутствует достоверная статистика, либо с новыми условиями существования объектов, например, в экстремальных или кризисных ситуациях (Пашкус), что особенно важно при инициации инновационных и высокотехнологичных проектов.

Экспертная оценка проекта дается на основе анализа научно-технического содержания проекта, квалификации управленческого потенциала авторского коллектива и рыночного спроса на продукт проекта. Применение экспертных оценок связано с рядом сложных дискуссионных вопросов, которые при распределении по стадиям подготовки экспертного мнения, трансформируются в практические задачи подготовки проекта, приведенные в схеме на Рис.2. Комбинирование различных характеристик способов получения экспертных мнений может производить множество вариантов экспертного оценивания на основании традиционных методов, что делает задачу их классификации актуальной и практически целесообразной для стадии инициации проектов.

В отечественных научных и практических работах ярко выделяются следующие проблемные зоны процедуры организации экспертного опроса: определение статуса эксперта и формирование экспертной базы для компаний, процедура организации

экспертизы, а также способ применения полученных экспертных мнений.

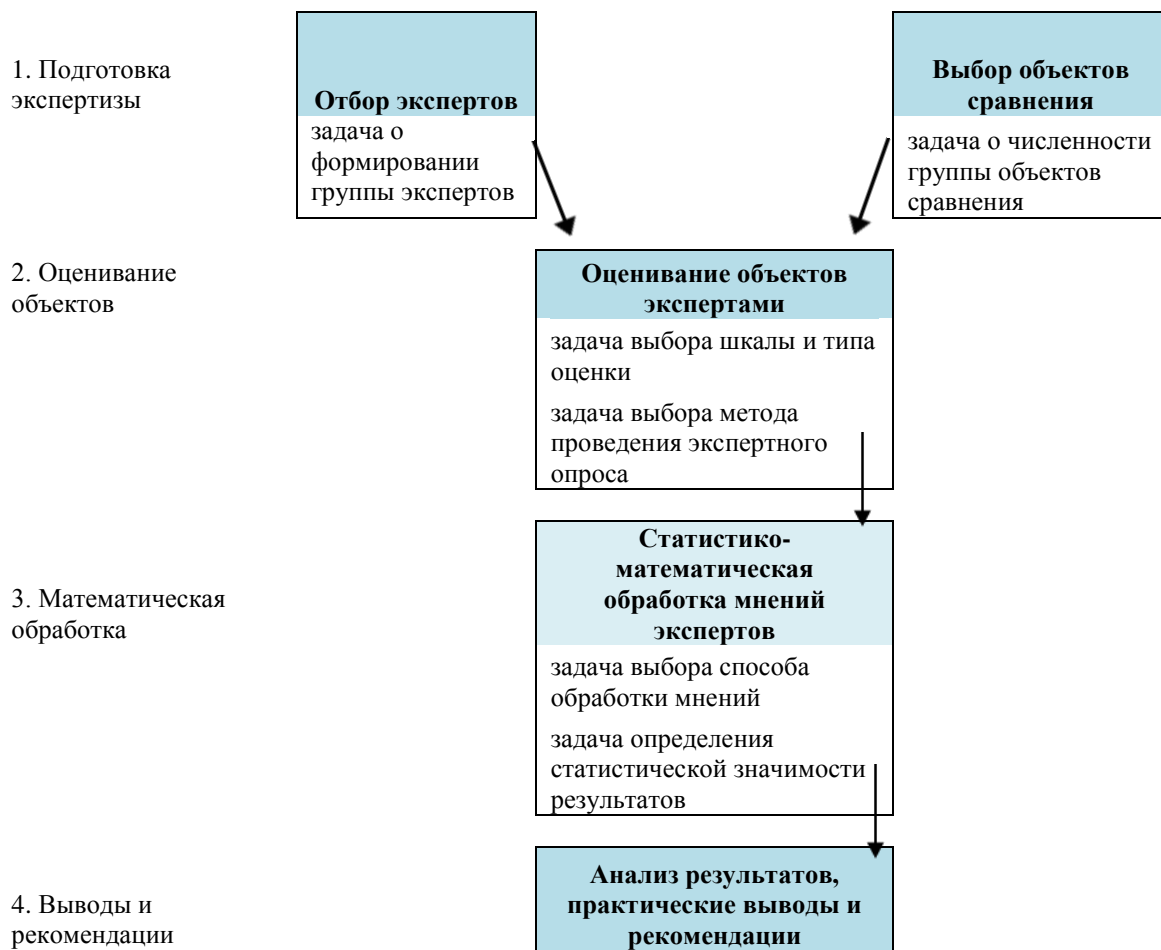


Рис.2. Алгоритм применения экспертной оценки на стадии инициации проекта

Экспертом принято называть специалиста, мнение которого учитывается при формировании суждений о выбранном объекте (объектах). С одной стороны, эксперты должны быть компетентными в своей области (предполагается также наличие опыта работы в оцениваемой области 9-10 лет), но, с другой, они должны обладать развитыми компетенциями и в смежных областях, чтобы суметь оценить объект со всех сторон. Одни авторы считают, что кроме высокой квалификации в своей области эксперт обязательно в той или иной степени должен быть наделен рядом специфических качеств, таких, как креативность, эвристичность, интуиция, предикаторность, независимость, всесторонность (Спицнадель), умение работать в составе экспертных комиссий (Литвак), научная любознательность, острота мышления (Ямпольский, Лисичкин). Другие авторы полагают, что эксперта, в равной степени наделенного всеми необходимыми качествами трудно найти, обычно некоторые качества проявляются сильнее, а другие – слабее, и разные задачи экспертного оценивания лучше решать экспертам разных типов. Например, экспертов можно разделить по наиболее ярко выраженным качествам на «генераторов идей», у которых преобладают эрудиция в различных областях знаний, широкий кругозор, нестандартность мышления, и «аккумуляторов опыта», сочетающих глубинные знания и опыт их практического применения (Блумберг, Глущенко).

Вопрос о численности экспертов в группе соотносится с их компетентностью и

степенью сложности объекта оценивания и решается в каждом конкретном случае. Численность группы не должна быть очень малой, так как в этом случае при взаимоисключающих мнениях экспертов получится не совокупная оценка, а известная всем ситуация с выбором предпочтительной траектории движения веза, описанная И.А. Крыловым в замечательной басне. В то же время при очень высокой численности экспертов снижается значимость мнения отдельного эксперта и качественный состав экспертной группы, что, разумеется, повлияет на снижение качества оценивания. Разработан ряд методик, позволяющих вычислить границы численности экспертной группы: через оценку влияния суждения одного эксперта на групповую оценку (Блюмберг, Глущенко); путем максимально возможного уменьшения численности экспертной группы при заданных значениях точности выборки (Ямпольский, Лисичкин).

3. Существующие классификации методов экспертных оценок в отечественной теории и практике

На сегодняшний день в литературе встречается довольно большое разнообразие вариантов классификации методов получения экспертных мнений, которые могут быть обобщены и сведены к списку основных существенных признаков:

1. По способу взаимодействия экспертов выделяют прямые методы, подразумевающие независимую работу каждого эксперта группы (также их называют методами получения индивидуального мнения членов экспертной группы), и методы с обратной связью, которые предусматривают открытое или закрытое взаимное ознакомление экспертов с мнениями друг друга (методами коллективной работы экспертной группы), (Сидельников, Блюмберг).
2. По отношению к процессу принятия решений экспертное оценивание делят на внутреннее и внешнее (Пашкус, Фисунов).
3. По способу сбора экспертных суждений выделяют очные и заочные экспертные оценки (Литвак).
4. По очередности применения экспертизы подразделяют на первичную и вторичную (Сидельников).
5. По направленности выделяют методы оценивания объектов и методы взаимной оценки компетентности эксперта (Лазарева).
6. По способу представления результатов экспертной оценки выделяют методы лингвистические, количественные и лингвико-количественные (Лазарева), тот же классификационный признак в ряде работ представлен в виде качественной и цифровой экспертизы (Байбурин).

Таким образом, каждый метод получения экспертного мнения может быть отнесен к одному или нескольким классам по каждому из признаков. Кроме того, часто исследователи относят к одному классу как методы получения экспертного мнения, так и методы обработки результатов экспертного опроса, не различая их особенностей. Именно это смешение и стало одним из ограничений экспертного метода, выраженного в неоднозначности результата экспертизы, отсутствие разработанной системы показателей, которые должны характеризовать успешность применения метода.

4. Построение схемы классификации методов получения экспертного мнения

Преодолеть указанное выше ограничение можно с помощью разделения методов сбора и обработки экспертных мнений на группы в зависимости от класса задач, решаемых с их помощью. По функциональному назначению можно выделить три

класса методов экспертных оценок, которые могут эффективно использоваться на фазе инициации (Рис.3):

- методы генерирования идей, способствующие возникновению идей и их развитию. Главной целью экспертизы становится разработка новых идей, поиск рационального зерна в самом невероятном варианте реализации проекта. Для оценки результатов экспертного опроса в этом классе целесообразно использовать характеристики количества и качества идей, появляющихся в ходе экспертизы, а также отвечающих условиям и ограничениям логистического проекта.
- методы обработки мнений экспертов, включающие как способы определения согласованности экспертных мнений и обеспечения консенсуса, так и процедуры, обеспечивающие быстрый и качественный отбор экспертов в группу, а также направленные на определение компетентности эксперта. Использование данного класса методов корректирует значимость оценки альтернативы в зависимости от степени компетентности эксперта. Эти методы дают возможность использования ранговых характеристик, применения параметрических и непараметрических статистико-математических методов.
- методы ранжирования альтернатив решений (или отдельных объектов) по существенным характеристикам. Именно эти методы обеспечивают сравнительную характеристику альтернатив в сопоставимом виде, уточняют или определяют их полезность для будущего проекта.

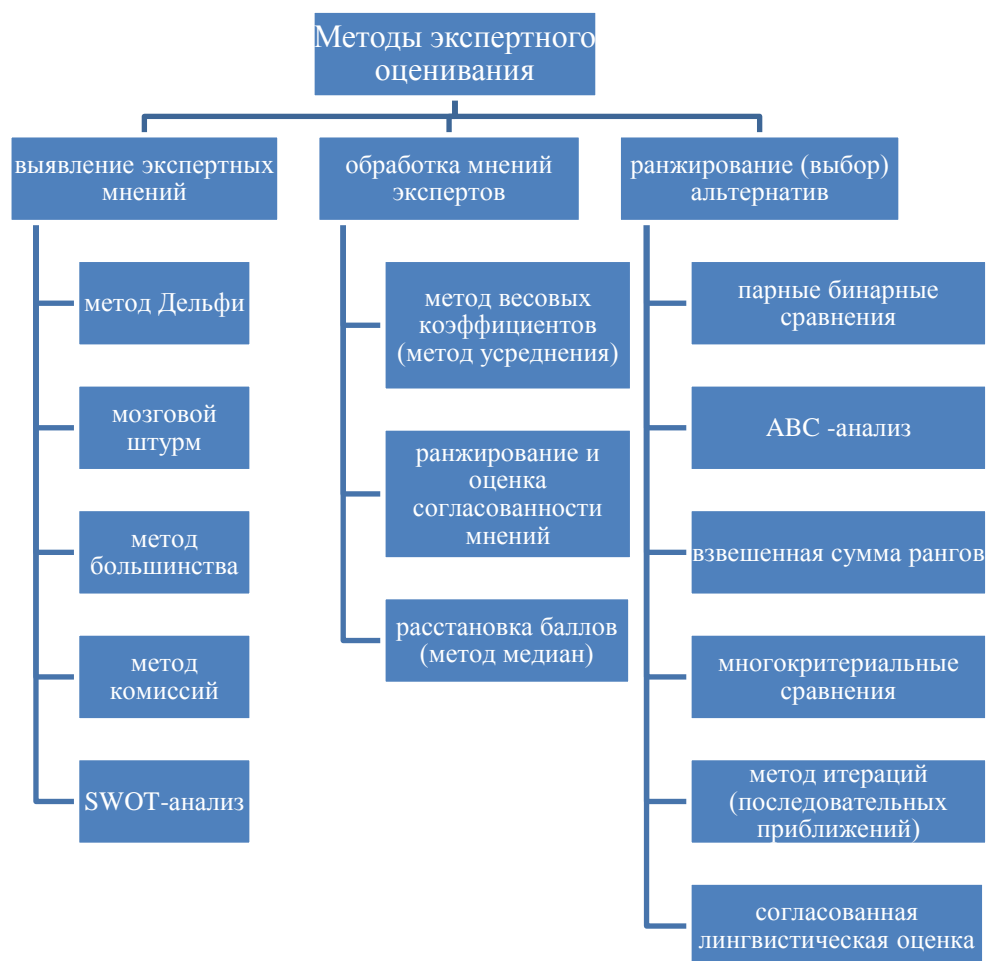


Рис.3 Классификация методов использования экспертных мнений

Разделение методов организации экспертного опроса на классы по функциональному назначению может быть полезно с практической точки зрения, а также является основой для дальнейших исследований и построения всесторонней классификации показателей, которая способна дать качественную, количественную и интегрированную оценку альтернатив логистического проекта на стадии инициации.

5. Выводы

Экспертные (эвристические) методы представляют собой последовательность процедур, основывающихся на мнениях специалистов (экспертов), и нацеленных на подготовку и (или) принятие решения. Они направлены на активизацию интуиции и опыта специалистов и используются при разрешении сложных слабоструктурированных и неструктурированных проблем на этапах разработки вариантов решений и выбора наилучшего решения, что особенно важно в управлении проектами на стадии их инициации.

Сегодня уже доказано, что экспертные оценки являются мощным инструментом менеджера, они могут и должны применяться вместе со статистическими и математическими методами, которые станут более результативными благодаря более точному определению характеристик объекта, а надежность выводов возрастет в результате компетентного усреднения мнений высококвалифицированных специалистов.

Предложенная вниманию читателя классификация экспертных процедур по функциональному назначению результатов и по способности решить задачу того или иного класса, разработана на основе отечественных публикаций для практического использования менеджерами проекта на этапе инициации. Кроме того, она может являться основой для дальнейших исследований в области проектного менеджмента и со временем превратиться в матрицу классификации методов выявления экспертных мнений, учитывающую не только класс решаемых с их помощью задач, но и сравнительную трудоемкость, а также иные важные параметры.

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М.Ю. Шерешева

д.э.н., профессор, Экономический факультет МГУ им. М.В. Ломоносова, директор
Research Center for Networked Economy
m.sheresheva@mail.ru

А.А. Костанян

магистр, Экономический факультет МГУ им. М.В. Ломоносова,
ani.kostanyan@yandex.ru

Повышение клиентоориентированности персонала государственных организаций здравоохранения (на примере Московской области)

Аннотация: в статье рассматриваются причины и способы повышения клиентоориентированности персонала государственных организаций здравоохранения. В новых правовых и экономических условиях функционирования отрасли, связанных с модернизацией системы ОМС, государственные медицинские организации должны взять курс на рыночное функционирование, использование инструментов маркетинга для привлечения и удержания пациентов, превращение персонала в одно из главных конкурентных преимуществ. Помимо этого, в рамках исследования проведен анализ кадрового потенциала отрасли (на примере Московской области), а также социологическое исследование по оценке качества медицинской помощи и показателей клиентоориентированности по мнению пациентов.

Ключевые слова: *сфера услуг, клиентоориентированность персонала, здравоохранение, медицинская услуга, воспринимаемая ценность услуги, экономика впечатлений.*

1. Актуальность и цель исследования

Приоритетное место среди человеческих потребностей занимает здоровье – основа существования человека. Во все времена здоровье являлось естественной, абсолютной и непреходящей ценностью, основой и условием жизни. Целью отрасли здравоохранения является сохранение и повышение уровня здоровья нации, именно поэтому здравоохранение занимает важное место в государственной политике любой современной страны.

В течение последнего десятилетия отечественное здравоохранение претерпевает существенные изменения. Основная тенденция реформирования системы государственного здравоохранения РФ состоит в движении к рыночному механизму взаимодействия экономических агентов индустрии здоровья (пациентов, медицинских организаций, страховых медицинских компаний), совершенствовании сервиса и формировании стратегии деятельности медицинской организации, исходя из потребностей пациентов. В таких условиях персонал становится одним из главных конкурентных преимуществ в борьбе за лояльность пациентов. Следовательно, повышение клиентоориентированности персонала является одной из актуальных проблем экономики здравоохранения.

Правовой и экономической основой обозначенных изменений является реформирование системы обязательного медицинского страхования (ОМС) как основного канала финансирования здравоохранения. На настоящий момент она регулируется ФЗ РФ от 29 ноября 2010 года №326 «Об обязательном медицинском страховании в РФ» [ФЗ РФ №326 от 29.11.2010], вступившим в силу 1 января 2011 года.

В новом законе есть два ключевых отличия, которые представляют особый интерес в рамках нашего исследования. Во-первых, пациент становится ключевой, центральной фигурой системы здравоохранения. Существенно расширяются возможности права выбора пациента – он вправе выбирать как страховую медицинскую организацию, так и само медицинское учреждение, а также конкретного врача. Во-вторых, наряду с государственными и муниципальными медицинскими организациями предоставлять медицинские услуги в рамках ОМС смогут также организации любой организационно-правовой формы, в том числе частные клиники и индивидуальные предприниматели.

Таким образом, изменения, которые привнес в систему здравоохранения № 326-ФЗ, а именно возможность выбора пациентом медицинской организации, возможность выбора конкретного врача, который будет оказывать ему медицинскую услугу, возможность участия частных медицинских организаций наряду с государственными и муниципальными организациями в оказании медицинской помощи в рамках ОМС привели к тому, что рынок медицинских услуг, который до сих пор полностью регулировался государственными методами, стал конкурентным и требует от государственных и муниципальных организаций здравоохранения совершенно иных моделей управления, присущих функционированию в рамках жесткой конкуренции, включающих в себя активное использование инструментов маркетинга и, в первую очередь, повышение клиентоориентированности персонала.

В связи с этим **целью исследования** является разработка предложений по стимулированию клиентоориентированности медицинского персонала в российском здравоохранении.

В ходе проведенного исследования были использованы следующие методы исследования: системный подход, метод анализа и сопоставлений, статистический анализ, ретроспективный исторический анализ, социологический и метод экспертных оценок.

2. Ретроспективный анализ развития концепции клиентоориентированности

Первым этапом исследования стало проведение ретроспективного анализа развития маркетинга в здравоохранении, а также проблемы клиентоориентированности персонала в современной теории маркетинга услуг на основе синтеза концепций воспринимаемой ценности и экономики впечатлений. Совместив этапы развития указанных концепций, мы получили следующую хронологию (см. Приложение 1):

- Этапы развития маркетинга в здравоохранении в своей логической и хронологической последовательности соотносятся с этапами развития концепций маркетинга, относящихся к обслуживанию в сфере услуг и к особому выстраиванию отношений с потребителем услуг (речь идет о концепции воспринимаемой потребителем ценности услуги и о направлении «экономика впечатлений»).
- Если на начальном этапе развития маркетинга в здравоохранении, когда из всех возможных инструментов использовались только PR компании (в силу существующих законодательных ограничений в рекламе), пациенту как главному потребителю медицинских услуг не уделялось должного внимания, то, начиная с 1980-х годов, когда именно пациент и его потребности становятся главной отправной точкой при формировании предложения медицинских услуг и при моделировании методов их предоставления, начинается развитие концепции воспринимаемой ценности. То есть момент становления пациента ключевой фигурой в отрасли здравоохранения совпадает с общемировым стартом развития маркетинговых концепций в сфере услуг, исследующих способы повышения ценности услуги для ее потребителя, повышение клиентоориентированности поставщиков услуги, а также повышения лояльности потребителя (пациента).
- Концепция воспринимаемой ценности переросла в абсолютно новое направление в маркетинге «experience economy», где акцент ставится не только на качество самой услуги, не только на квалификацию и навыки поставщика услуги, но и на впечатление, которое получает потребитель услуги.
- Кроме того, можно провести параллели и в стратегии работы с медицинским персоналом. В 1970-е годы в здравоохранении начинают внедряться программы лояльности персонала, что говорит о ключевой роли врача как поставщика медицинских услуг, встает вопрос о необходимости повышения клиентоориентированности персонала как главного конкурентного преимущества медицинской организации. Именно в эти годы в мировой практике управления начинают появляться концепции KPI, определяющие для персонала стандарты выполнения работ и оказания услуг, в числе которых начинают появляться показатели клиентоориентированности.

3. Характеристика кадрового потенциала российского здравоохранения (на примере Московской области)

Чтобы составить представление о кадровом потенциале российского здравоохранения, как об основном объекте модернизации, мы провели анализ текущих количественных и качественных характеристик трудового потенциала здравоохранения (на примере Московской области).

В ходе исследования были выдвинуты 4 рабочих гипотезы, проверка которых показала, что количественные нормативы трудовых ресурсов здравоохранения Московской области не выполнены по государственным и муниципальным организациям здравоохранения и перевыполнены по организациям с частным и другим инвестированием. При этом, заработная плата работников здравоохранения

Московской области основывается не на затратах, а на результатах труда, в отрасль вводится понятие эффективного контракта, который повышает экономическую мотивацию работников и устанавливает зависимость между достижением целевых показателей и уровнем заработной платы.

Абсолютные значения заработной платы работников здравоохранения Московской области в 1,5-2 раза выше значений в целом по России. Кроме этого, система непрерывного образования медицинских работников, которая включает в себя подготовку кадров, а также последипломное и дополнительное образование, является более продолжительной, чем система образования в других сферах профессиональной деятельности.

Статистические данные о квалификации медицинского персонала говорят о высоком уровне его подготовки, но из-за просчетов в распределении персонала наблюдается ситуация искусственного дефицита на рынке труда здравоохранения, которая находит отражение в том, что трудовые ресурсы готовятся не в соответствии с рабочими местами и потребностями населения в различных клинических специалистах. И, наконец, первостепенной является проблема работы по совместительству – специфика рынка труда здравоохранения. Коэффициент совместительства в Московской области составляет 1,5, что, на наш взгляд снижает качество медицинской помощи и ухудшает показатели клиентоориентированности.

4. Результаты исследования клиентоориентированности медицинского персонала и пути ее повышения в муниципальных организациях здравоохранения Московской области

Для оценки качества работы медицинских организаций, а также для оценки клиентоориентированности медицинского персонала мы взяли за основу Приказ от 31 октября 2013 года № 810а «Об организации работы по формированию независимой системы оценки качества работы государственных (муниципальных) учреждений, оказывающих услуги в сфере здравоохранения».

Приказ содержит методические рекомендации по проведению независимой оценки качества работы государственных и муниципальных организаций здравоохранения, перечни показателей качества работы медицинских организаций в стационарных и в амбулаторно-поликлинических условиях, а также образцы анкет по анализу удовлетворенности пациента качеством предоставления медицинских услуг в стационарных и амбулаторно-поликлинических условиях. На основании указанных в методических рекомендациях показателей и с помощью опросных анкет Министерством здравоохранения будут составлены независимые рейтинги медицинских организаций с целью обеспечения потребителей услуг здравоохранения дополнительной информацией о деятельности медицинской организации.

Мы проанализировали приведенные в методических рекомендациях показатели оценки качества работы медицинской организации с точки зрения необходимости и достаточности формулировки показателя, его объективности, степени сложности сбора информации для оценки показателя, корректности применения единицы измерения и шкалы измерения показателя и т.д. В конечном итоге мы значительно преобразовали систему показателей, а также с помощью привлечения экспертов отрасли разработали систему оценки этих показателей. С учетом новой системы показателей нами была преобразована предложенная в Приказе анкета по оценке качества медицинской помощи.

С помощью скорректированных нами показателей оценки качества работы организации, а также на основе усовершенствованной анкеты для опроса пациентов мы провели выборочные исследования в 3 муниципальных организациях здравоохранения Московской области и проранжировали их в соответствии с полученными результатами (для ограничения рамок работы исследование будет проведено только для амбулаторно-поликлинических организаций здравоохранения Московской области). В

ходе расчета итоговых интегральных показателей мы выстроили предложения по корректировке системы показателей клиентоориентированности медицинского персонала.

В исследовании участвовали следующие амбулаторно-поликлинические медицинские организации Московской области:

- 1) Муниципальное учреждение здравоохранения «Клинская городская больница» Поликлиника №3 (Клинский муниципальный район);
- 2) Муниципальное бюджетное учреждение здравоохранения «Городская поликлиника №2» (Мытищинский муниципальный район);
- 3) Муниципальное учреждение здравоохранения «Ногинская центральная районная больница» Поликлиника №2 (Ногинский муниципальный район).

При определении категории респондентов мы остановили свой выбор на получающих медицинскую помощь лицах старше 55 лет. Объем выборки для исследования составляет 300 респондентов - в каждой выбранной медицинской организации опрошено 100 человек (ошибка выборки равна 5,66%). Анкетирование проводилось в период с ноября 2014 года по март 2015 года.

По итогам анкетирования и анализа результатов с помощью разработанной системы оценки показателей мы рассчитали интегральный показатель для каждой организации, который позволил нам составить рейтинг трех выбранных медицинских организаций. Для расчета интегрального индекса качества использовалась следующая формула:

$$Inx_{\text{суб}} = \sum_{i=1}^n W_i * k_i^{10}, \text{ где}$$

k_i^{10} – значение показателя k_i по 10-ти балльной шкале;

w_i – значение весового коэффициента показателя k_i , при этом сумма всех весовых коэффициентов равна 1.

В соответствии с рассчитанными интегральными показателями лучшей поликлиникой является поликлиника №2 г. Мытищи (8,03), далее следует поликлиника №2 г. Ногинска (7,15), замыкает тройку поликлиника №3 г. Клина (6,45) (см. Приложение 2).

Детальный анализ всех показателей позволяет сделать вывод о том, что несмотря на то, что в Поликлинике №3 города Клин очень высокие показатели, связанные с оценкой клиентоориентированности врачей и среднего медицинского персонала, с оценкой доступности записи на прием и возможности записаться на прием при первом обращении в медицинскую организацию, несмотря на благоустроенную территорию поликлиники, ее удобное расположение пациенты не довольны качеством оказания медицинской помощи, не довольны результатами лечения, долго ждут результатов диагностики. Вследствие этого, лишь 19% опрошенных ответили, что их ожидания превзойдены, а 29% заявили, что они полностью не удовлетворены оказанной медицинской помощью.

В поликлиниках Мытищ и Ногинска наблюдается противоположная ситуация: хотя пациенты и невысоко оценивают социальные навыки медицинского персонала, указывают на недостатки условий в поликлинике, на достаточно длительный период ожидания приема врача, но они довольны результатами оказанной медицинской помощи (в Мытищах и в Ногинске не довольны результатами только 11 и 14 человек соответственно), а в Мытищах 46% опрошенных заявили, что их ожидания от оказания медицинской помощи были превзойдены, для районной поликлиники такой показатель является большим достижением.

Итак, проведенный анализ позволяет утверждать, что отрасль здравоохранения – это та сфера, в которой одна лишь клиентоориентированность персонала не сможет

стать ключом к успеху в современных условиях функционирования отрасли. Конкурентным преимуществом в борьбе за пациента является опыт и квалификация персонала, его способность оказывать качественную медицинскую помощь, соответствующую структуре потребностей населения. Благоустройство прилегающих территорий, создание комфортных условий для пациентов и способность персонала превосходить все потребности пациентов могут стать значимым подспорьем при реализации стратегии привлечения пациентов.

5. Выводы и рекомендации

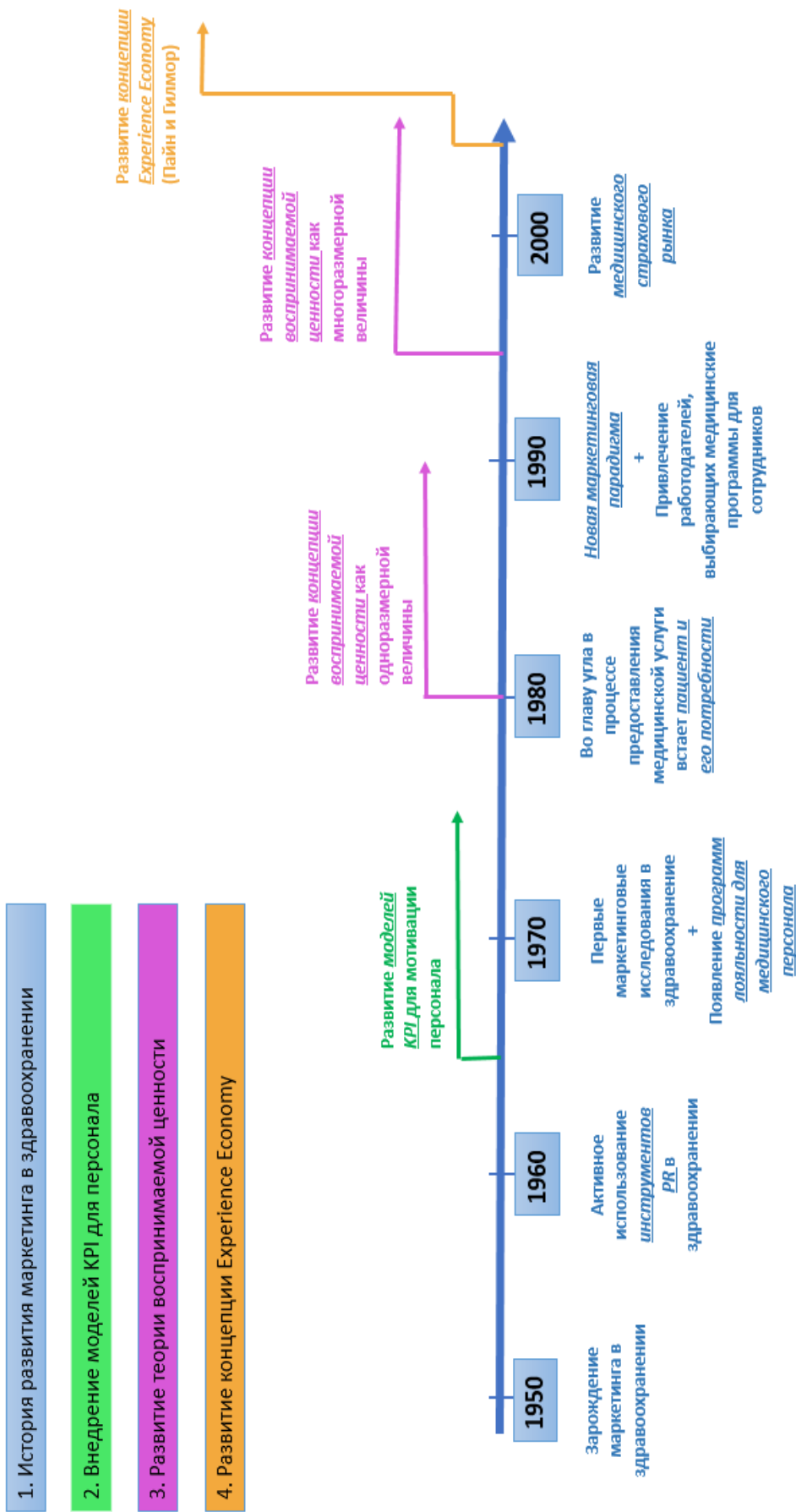
По итогам анализа можно сделать некоторые рекомендации по повышению клиентоориентированности медицинского персонала в российском здравоохранении. В отношении персонала необходимо привести в соответствие численность и структуру медицинских кадров объемам деятельности, задачам и потребностям практического здравоохранения, чтобы избежать ситуации искусственного дефицита. Помимо этого, необходимо разработать научно обоснованные методы планирования численности медицинского персонала. Кроме того, на наш взгляд, целесообразно включить показатели клиентоориентированности как в общую систему контроля качества медицинской помощи, так и в факторы, формирующие целевые показатели для эффективного контракта. Так, по результатам проведенного анкетирования и выяснения мнения пациентов в качестве индивидуальных показателей возможно введение следующих: пунктуальность соблюдения графика (необходимо учитывать как своевременный приход на работу, так и соблюдение графика приема пациентов для исключения образования «живых» очередей при существовании системы записи на прием с указанием времени) и коммуникативные навыки персонала, включающие в себя вежливость, доброжелательность, выслушивание жалоб пациентов, выявление динамики в состоянии здоровья пациентов, детальное объяснение лечения и т.д. (единицей измерения для этого показателя может служить соотношение жалоб и благодарностей, для этого необходимо подготовить техническую сторону вопроса).

Что касается самой медицинской организации, то, на наш взгляд, необходимы следующие усовершенствования. Во-первых, это улучшение условий, созданных для пациентов – благоустройство территории, транспортная доступность, формирование условий для немобильных групп граждан, комфортные условия ожидания приема, чистота и свежесть помещений и т.д. Во-вторых, повышение качества и полноты доступной на сайте информации для пациентов – включение данных о персонале, его образовании и квалификации, информации о правах и возможностях пациента в системе ОМС, а также о бесплатном лекарственном и других обеспечениях. И, в-третьих, в ходе анкетирования многие пациенты отмечали, что проведение профилактических мероприятий положительно скажется на имидже медицинской организации – возможно проведение «дней здоровья» по разным направлениям, просветительских акций о пользе здорового образа жизни и др.

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Приложение 1. Сводный хронологический анализ этапов развития маркетинга в здравоохранении, моделей КРМ для персонала, теории воспринимаемой ценности и концепции Experience Economy.

Источник: составлено автором на основе обзора литературы.

Приложение 2.

Результаты оценки качества медицинской помощи и показателей клиентоориентированности персонала трех амбулаторно-поликлинических организаций Московской области

Показатель	Клин			Мытищи			Ногинск		
	Исходное значение, k_i	Оценка по 10-ти балльной шкале, k_i^{10}	Итого оценка, $w_i * k_i^{10}$	Исходное значение, k_i	Оценка по 10-ти балльной шкале, k_i^{10}	Итого оценка, $w_i * k_i^{10}$	Исходное значение, k_i	Оценка по 10-ти балльной шкале, k_i^{10}	Итого оценка, $w_i * k_i^{10}$
k1	95	9,5	0,67	93	9,3	0,65	91	9,1	0,64
k2	6	6	0,60	4	8	0,80	7	6	0,60
k3	3,5	8	0,64	2,75	6	0,48	2,15	4	0,32
k4	20	8	0,64	10	10	0,80	25	8	0,64
k5	0,8	8	0,64	0,8	8	0,64	0,8	8	0,64
k6	1	10	0,90	1	10	0,90	1	10	0,90
k7	10	6	0,48	16	2	0,16	15	4	0,32
k8	8	6	0,48	2	10	0,80	5	8	0,64
k9	0	0	-	1	10	1,00	1	10	1,00
k10	68	6,8	0,48	83	8,3	0,58	74	7,4	0,52
k11	3	6	0,48	2,5	4	0,32	2,75	6	0,48
k12	0,5	5	0,45	1	10	0,90	0,5	5	0,45
Итого	1		6,45			8,03			7,15

Показатель	Наименование	Показатель	Наименование
k1	Запись на прием при первом обращении	k7	Число дней ожидания плановой госпитализации
k2	Число дней ожидания приема	k8	Число дней ожидания результатов диагностики
k3	Доступность записи на прием	k9	Удовлетворенность результатом оказанной помощи
k4	Время ожидания приема в очереди	k10	Готовность рекомендовать медицинскую организацию
k5	Условия ожидания приема	k11	Оценка клиентоориентированности персонала
k6	Оказание помощи на дому	k12	Превзойдены ли ожидания пациента

Источник: составлено автором по итогам проведенного анкетирования

Яковлев А.А.

Национальный исследовательский университет «Высшая школа экономики»,
Институт анализа предприятий и рынков
ayakovlev@hse.ru

Игнатьева А.Ю.

Национальный исследовательский университет «Высшая школа экономики»,
Институт анализа предприятий и рынков
nastya.ignatieva@gmail.com

Ткаченко А.В.

Национальный исследовательский университет «Высшая школа экономики»,
Факультет экономических наук
tkachenko_av@hse.ru

Добросовестность повторяющихся закупок: эмпирический анализ

Аннотация: Работа посвящена анализу факторов, определяющих различия цен государственных контрактов, на примере рынка автомобильного топлива. Данный выбор рассматриваемого товара обуславливается тем, что, во-первых, товар является простым и однородным, то есть относится к классу инспекционных благ («search goods»), проверка качества которых не сопряжена со значительными издержками для заказчика, и, во-вторых, является социально важным товаром, в связи с чем проводится еженедельный мониторинг розничных цен на топливо, как на уровне страны, так и в региональном разрезе, что позволяет делать выводы относительно эффективности ценообразования. Работа предполагает более детальное рассмотрение феномена повторных закупок, представленного в работе Яковлева и др.(2014), в частности, проверено выполнение выявленных ранее взаимосвязей на большем массиве данных (248980 наблюдений), оценено влияние новых факторов, к примеру, нового законодательства, 44-ФЗ, вступившего в силу 1 января 2014.

Ключевые слова: *государственные закупки, бензин, коррупция, повторяющиеся контракты.*

Введение

Одной из первоочередных задач государственной политики является обеспечение эффективного регулирования государственных закупок, в качестве индикатора которого может выступать итоговая цена контракта. Однако множество проведенных исследований свидетельствуют о наличии системных проблем функционирования существующих механизмов. Действующий с 2006 по 2013 год 94 - ФЗ, регулирующий процедуру государственных закупок во всех регионах РФ, был разработан с целью нивелирования коррупционных стимулов агентов, повышения прозрачности, а также обеспечения единой системы, однако он не дал ожидаемых результатов. Так, о наличии коррупционных сговоров может свидетельствовать превышение цен по государственным контрактам над розничными ценами. Не однозначен и эффект стимулирования заказчиков проводить закупки посредством открытых аукционов, так как увеличение прозрачности способствует как увеличению конкуренции, так и повышению вероятности сговора, что особенно характерно для олигополистических рынков, где имеет место несколько крупных игроков, что, в свою очередь, справедливо для российского рынка автомобильного топлива. Так, в большинстве регионов существует одна компания, занимающая свыше 35% рыночной доли, в то время как, 30 регионах доля крупнейшей компании достигает 50% – 60% Бальсевич, Подколзина (2013). А более 92% бензина, произведенного за первые 2 месяца 2015 года, приходится на 6 крупнейших российских компаний. Более того, процедура проведения открытых аукционов не позволяет заказчику учитывать характеристики поставщика: отбор производится главным образом, в зависимости от ценового предложения, что, несомненно, усиливает проблему неблагоприятного отбора. В то же время, общая стоимость государственных контрактов составляет значительную часть расходов любого регионального бюджета, приблизительно 30% - 40%, что также подчеркивает актуальность выбранной проблематики.

Стоит также отметить, что в работе внимание акцентировано на повторяющиеся контракты, более точно, на разницу контрактных цен при повторном взаимодействии и при разовой сделке. Исходя из экономической теории, доверие, как результат повторяющихся контрактов, должно способствовать снижению транзакционных издержек, развитию обмена информацией, уменьшению влияния неопределенности будущей конъюнктуры и неполноты контрактов на время переговоров, а значит, должно снижать цену простых, однородных товаров, к которым относится и бензин. Однако на практике это зачастую не так. Таким образом, цена повторяющихся государственных закупок может рассматриваться как сигнал того, что агенты действуют оппортунистически: со стороны заказчика возможно сознательное манипулирование условиями заказа, с целью получения контракта <<нужной>> фирмой, в то время как поставщики могут заключать сговор.

Работа направлена на выявление факторов, определяющих различия контрактных цен. На первом этапе предлагается оценить, имеют ли место закономерности, выявленные в работе Яковлев и др.(2014) для контрактов в 2011 году, на большем массиве данных относительно контрактов, заключенных в период с 2011 по март 2015 года. Данный временной интервал также позволяет оценить, произошли ли какие - либо изменения с вступлением в силу 1 января 2014 года нового федерального закона << О контрактной системе в сфере закупок товаров, работ, услуг для обеспечения государственных и муниципальных нужд >> (44 - ФЗ), однако предполагается, что эффект, если он и будет выявлен, будет слабым, так как требуется много времени для трансформации существующей системы и создания

многоуровневого механизма мониторинга в соответствии с 44 - ФЗ. Также выборка не ограничивается бензином АИ - 92, принимаются во внимание все разновидности автомобильного топлива, учитываются и другие характеристики контрактов, к примеру, является ли контракт сложным, когда бензин - только один из нескольких закупаемых продуктов, или простым, то есть производится закупка только данного вида автомобильного топлива.

Таким образом, объект данного исследования контрактные цены на автомобильное топливо при государственных закупках в России в 2011 - 2015(март) годах. Предмет исследования - факторы, влияющие на ценообразование бензина в России.

Анализ данных

Используемые в работе данные были получены посредством парсинга сайта www.zakupki.gov.ru, который представляет собой Единый реестр государственных и муниципальных заказов, так, согласно существующему законодательству информация о всех совершаемых государственных закупках должна быть размещена на данном электронном ресурсе. Таким образом, был получен массив данных, состоящий из 369137 наблюдений относительно 98 переменных, 264045 наблюдения соответствуют контрактам, заключенным в течение 2011 - 2013 годов, когда процесс закупок регулировался 94 - ФЗ, оставшиеся 105092 - контрактам, подписанным в период с 2014 по март 2015 года, то есть при новом законодательстве (44 - ФЗ). Еженедельные цены одного литра бензина, как на уровне всей страны, так и в региональном разрезе, были получены из базы данных Росстата, а именно, единой межведомственной информационно – статистической системы (ЕМИСС).

Интересный момент, обнаруженный на данной этапе – разброс контрактных цен 1 литра бензина, так, показатель варьировался от -1141480 до $5.03 \cdot 10^8$, в связи с чем первоначально выборка была ограничена интервалом (0,60), где было сосредоточено большинство наблюдений, распределение которых отчетливо напоминает гауссиану (рисунок 1). Однако стоит заметить, что цены, превышающие порог в 60 рублей, сложно назвать выбросами, что и выявил последующий графический анализ (рисунки 2 - 3). Таким образом, можно сделать вывод, что распределение контрактных цен на бензин имеет очень <<длинные>> хвосты, и, возможно, именно их следует принимать во внимание в аспекте анализа коррупции, а не сделки, совершаемые в приемлемом ценовом диапазоне. В таком случае, открытым остается вопрос, насколько достоверна информация, предоставляемая единым реестром государственных и муниципальных заказов?

После введения ограничения на цену бензина исходная выборка сократилась до 248980 наблюдений.

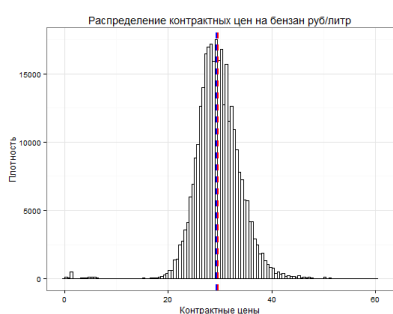


Рисунок 1

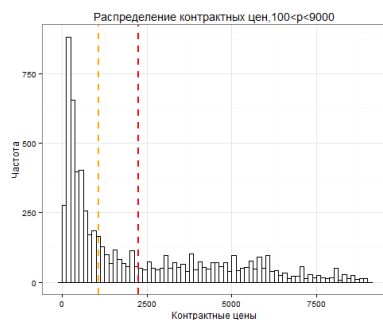


Рисунок 2

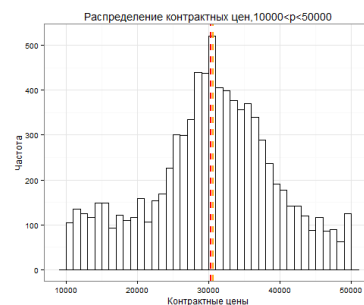


Рисунок 3

Основная сложность анализа повторяющихся взаимодействий заключается в отсутствии четкой детерминированности данного понятия. Поэтому остается неясным, что именно считать повторяющимся контрактом. Так, в работе Яковлев и др (2014), контракт считался повторяющимся, если агенты до этого момента совершали как минимум 2 сделки, то есть заключаемый контракт был для них как минимум 3, это обуславливалось тем, что вторичное взаимодействие может носить скорее случайный характер. Однако в данной работе рассматривался только 2011 год, и остается не ясно, насколько данный подход релевантен по отношению к более длинному временному интервалу. В связи с этим, было решено использовать два различных способа подсчета переменной, показывающей, является ли контракт повторяющимся или нет. Первый - аналогичный способу, применяемому в вышеупомянутой работе, для каждой пары агентов было подсчитано количество их взаимодействий для каждого года, после чего рассчитывалась среднее по годам, если среднее оказывалось 3 и более, то при заключении 3 сделки, данный и последующие контракты считались повторяющимися; второй подход принимает во внимание распределение числа прошлых взаимодействий и использует квантиль, как индикатор. На рисунке 4, видно, что большинство агентов в прошлом имело 1 или 2 взаимодействия, или же не заключали сделки и вовсе. Чтобы оценить, на сколько «тяжелые хвосты» имеет данное распределение, был проведен графический анализ: всем значениям, превышающим 10, присваивалось 10, однако на рисунке 5 это можно заметить лишь по тому факту, что средняя величина (красная линия) немного сместилась к нулю. Поэтому было решено, что для отсеечения повторяющихся контрактов, будет достаточно взять квантиль для вероятности 0.66, которая оказалась приблизительно равна 1. Таким образом, если агенты имели в прошлом хотя бы 1 взаимодействие, контракт считался повторяющимся.

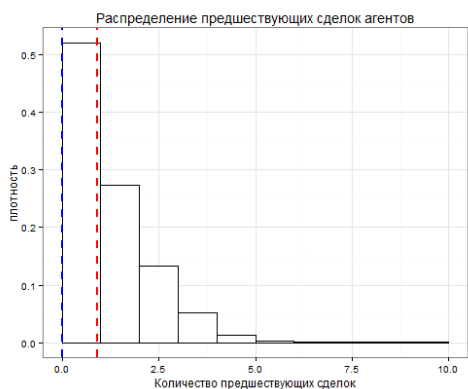


Рисунок 4

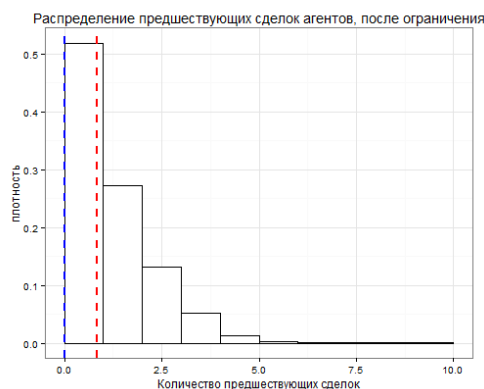


Рисунок 5

Эконометрический анализ

Первая часть работы была направлена на проведение сравнительного анализа результатов, полученных в статье Яковлев и др. (2014), когда исследовались контракты, заключенные только по 92 бензину в 2011 году, и результатов, полученных в данной работе. Были оценены две следующие модели:

$$y_{1i} = \beta_0 + \beta_1 \ln(\text{sum}_i) + \beta_2 \text{part_amont}_i + \beta_3 (\text{part_amont}_i)^2 + \beta_4 \text{interval_d}_i + \beta_5 \text{rep_cont}_i + \beta_6 \text{norm_price}_i + \beta_7 \text{org_type}_i + \beta_8 \text{kvalt}_i + \varepsilon_i$$

$$y_{2i} = \beta_0 + \beta_1 \ln(\text{sum}_i) + \beta_2 \text{part_amont}_i + \beta_3 (\text{part_amont}_i)^2 + \beta_4 \text{interval_d}_i + \beta_5 \text{rep_cont}_i + \beta_6 \text{norm_price}_i + \beta_7 \text{org_type}_i + \beta_8 \text{kvalt}_i + \varepsilon_i$$

$$y_{1i} = \frac{\text{price}_i}{\text{rf_price}} \quad y_{2i} = \frac{\text{price}_i - \text{region_price}_i}{\text{rf_price}}$$

price - контрактная цена 1 литра бензина;

rf_price - средняя цена 1 литра бензина по РФ;

region_price - региональная цена 1 литра бензина;

ln(sum) – логарифм объема контракта в стоимостном выражении;

part_amnt - количество участников торгов;

interval_d - срок исполнения контракта в днях;

norm_price - отношение розничной цены 1 литра бензина в регионе к розничной цене 1 литра бензина по России;

org_type - тип организации заказчика, 1 - здравоохранение, 2 - образование, 3 - медицина, 4 - прочие учреждения;

kvalt – квартал, в котором был подписан контракта;

Результаты оценивания моделей представлены в таблицах 1 и 2. Наиболее существенным представляется следующий факт, можно заметить, что знаки и величина коэффициентов при переменной *rep_cont11*, то есть переменной отвечающей, является ли контракт повторяющимся или нет, очень схожи с коэффициентами, полученными авторами работы. Действительно, наблюдается отрицательная зависимость цены от повторяющегося контракта для электронного аукциона, тогда как, для запроса котировок и закупки у единственного поставщика имеет место положительная взаимосвязь, отметим также, что переменная *rep_cont11* была посчитана по схожей методике, которую использовали авторы в своей работе для определения данного регрессора. Теперь обратим внимание на переменную *rep_cont21*, можно заметить, что коэффициенты (в том случае, если вместо переменной *rep_cont11* в качестве регрессора использовать *rep_cont21*) отличаются, теряется отрицательная зависимость объясняемой переменной для типа процедуры <<электронный аукцион>>, таким образом, результаты, представленные в статье, являются неустойчивыми к тому, как именно мы определяем повторяющийся контракт. Что верно для обеих спецификаций моделей. Более того, согласно анализу данных, представленному в

разделе 5, большинство агентов не имеют большого количество прошлых взаимодействий, так, только 10439 из 248980 контрактов были признаны повторяющимися при использовании методики аналогичной той, что использовали авторы статьи, в то время как, для переменной *rep_cont21* таких контрактов насчитывалось 130332.

	Полная выборка	ЭА	ЭА, Яковлев	ЗК	ЗК, Яковлев	ЕП	ЕП, Яковлев
(Intercept)	-0.01714***	-0.00441	0.491*	-0.01594***	0.115***	0.03478**	0.0977*
ln_sum	0.00094***	0.00006	0.000587	-0.00005	-0.00706***	0.00086***	-0.000436
part_amnt		0.00086	-0.0510	0.00053	0.0143**		
part_amnt2		-0.00302***	0.00266	-0.00175***	-0.00529***		
interval_d	0.00012***	0.00014***	0.000135	0.00008***	0.000049*	0.00004***	0.000101**
rep_cont11	0.00239**	-0.00819***	-0.0220**	0.00707***	0.0116***	0.00997***	0.0272***
norm_price	1.04173***	1.05703***	0.626***	1.04240***	0.977***	0.98459***	0.917***
rep_cont21	0.00842***	0.00793***		0.00659***		0.00147	
R ²	0.38629	0.35669	0.264	0.50398	0.449	0.24075	0.699
Num. obs.	207944	79572	193	97671	2034	30010	207

****p* < 0.001, ***p* < 0.01, **p* < 0.05

Таблица 1: Сравнение моделей, у1

	Полная выборка	ЭА	ЭА, Яковлев	ЗК	ЗК, Яковлев	ЕП	ЕП, Яковлев
(Intercept)	-0.01579***	-0.00112	53.01*	-0.01438***	12.72***	0.03448**	12.93**
ln_sum	0.00110***	0.00010	0.0569	0.00008	-0.677***	0.00088***	-0.0804
part_amnt		0.00026	-5.782	0.00053	1.509**		
part_amnt2		-0.00299***	0.373	-0.00180***	-0.545***		
interval_d	0.00013***	0.00014***	0.0129	0.00008***	0.00479*	0.00004***	0.0104**
rep_cont11	0.00267**	-0.00657***	-2.277***	0.00723***	1.066***	0.00997***	2.764**
norm_price	0.04362***	0.06045***	-40.18**	0.04331***	-3.849	-0.01438	-11.14**
rep_cont21	0.00831***	0.00790***		0.00679***		0.00133	
R ²	0.05200	0.07596	0.188	0.02519	0.050	0.03322	0.14
Num. obs.	207944	79572	193	97671	2014	30010	207

****p* < 0.001, ***p* < 0.01, **p* < 0.05

Таблица 2: Сравнение моделей, у2

Так как максимальный R^2 , полученный на прошлом этапе анализа, составил чуть более 0.5, то очевидно, что выбранный перечень регрессоров недостаточно хорошо описывал вариацию объясняемой переменной, и нужно было учесть ранее не использованные факторы. В связи с тем, что массив данных состоял из контрактов, заключенных в период с 1 января 2011 по 31 марта 2015 года, а цена автомобильного топлива росла на протяжении всего этого интервала, рисунок 6, то необходимо было включить фактор времени, выделив временной тренд. Также модели были дополнены регрессорами, отвечающими дополнительным характеристикам контрактов, таких как его сложность, доля стоимости продукта в общей стоимости контракта, количество продуктов в контракте, объем предыдущих контрактов. После чего тестировались разные спецификации моделей, наилучшая из которых выбиралась, исходя из информационного критерия *AIC* (чем меньше значение критерия, тем модель лучше), также принималась во внимание величина R^2 . Итоговая модель имела вид ($R^2 \approx 0.745$):

$$\begin{aligned} \ln_price_i = & \beta_0 + \beta_1 \ln(\text{sum}_i) + \beta_2 \text{part_amnt}_i + \beta_3 (\text{part_amnt}_i)^2 + \beta_4 \text{interval_d}_i + \\ & + \beta_5 \text{rep_cont2}_i + \beta_6 \text{norm_price}_i + \beta_7 \text{org_type}_i + \beta_8 \text{region_price}_i + \beta_8 \text{gasoline_type}_i + \\ & + \beta_9 \text{prod_amount}_i + \beta_9 \text{portion}_i + \beta_{10} \text{weekf}_i + \beta_{11} \text{year}_i + \varepsilon_i \end{aligned}$$

portion - доля стоимости продукта в общей стоимости заказа;

gasoline_type - марка топлива, 1 - 80 бензин, 2 - АИ - 92, 3 - АИ - 95;

prod_amount - количество продуктов в контракте;

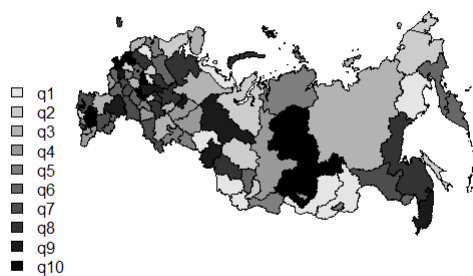
weekf - дамми на номер недели, в течение которой был подписан контракт ;

year - дамми на год, в котором был заключен контракт;

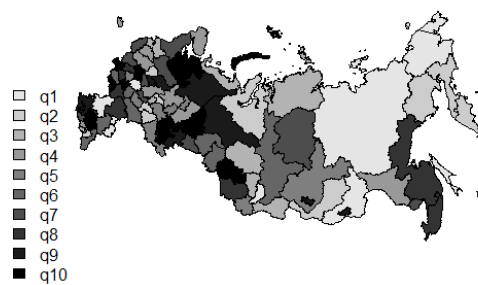
Более того данные были рассмотрены в качестве панели, так как предполагается, что контракты внутри регионов должны быть схожи, то можно прибегнуть к их усреднению без особой потери информации. Помимо того, что цены различаются довольно значительно между регионами, они также существенно варьируются внутри каждого региона в зависимости от типа бензина, поэтому было решено использовать 3 панели, для каждого типа топлива. Далее для каждой из панелей были оценены сквозная регрессия, модель с детерминированными эффектами и модель со случайными эффектами, после чего были проведены тесты на сравнение моделей, нулевые гипотезы которых были отвергнуты в пользу модели с детерминированным эффектом. Хотя фиксированные эффекты и варьируются по регионам в зависимости от типа бензина, можно выделить некую закономерность, так, регионы Хабаровский край, Архангельская область и Ханты-Мансийский автономный округ-Югра, стабильно характеризуются высокими значениями, в то время как, Республика Саха-Якутия - низкими.

Также было решено проверить, могут ли быть разделены контракты на кластеры в соответствии с переменными *prod_amount* и *n_iter*, количеством продуктов в контракте и количеством прошлых взаимодействий агентов, чтобы лучше понять, влияют ли данные переменные на итоговую цену контрактов. Так как нам не известна природа ошибок в данных, случайно ли встречались столь существенные отклонения, или были сделаны намеренно, чтобы скрыть, к примеру, коррупционную сделку, было решено разделить на кластеры, как всю исходную выборку, так и ее подвыборку, где значение переменной $\{it\ price\}$, контрактная цена литра бензина, варьируется от 10 рублей до 60 рублей. Так, был получен интересный результат, в первый кластер, при разделении всей выборки, попали относительно простые контракты, то есть те наблюдения, когда в среднем производится закупка двух продуктов, при этом данные контракты, характеризовались большим числом прошлых взаимодействий агентов, в то время, как во второй кластер состоял из куда более сложных контрактов, а количество прошлых взаимодействий поставщика и заказчика при этом было около единицы. Похожая тенденция наблюдалась и при разделении на 3 кластера. После чего была еще раз оценена регрессионная модель, где в качестве дополнительного регрессора включалась *dummy* на кластер, однако переменная оказалась не значимой, таким образом, нельзя сделать вывод, что сложность контракта и его повторяемость действительно влияют на контрактную цену.

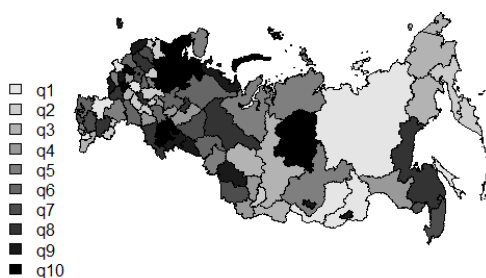
Распределение фиксированных эффектов по регионам РФ бензин 80



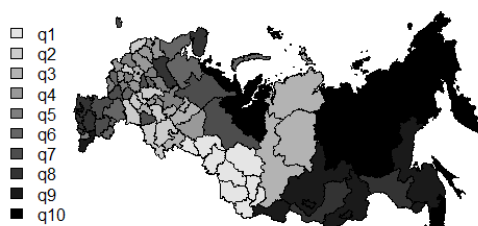
Распределение фиксированных эффектов по регионам РФ бензин 92



Распределение фиксированных эффектов по регионам РФ бензин 95



Распределение средней цены бензина по регионам РФ март 2015 год



Выводы

- Зависимость скорректированной цены на бензин от повторяемости контракта неустойчива: результат сильно зависит от того, как определяется повторяемость контракта. При спецификации повторяющегося контракта как в работе Яковлева были получены аналогичные результаты. Однако при другой спецификации или при автоматическом разбиении на кластеры повторяемость контракта не оказывает значимого влияния на цену.
- скорректированная цена не зависит от сложности контракта
- индивидуальные региональные эффекты при оценке панельной модели с фиксированными эффектами имеют структуру устойчивую по типам бензина. Более того, эта структура существенно отличается от исходной региональной стоимости бензина, что хорошо видно на построенных картах.
- распределение контрактных цен на бензин имеет очень “длинные” хвосты. Большинство цен, как и следовало ожидать, находится в диапазоне от 0 до 60 рублей, и распределение хорошо похоже на гауссиану. Однако правый хвост тянется до нескольких тысяч рублей за литр. Возможно, это просто ошибки ввода данных или парсинга. Или же часть именно этих контрактов и являются коррупционными.

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DOCTORAL COLLOQUIUM PAPER

**G.Alaev, PhD student, Graduate School of Economics and Management,
Ural Federal University named after B.N.Yeltsin
georgy.alaev@yahoo.com**

Russian firms during crises: do managerial capabilities matter and are they dynamic?

From resource-based view of the firm, we decide to reframe key aspects of management research thesis and to focus on two critical points. First, we tried to identify key dynamic capabilities for Russian firms that influence on financial performance during crises. Second, how Russian firms cope crises and do they obtain a knowledge (in other words, experience) how to survive in front of future crises. Research sample includes 72 medium-sized firms from private sector. Quantitative data analysis represented by open-sourced content from financial statements of medium sized firms from sample. Qualitative data includes interviews and questionnaires summary with management bodies of firms from sample. We have tried to measure qualitative data using BVR technique. Preliminary results of research confirmed our hypotheses.

Key words: dynamic capabilities, interfirm relationships, resources

1. Overview

Last decades management scientists focused on different research topics of firm's growth and firm's behavior during crises (Delmar, Davidsson, Gartner, 2003; Yakovlev, Simachev, Danilov, 2009; Godard, Goerg, Hanley, 2011). Contemporary theories of strategic management combine external aspects of firms faces financial crises influence as well as internal aspects. However, current papers characterized that they are in general describe firm's behavior during crises and do not analyze key factors influencing on such type of behavior. According to the dominant paradigm in contemporary management science, related to resource approach of firm, knowledge of resources kept by firm is crucially important and does this firm has to realize competitive advantage (Davidson, Steffens, 2007). Some papers state, that firm's growth and sustainability during crises is possible only if this firm has a competitive advantage with one of their market positions. For example, Garnsey et al. (2006) focused on sales volume of different types of products for measuring firm's growth. Thus, examination of different managerial practices looks as a prospective area of research with applications for identification of successful ways of crises surviving and sustainable growth of firms. In one hand, this topic represented as prospective area of management research, because it shows importance of either managerial actions in coherence with firm performance measurement. In other hand, it looks as applied task in management research in Russia as it is.

In contemporary management theory identification of organizational and behavioral factors, which lead firm to financial success, is one of general topics. Last researches in area of strategic management have shown that sustainable competitive advantage of firm strongly related with dynamic capabilities of firm (Helfat et al., 2007). These capabilities allow obtaining Schumpeterian rent within condition of fast changing external environment, as well as transformation of resource base of the firm for adaptation of challenges of new economic environment (Teece, Pisano, Shuen, 1997).

In particular, contemporary management research provide many papers related to questions of firm's surviving during market distortions. Latest papers as a rule reflects experience from recent world financial crisis, in 2008. For example, Gotard et al. (2008) estimated sensitivity of local Irish firms and multinationals in conditions of local financial crisis. They proved hypothesis, states that multinationals are more stable facing local distortions due to several reasons: they are more experienced (they can use practices from other markets) and more flexible, in case of increasing of sunk costs they can leave local market without crucial influence of business overall. Local Irish firms do not have such alternative. Firstly, multinationals generally do less of their input sourcing in the host country than domestic firms. This implies that they less linked into the local input market. For the Irish case, Görg and Ruane (2000), Barry and Bradley (1997) both find that multinationals have lower linkages with upstream firms, i.e., their ratio of domestically sourced to total inputs is lower than for domestic firms. Specifically, Barry and Bradley (1997) find for the Irish manufacturing sector in 1993 that foreign multinationals source on average 34 percent of their material inputs in Ireland, while this ratio is 79 percent on average for domestic firms. Görg and Ruane (2000) distinguish the sourcing of materials and services inputs using data for the Irish electronics industry. They find that in 1995, multinationals source 23 percent of their materials and 72 percent of their services in Ireland, compared with 32 and 89 percent, respectively, for domestic firms. Another paper reflects financial constraints for US firms arises due to world financial crisis. Campello et al. (2010) found that constrained firms planned deeper cuts in tech spending, employment, and capital spending. Constrained firms also burned through

more cash, drew more heavily on lines of credit for fear banks would restrict access in the future, and sold more assets to fund their operations.

2. Capabilities of firm

Term «capability» is very popular and useful in management science and it is not new in theory and practice of management. Thus, this term was determined as «fixed specific set of actions and processes of firm» by Morris and Paul (1987). To sum up, we can identify capability as a specific form of firm's behavior.

Contemporary managerial and entrepreneurial literature broadly describes entrepreneurial capability of firm. According to recent papers, firms, which characterized by entrepreneurial capability, mainly oriented for search of new market opportunities, less risk-avoidable and common sense of using these new opportunities (Lumpkin, Dees, 1996). It means that entrepreneurially oriented firms usually initiate new actions at the market and, by using «pioneer rule», they finally achieve competitive advantage. In this paper, we use term of entrepreneurial capability for describing firm's behavior, characterized by innovation, proactivity and risk addiction. Concept of dynamic capabilities (Teece, Pisano, Shuen, 1997) split «dynamics» to three different processes or actions: 1) ability to forecast unique opportunities and threats; 2) prepare firm's internal resources for achieving these opportunities and resist for threats; 3) transform current position of firm for better identification and reaction for opportunities. Apparently, entrepreneurial capability is responsible for signal detecting from external environment, generation of new ideas, in other words, it is responsible for such firm's behavior, characterized by skill set of proactivity and implementation of innovations (Covin, Selvin, 1991). According to third action of dynamic capabilities, transformation of current firm's position, it is implication of transformation and recombination of internal and external resources and capabilities of firm, well-timed coherence of these processes sensitive for environmental changes and market situation (Barney, 2002). Obviously, that transformation of organizational resources is more efficient in case of developed system of organizational changes. Thus, firm's behavior oriented for transformation of pool of resources, in other words, for better correspondence between intrafirm organizational resources and market situation, is expressed by development and prevalence of intraorganizational changes (Eisenhardt, Martin 2001) which can be represented as intrafirm capability. Here we can group changes in firm's strategy, structure, corporate culture, development of new products, changes in business processes. Changes in those elements allow firm to adopt more efficiently for new market conditions. Moreover, ability to change gives firm flexibility in decision-making processes.

Processes, which allow firm reduce costs during changes implementation, enable to collect more information about signals from external environment and could be applied for knowledge management and organizational learning areas. Currently, core firm's competences concerned not only with production function, but also with employees knowledge. Therefore, key management objective is changing: knowledge becomes one of production factors, and knowledge management become to play one of the key roles in competitiveness of modern companies (Drucker, 1998). Zollo and Winter (1998) have identified such characteristics of dynamic capabilities as accumulation of previous experience, articulation of data received and analyzed, codification this data on specific storages.

To sum up, we can identify following firm capabilities: entrepreneurial capability; knowledge capability and capability of changes (or transformation capability). Apparently, each of them has a unique characteristics and influence in a different ways on firm's performance. Thus,

entrepreneurial capability is responsible for search of new market possibilities; implementation of organizational, product and market innovations; transformation capability is related to intrafirm changes; knowledge capability concerned with collecting, integration, analysis and implementation of previous firm's experience.

Hypothesis 1. Three capabilities (entrepreneurial, transformation and knowledge) are identifiable, separated and interconnected.

The same time it is important to mark, by which way capabilities influence of firm performance. Davidsson et al. (2009) studied it: profitable firms are able to rise and develop unique advantages in key areas of firm's businesses, it allows to broad firm's activity on the market. Thus, for sustainable growth, sustainable competitive advantage as a derivative from dynamic capabilities related to firm's opportunities to optimize and change their resource base, in accordance with market conditions. Thus, firms possessed entrepreneurial, knowledge and transformation capabilities are more stable in front of crises.

Hypothesis 2. Firms with capabilities (or with high scores) are better survive during crises than firms without such capabilities (or with low scores).

Let's analyze more deeply each of the following capabilities:

Transformation capability. During process of firm's development management faced with situations of changing relationships between organizational elements, and their coherence is crucially important on firm's performance. Processes, related to intrafirm changes, exist in organization, are composing transformation capability. If organization have more such processes, that means that this organization is more oriented for changes, As McGuinness and Morgan (2005) determine transformation capability as «organizational capability to perform into life constant changes, ability to launch and manage flow of interrelated organizational changes inline with long-term firm strategy». Eisenhardt and Martin (2000) have similar understanding of transformation capability: they determine it as «ability to identify new opportunities of development and understanding, which internal changes should be initiated». To sum up, transformation capability implied developed change management organizational practices.

Entrepreneurial capability. This capability is aimed to production of new resources combinations, processes, distribution channels and markets. Firms, characterized by entrepreneurial capability, have such qualities as proactivity, openness, innovations and risk addiction. Essentially, entrepreneurial activities should be implemented in processes, practices, decision-making and structure of organization. Zahra and Gravis (2000) found that in conditions of fast changing environment, entrepreneurship improve firm performance, by increasing productivity and income. Other papers stated, that entrepreneurship promote process of resources transformation for better adopting to environment (Dimitratos, Lioukas, Carter, 2004). Basing on view of market changes, innovations and customer's needs, managers decide to start recombination of resources or not (Jantunen et al., 2005). Estimation of growth capabilities is restricted by ability of managers to identify these capabilities. Thereby firm's growth is, by other words, derivative from opening of market capabilities and transformation of organizational resources.

Knowledge capability. According to Zollo and Winter (2002) dynamic capabilities are developing from learning and development processes. Learning processes and management of organizational knowledge are impressed by firm's orientation towards knowledge management, which includes different activities such as experience absorption, knowledge exchange and codification of knowledge. Usually, knowledge in organization is divided into two branches – information and know-how (Kogut, Zander, 1992). Information – it is a knowledge, which could be transferred without any damages of integrity, characterized with concrete order of

understanding. Know-how it is an accumulated set of skills learned or achieved. Knowledge could be contained in rules, technologies or databases. Management literature determine knowledge capability as a collaboration of search, analysis and storage of information (Machand, Kettinger, Rollins, 2000). Firm's ability to assimilate new knowledge and necessary knowledge depends from current database of knowledge. Contemporary management literature determines it as an ability to catch new knowledge (Cohen, Levintal, 1990). Firm accumulate determined volume of knowledge during business operations. These experience and knowledge allow to broad borders for accumulating new knowledge, related with previous experience. To sum up, theoretical approach allow us to draw research hypotheses and test them by using data obtained and valid research techniques.

3. Data sampling and research methodology

We obtained data from research sample includes 72 mid-sized companies (headcount 50-3000 employees) from five business areas: Machinery, Oil&Gas, HoReCa, IT and real estate. Main part of companies located in Ekaterinburg – 50 of them (70%), 10 (13%) companies are from Ufa and 12 (17%) from Novosibirsk. This scope includes regions with high production base (such as Ekaterinburg), resource base (Ufa, as well as Bashkortostan region is a well-known oilfield region) and innovative base (Novosibirsk is known as a scientific center). Moreover, our approach gives us heterogeneity of data, because sample includes organizations from different areas. In addition, our sample includes 50 firms, established earlier 1998: thus, we estimated «survival rate» during 1998 and 2008 crises.

We conducted series of interviews from October 2013 until May 2015 with executives and senior managers of firms from sample. Our interviewing techniques were based in accordance with Bloom and van Reenen (2007) approach: firstly, we conducted interviews with senior managers which see business «at a glance» (from one side), and periodically involved directly into business duties, because they need to keep «sense» of their business (from another side). Second, our interviewing technique was «double blinded»: interviewers, undergraduate and graduate students, were not involved into research agenda. Moreover, interviewees (managers and senior executives) were informed that we conduct just market research. These matters allow us to avoid biases from interviewers and interviewees during conducting interview. Questions were divided into 3 subjects (by theoretical topic) and were represented as a statements characterizing firm's behavior with scale from 1 to 5, where 1 means «absolutely disagree» and 5 – «absolutely agree». As key research methods, we chose exploratory factor analysis (EFA), confirmatory factor analysis (CFA) and path analysis of our regression model. Factor analysis allow us to describe research subject comprehensively and compactly. Due to factor analysis, it is possible to identify hidden latent variable factors, responsible for linear statistical constraints, correlations between observable variances. If marks, received during research, on several scales are similar, and they have high level of correlation coefficient, we can assume, that determined hidden variable exists, due to which we can explain observable similarity of marks received. As a method of rotation, we introduced varimax rotation. For varimax a simple solution means that each factor has a small number of large loadings and a large number of zero (or small) loadings. This simplifies the interpretation because, after a varimax rotation, each original variable tends to be associated with one (or a small number) of factors, and each factor represents only a small number of variables. In addition, the factors can often be interpreted from the opposition of few variables with positive loadings to few variables with negative loadings. Formally, varimax searches for a rotation (i.e., a linear combination) of the original factors such that the variance of the loadings is maximized. As

a measure of factors structure sample validity, we used Keiser-Meyer-Olkin measure of sampling adequacy. As a criterion of model's quality, we used chi-square, CFI, TLI, RMSEA. Obviously, factor analysis in economics and management research is one of most applicable instruments for measurement of firm's development, because it reduce a set of variables (Velicer, Jackson, 1990). As independent variables we used data from interviews and questionnaires, aggregated into factors (by using factor analysis), or complex variables. As dependent variable, we used changes in gross profit volume from 1996 until 1999 and from 2006 until 2009, from questionnaires estimated in percentage, from present year to prior year. Therefore, we estimated average changes in sales volume as well as changes in cost of sales without taxation effects. In addition, we introduced control variables: maturity rate (estimated as year of establishment minus year of interview) for organization and headcount of employees. These variables allow improving quality of model and can influence of gross profit changes.

4. Model

In particular, we can represent model of capabilities as at:

$$\begin{aligned}
 Y_1 &= \alpha_{11}F_1 + \alpha_{12}F_2 + \alpha_{1m}F_m \\
 Y_2 &= \alpha_{21}F_1 + \alpha_{22}F_2 + \alpha_{2m}F_m \\
 Y_3 &= \alpha_{31}F_1 + \alpha_{32}F_2 + \alpha_{3m}F_m \\
 Y_4 &= \alpha_{41}F_1 + \alpha_{42}F_2 + \alpha_{4m}F_m \\
 &\dots \\
 Y_n &= \alpha_{n1}F_1 + \alpha_{n2}F_2 + \alpha_{nm}F_m
 \end{aligned}$$

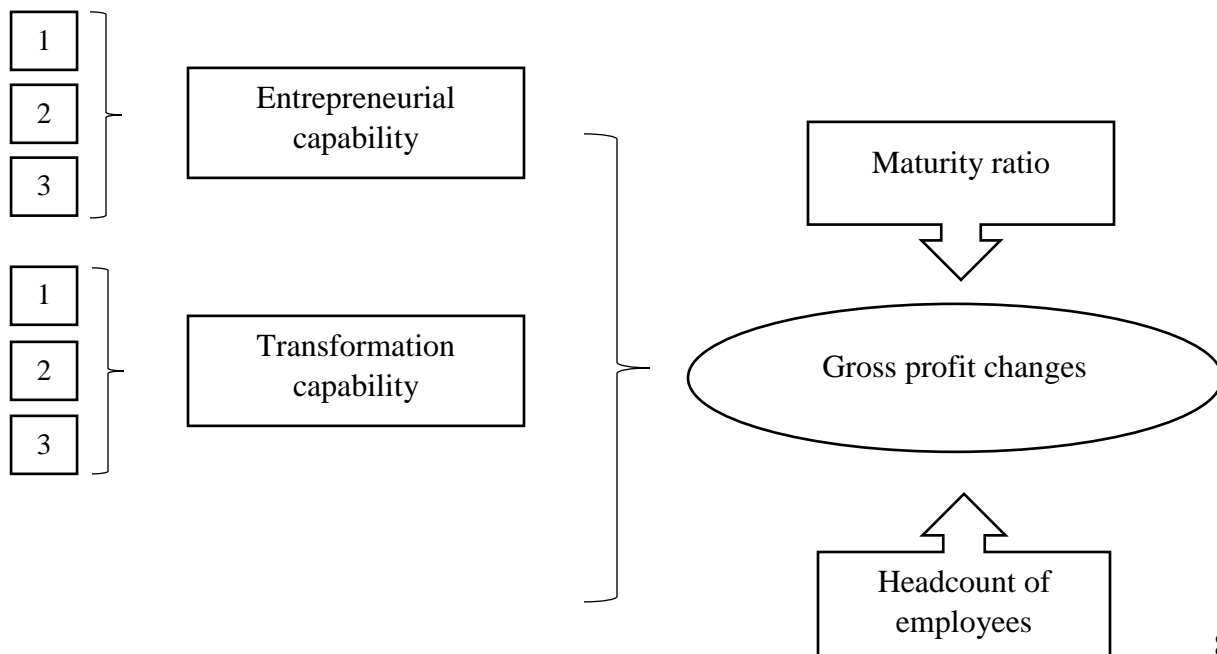
where

Y – dependent (observable) variable;

α – constant (coefficient of F)

F – function of set of variables

For further analysis of firm's capabilities, we introduced following causative model:



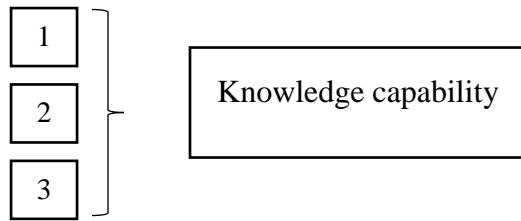


Figure 1. Testing model of firm’s capabilities influence on gross profit.

5. Preliminary results.

Let’s review preliminary results of research. Our analysis was performed in R Commander software. Quality of sample checked by using Keiser-Meyer-Olkin measure of sampling adequacy. Quality of sample and reliability of data for implementation of factor approved by high scores: KMO = 0.818 with p-value less than 0.01. It shows high level of adequacy of factor model concerning correlation matrices for determined set of variables. Next step is determining of sufficient quantity of factors in a model. Obviously, we need to estimate share of dispersion of variables in a sample could be explained by set of factors. For us, acceptable value should be more than 50%; it is a «general rule» for determined quantity of factors (Velicer, Jackson, 1990). In our research, three factors describe 56% of dispersion. Thus, we gained acceptable values.

Next step in our analysis - examination of factor loadings for each of factors, determined in Table 1. In a table stated below, we determined components with loadings > 0.5. It allows us to get simplification of factors structure (Fabrigar et al., 1999).

Table 1.

Factor loadings*

Question/Factor	Loadings (values)		
	1	2	3
Implementation of best practices from market leaders	.824		
Application of ideas from partners	.794		
Accumulation and analysis of previous experience	.772		
Usage of technical devices for storage of information	.701		
Informal relations with counterparties	.660		
Creative work environment	.520		
Benefits for employees with entrepreneurial ideas	.502		
Presence of unused resources for immediate usage in new projects		.735	
Free time for employees for development of their ideas		.711	
Encouragement of making of risky decisions		.681	
Untypical managerial practices (for such business field)		.615	
Constant technological and market research		.591	

Restructuring			.840
Revision of business processes			.814
Changing of strategy			.791
Managerial rotations			.767
Organizational culture development			.714
Participation in joint ventures			.651

**Performed with PCA (principal component analysis). Rotation: varimax. In total 7 iterations performed.*

Analyzing table stated above, we can conclude, that factors were split into three categories: factor related to information and knowledge; factor related to risk and new ideas and factor related to organizational changes. Thus, we can evaluate each of three of capabilities, which identified during factor analysis. However, we performed a CFA for defined structure of factors for the purpose of approval testing results of principal component analysis. This analysis was performed with structural equations modelling package Ivaan R. We have developed model for each factor identified:

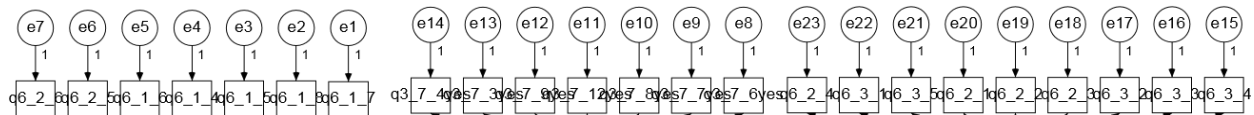


Figure 2. Structural model of factors identified.

We introduced modification indexes to improve quality of model. For assessment of quality of model, we used various fitting indexes such as CMIN/Df, TLI, CFI, RMSEA. Values of each fit indexes showed as at: CMIN/Df=2.71; TLI=0.92; CFI=0.94; RMSEA=0.0586. All of them are located in threshold values, therefore our model is acceptable for further development: as stated in Brown (2006) threshold values for each of factors are following: CMIN/Df<2.8; TLI>0.9; CFI>0.8; RMSEA<0.06. It proves, that factor model describes data in sample properly.

Let's interpret regression coefficients, which allow us to evaluate stability of structure of factors, determined during primary analysis. Table 2 shows us, that factors have sustainable structure, because each of them has p-value less than 0,001.

Weighted regression coefficients.

Table 2.

	Estimate	S.E.	C.R.	P
q6_2_6 <---knowledge_cap	1,0000			
q6_2_5 <--- knowledge_cap	,8773	,0646	13,573	***
q6_1_6 <--- knowledge_cap	1,0431	,1016	10,265	***
q6_1_4 <--- knowledge_cap	1,1913	,1076	11,072	***

q6_1_5	<--- knowledge_cap	1,2687 ,1059	11,981	***	
q6_1_8	<--- knowledge_cap	1,0873 ,0942	11,547	***	
q6_1_7	<--- knowledge_cap	1,1418 ,0951	12,001	***	
.....					
		Estimate	S.E.	C.R.	P
q3_7_3yes	<--- transformation_cap.	1,1715 ,1143	10,253	***	
q3_7_9yes	<--- transformation_cap.	1,0871 ,0960	11,329	***	
q3_7_12yes	<--- transformation_cap.	1,1945 ,1018	11,732	***	
q3_7_8yes	<--- transformation_cap.	1,0458 ,0940	11,130	***	
q3_7_7yes	<--- transformation_cap.	1,1870 ,1017	11,668	***	
q3_7_6yes	<--- transformation_cap.	1,3384 ,1074	12,458	***	
q6_3_1	<--- entrepreneurial_cap.	,7561 ,0873	8,6632	***	
q6_3_5	<--- entrepreneurial_cap.	,7809 ,0895	8,7228	***	
q6_2_1	<--- entrepreneurial_cap.	1,6728 ,1345	12,438	***	
q6_2_2	<--- entrepreneurial_cap.	1,6924 ,1302	12,998	***	
q6_2_3	<--- entrepreneurial_cap.	1,5870 ,1244	12,760	***	
q6_3_2	<--- entrepreneurial_cap.	,8944 ,0902	9,9146	***	
q6_3_3	<--- entrepreneurial_cap.	,5914 ,0789	7,4984	***	
q6_3_4	<--- entrepreneurial_cap.	,9018 ,0905	9,9668	***	

To sum up, we identified, that firms from Machinery sector are more oriented on transformation capabilities and improving performance through restructuring, organizational culture development and participation in joint ventures. Firms from Oil&Gas have high scores related to knowledge capability: that means that they use untypical managerial practices and fund technological development programs. In contrast, firms from IT, HoReCa and real estate improve their entrepreneurial capability: they invest in employees and their ideas. In case of IT industry it can be explained, that software, main product of this industry, is fast changing product with high value added, therefore it has to be flexible and market-oriented. Cases of HoReCa could be explained with high capital turnovers and highly competitive markets at these areas.

We approved our hypotheses. First, we identified three interconnected and identifiable capabilities. Each of them has low or high influence on firm; it depends from sector and nature of business. Second, firms with better scores for each of capabilities have better financial results (gross profit) whereas firms with lower scores have deep fluctuations in financial performance during crises: that means that they are less stable.

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**Tatiana Beliaeva, St. Petersburg University, Graduate School of Management, e-mail:
st020240@student.spbu.ru**

**Galina Shirokova, St. Petersburg University, Graduate School of Management, e-mail:
shirokova@gsom.pu.ru**

**Tatiana Romanova Stettler, Kent State University
tstettle@kent.edu**

Complementarity Effects of Strategic Orientations on Firm Performance: the Moderating Role of Environmental Hostility

Abstract: While the notion of firm's strategic orientation has received considerable attention in management literature, most research has been focused on one strategic orientation type. In this research, we investigate how multiple strategic orientations – entrepreneurial, market and learning orientations – are both individually and jointly related to firm performance, taking into account the peculiarities of external environment. The analysis of 221 Finnish and Russian firms suggests that firm performance is primarily driven by entrepreneurial orientation when strategic orientations are viewed independently. However, when strategic orientations are combined, their complementarity effect appeared to be larger than the individual effects and is positively moderated by environmental hostility.

Key words: *strategic orientations, entrepreneurial orientation, market orientation, learning orientation, complementarity, firm performance, environmental hostility*

1. Introduction

In a constantly changing business environment firms seek for competitive advantage and new market opportunities so that they can grow and enlarge their market share. Greater attention is focused on firms' strategic orientations, which refer to strategic decisions of a company that direct its activities to achieve superior performance (Gatignon & Xuereb, 1997). Some firms adapt entrepreneurial behavior (entrepreneurial orientation) (Covin & Slevin, 1989), the other focus on markets and customers (market orientation) (Narver & Slater, 1990), and others are oriented towards creation and transfer of knowledge within organization (learning orientation) (Sinkula et al., 1997).

The relationships between multiple strategic orientations have not received much attention in academic literature, and the results of the existing studies are somewhat contradictory (Hakala, 2011). Specifically, a number of studies have considered strategic orientations independently from each other (e.g., Laukkanen et al., 2013; Li, 2005), while other examined interactions between them describing either sequential (e.g., Hakala, 2013; Wang, 2008) or simultaneous (e.g., Li et al., 2008; Lonial & Carter, 2015) impacts of orientations on firm performance. Theoretical foundations and empirical investigations of the relationship between entrepreneurial, market and learning orientations are still lacking and require a more holistic view on firm strategic behavior.

According to the contingency theory, organizations are most effective when their internal elements are fitted with the external environment (Lawrence & Lorsch, 1967). Particularly, in contemporary market conditions companies face a number of challenges for their business operations, which form hostile environmental conditions for doing a business (Covin & Slevin, 1989; Rosenbusch et al., 2013). These constraints require a well-crafted strategic direction, and hostility may be the important environmental settings which influence firm's behavior and the way how strategic orientations are related to firm performance.

In this research, we investigate both individual and complementarity effects of entrepreneurial, market and learning orientations on firm performance, taking into account the moderating role of environmental hostility. We address the following research questions: (1) How do entrepreneurial, market and learning orientations individually and jointly (complementarily) relate to firm performance? (2) How does hostile external environment affect the strength of the relationship between the combination of strategic orientations and performance outcomes?

This research contributes to the existing literature on strategic orientations in several ways. First, by investigating the complementarity of strategic orientations, it shows the importance of firm's ability to manifest multiple strategic orientations simultaneously. Second, by integrating all three strategic orientation types and applying a contingency approach, it shows the role of environmental hostility in shaping the strength of the relationship between combined strategic orientations and firm performance. Third, by exploring commonality and diversity in the relationships across two countries, it establishes the boundaries of cross-cultural generalizability of these relationships.

The paper proceeds as follows. First, we develop the theoretical framework and hypotheses. Then, sample and measures are described. This is followed by hypotheses testing and presentation of findings. Lastly, we discuss the findings and provide further research directions in this field.

2. Theory and Research Hypotheses

2.1. *Individual effects of strategic orientations on firm performance*

The strategic orientation of a firm has attracted widespread attention from management and entrepreneurship scholars. This notion describes the strategic decisions and principles of a company, which direct its activities and generate behavior intended to achieve

superior firm performance and sustainable competitive advantage on the market (Gatignon & Xuereb, 1997). Oftentimes, strategic orientations are conceptualized from the recourse-based perspective (Barney, 1991) and considered as organizational resources or dynamic capabilities which may improve firm performance (Lonial & Carter, 2015) and are vital for small businesses which tend to lack financial and human resources (Ruokonen & Saarenketo, 2009). Among different types of strategic orientations, entrepreneurial (EO), market (MO) and learning (LO) orientations have received extensive consideration in both theoretical and empirical literature (Hakala, 2011).

EO refers to a strategy making process which provides organizations with entrepreneurial activities and decisions (Lumpkin & Dess, 1996). EO is usually described with the dimensions of innovativeness, proactiveness and risk-taking (Covin & Slevin, 1989). The adoption of entrepreneurial orientation enables firms to experiment, generate new ideas and commercialize them into new products or services. Innovativeness describes a firm's tendency to be engaged in creative initiatives and product modifications, support new ideas and practices, and make substantial investments in research and development (Lechner & Gudmundsson, 2014; Lumpkin & Dess, 1996). The innovativeness dimension is closely related to proactiveness, and a combination of both allows firms to benefit from a first-mover advantage and improve overall firm performance by producing timely responses to arising consumers' needs (Hult et al., 2004). A firm's involvement in the risky projects, in its turn, gives firms the possibility to gain large profits as an outcome of a successful project realization and may also positively affect firm performance.

MO refers to a strategic behavior characterized with creation of superior value for customers (Narver & Slater, 1990). In the body of previous literature two main conceptualizations of MO have been widely adopted. The first one, developed by Kohli and Jaworski (1990) describes MO as relating to organization-wide generation and dissemination of market information and organizational response to it. The second conceptualization, proposed by Narver and Slater (1990), sees MO as a construct with the dimensions of customer orientation, competitor orientation, and interfunctional coordination. Market orientation allows firm better understand customer needs, rapidly respond to competitors' actions, evaluate competitors' strategies, and target opportunities for competitive advantage. In general, previous studies on MO confirm its positive relationship with business performance (Kirca et al., 2005). By gathering relevant information on customers and competitors, MO enables firms to adjust its operations to target markets, anticipate and respond to customer needs, and build competitive advantage.

LO is conceptualized as a "set of organizational values that influence the propensity of the firm to create and use knowledge" (Sinkula et al., 1997, p. 309). The three widely used components of LO include commitment to learning, shared vision and open-mindedness (Sinkula et al., 1997). Firms with high level of learning orientation encourage their employees to think 'outside the box' and follow the changes in external environment by challenging current norms and behavior (Baker & Sinkula, 1999). Previous studies have shown that learning-oriented firms show better adaptation capacities to the dynamic environments by developing products and services, which meet emerging customer needs (Lonial & Carter, 2015). LO enables firms to learn from their environment, quickly adapt to the external changes and provide rapid solutions by modifying products and services.

Overall, each of the discussed strategic orientation types, considered independently, may be beneficial for firm performance, creating competitive advantage and enhancing performance outcomes. Thus, we propose that:

Hypothesis 1. Individually, (a) entrepreneurial, (b) market and (c) learning orientations are positively associated with firm performance.

2.2. Performance effects from complementarity of strategic orientations

The processes, by which EO, MO and LO operate, may be more complex than their direct relationship with firm performance. The studies of interactions between strategic orientations have shown that different combinations of orientations may enable firms to perform better, compared to manifestation of only one orientation type (Hakala, 2011). These results are in line with economic theory of complementarity, according to which “the whole is more than the sum of its parts” (Milgrom & Roberts, 1995, p. 184), and a combination of resources may create more value compared to the possessing of one resource individually. Multiple strategic orientations can be related to firm performance through another latent variable, which refer to a higher-order construct. Specifically, EO, MO and LO can be conceptualized as the indicators of a positional advantage (Lonial & Carter, 2015) or proactive learning culture (Gnizy et al., 2014), and are positively related to firm performance.

In this study, we conceptualize EO, MO and LO as indicators of a firm’s overall ‘strategic orientation’, which reflects the direction of firm’s strategic behavior towards market, creation of products/services through entrepreneurial decision-making, and internal process supporting firm’s strategic behavior and enabling further development (Venkatraman, 1990). We examine the complementarity effect of strategic orientations on firm performance, which is assumed to be more valuable compared to individual effects, and hypothesize that:

Hypothesis 2. EO, MO and LO (a) are the indicators of a higher-order construct of firm’s strategic orientation, and (b) have a positive complementarity effect on firm performance, which is larger than their individual effects.

2.3. The moderating role of environmental hostility

Strategic management literature highlights the importance of a contingency approach which allows taking into account both the characteristics of a firm’s strategic behavior and its external environment (Lawrence & Lorsch, 1967). In this study, we examine environmental hostility as the important environmental settings which may impact the way strategic orientations relate to firm performance.

Environmental hostility describes to the extent to which external business environment poses threats to firm’s survival, including strong competitive intensity, lack of business opportunities, resource constraints, governmental intervention and other challenges (Miller & Friesen, 1982).

Previously researchers have investigated the role of hostility in influencing the way EO, MO and LO relate to firm performance (eg., Atuahene-Gima & Ko, 2001; Covin & Slevin, 1989; Jaworski & Kohli, 1993). In particular, it was shown that the relationship between EO and business performance is stronger in hostile compared to benign environments, and the adoption of entrepreneurial behavior enables firms to be more efficient in searching for new business opportunities, make modifications in products/services and compete aggressively on the market (Covin & Slevin, 1989). A firm may also enjoy greater benefits from the adoption of MO when environmental hostility and competitive intensity increases (Atuahene-Gima, 1995; Kohli & Jaworski, 1990), since market-oriented behavior allows firms to better respond to customers’ needs, acquire superior information on the market, monitor the competitors’ actions and quickly act in response to them. LO was also seen as a means to achieve a fit between organization and its external environment (Levinthal, 1991), allowing firms to learn from the environment and benefit from challenging current practices within the organization (Baker & Sinkula, 1999).

Following this, we assume that a combination of EO, MO and LO will be positively moderated by the level of hostility in external environment, and hypothesize that:

Hypothesis 3: The positive complementarity effect of EO, MO and LO is stronger in the highly hostile environments compared to the non-hostile ones.

3. Method

3.1. Sampling

To test our hypotheses, we have surveyed firms from Finland and the European part of Russia in 2013-2014. Companies, constituting the population for the research, were privately owned SMEs, operating in different industries. For potential cross-country construct invariance reduction and adaptation of the questionnaire to the study contexts, the method of translation and back translation of the questionnaire was used, and pilot testing was undertaken.

The data were collected separately in two countries by distribution of a standardized questionnaire to key respondents. Population of Finnish and Russian firms was retrieved from Amadeus and SPARK-Interfax databases. From the populations, a sample of 8000 Finnish and 12,000 Russian companies were randomly selected, and the standardized questionnaire, transformed into the online form, was distributed to the key respondents of the whole sample. Overall, we collected 117 Finnish and 106 Russian questionnaires with the effective response rate of 22% in Finland and 7% in Russia. After cleaning the data, the final pooled dataset of Finnish and Russian companies used for the analysis, was equal to 221 observations.

3.2. Measures

Dependent variable. In this study, we apply a financial indicator of sales growth rate which is widely used in management literature to measure of SMEs' performance (Delmar et al., 2003). Sales growth was operationalized as the percentage change in a firm's sales from 2010 to 2012. The measure was obtained from the questionnaire, and then checked and supplemented from the official databases (SPARK Interfax, Amadeus).

Independent variables. For measurement of firm's strategic orientations, we rely on the established scales which were adapted to the specific study environments. All the questions in the survey were related to the firms' activities in 2012.

Following Covin and Slevin (1989), we conceptualize *entrepreneurial orientation* as a three-dimensional construct, comprising of innovativeness, proactiveness and risk-taking. The nine-item seven-point Likert scale was applied to measure firm's level of EO (Covin & Slevin 1989). Cronbach Alpha for EO construct is 0,872, confirming the scale's internal consistency.

The conceptualization of *market orientation* is based on the work of Narver and Slater (1990), which conceptualized MO with three dimensions of customer orientation, competitor orientation and inter-functional coordination. Fifteen-item five-point Likert scale, adapted from Narver and Slater (1990), was applied to measure firm's MO level. Reliability of MO construct is 0,796, confirming the scale's internal consistency.

Learning orientation is conceptualized with three dimensions of commitment to learning, shared vision and open-mindedness, following the Sinkula, Baker and Noordewier (1997). From the existing literature, the eleven-item seven-point Likert scale was used to measure firm's level of LO. Cronbach Alpha for LO construct is 0,906, which is above the recommended threshold.

To measure the level of *environmental hostility*, a dummy variable was used, where '1' indicated the hostile external environment and '0' otherwise. The measure was based on the assessment of the overall hostility level in the external environment adapted from Miller and Friesen (1982).

Control variables. The level of strategic orientations and firm performance depend on such variables as firm's age, size, and type of industry, which were used as control variables in the study. Firm's *age* was estimated by the number of years since firm's foundation. Firm's *size* was operationalized as the total number of employees in 2012. To control for *industry*, three dummy variables were created, reflecting companies' activities in one of the following sectors: manufacturing, services, or intellectual and informational activities.

4. Data Analysis and Results

4.1. Reliability and validity of the constructs

To test the research hypotheses, confirmatory factor analysis (CFA) using maximum likelihood estimation and structural equation modelling (SEM) was applied to the pooled data. Before pooling the data and performing the analysis, we removed the national bias by standardizing the data separately in each country. Data standardization helped to make the data “decultured” (Song et al., 2010), so that the true correlation between the variables is not affected by country-specific characteristics. After standardizing the data, we examined the latent variables for dimensionality, reliability and validity and performed SEM using the pooled data set (Engelen et al., 2015).

CFA was conducted on each of the latent constructs of EO, MO and LO to examine the constructs’ reliability and validity. Initially, we analyzed the scales of each strategic orientation type in sub-models, which helped to avoid the risk of violating minimum sample size to parameter ratios. Then we examined the whole measurement model with all strategic orientations included (Table 1). Based on the factor loadings and CFA fit statistics, several items were removed from the scales. All items significantly load on the corresponding constructs, exhibiting adequate convergent validity. Results also show acceptable levels of Cronbach alpha and average variance explained (AVE) of the variables. The acceptable level of composite factor reliability (CR) confirms the scales’ adequate composite reliability. Table 2 contains descriptive statistics and correlations between the studied constructs.

Table 1. Measurement models and fit indices

CFA models	χ^2/df	GFI	CFI	AGFI	RMSEA
Measurement model 1	1,262	,975	,994	,948	,035
Measurement model 2	1,919	,949	,957	,912	,065
Measurement model 3	1,524	,959	,988	,927	,049
Full measurement model	1,777	,961	,971	,927	,059

Notes: Measurement model 1: innovativeness, proactiveness, risk-taking.

Measurement model 2: customer orientation, competitor orientation, inter-functional coordination.

Measurement model 3: commitment to learning, shared vision, open-mindedness.

Full measurement model: all items retained in model 1 through to model 5 were modeled simultaneously.

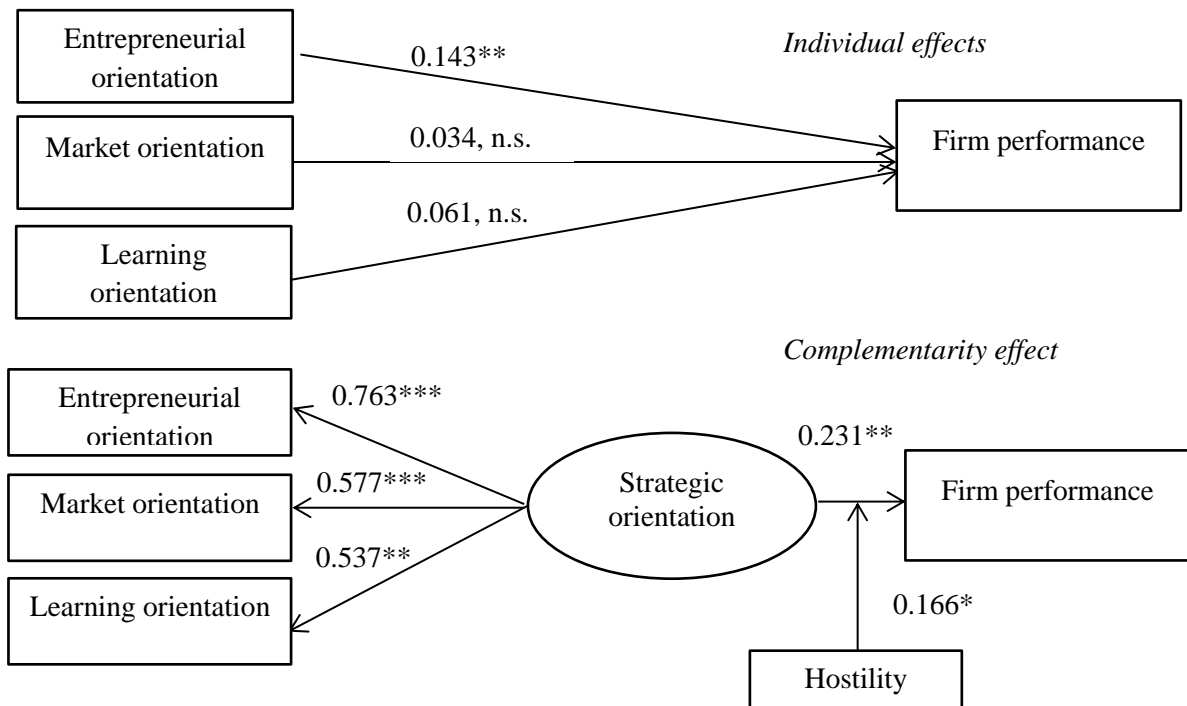
Table 2. Correlations

N	Variable	Mean	S.D.	1	2	3	4	5	6	7	8	9
1	Performan ce	29.66	54.96	1								
2	Firm age ¹	2.39	0.75	-0.273*	1							
3	Firm size ¹	2.63	1.59	-0.153*	0.411*	1						
4	Production	0.26	0.44	-0.009	0.178*	0.248*	1					
5	Services	0.46	0.49	0.073	-0.073	-0.158*	-0.552*	1				
6	EO	4.07	1.26	0.140*	0.091	0.121	0.094	-0.124	1			
7	MO	3.82	0.59	0.155*	-0.087	-0.045	-0.054	0.026	0.439*	1		
8	LO	4.97	1.10	0.170*	-0.168*	-0.206*	-0.044	-0.033	0.299*	0.589*	1	
9	Hostility	0.51	0.50	0.007	-0.099	-0.067	0.048	-0.003	-0.095	-0.090	-0.117	1

Notes: ¹ Natural logarithm taken; Significant at *p<0.05; N=221.

4.2. Hypothesis testing

Structural equation modeling was applied to test the research hypotheses. The results of hypotheses testing are presented in Figure 1.



Note: *** $p < 0.001$; ** $p < 0.05$, * $p < 0.1$.

Figure 1. SEM results

In the individual effects model ($\chi^2 / df = 2.420$; GFI = .964; AGFI = .907; CFI = .935; RMSEA=.080), the results have shown that EO is positively associated with firm performance ($\beta = .143$; $p < .05$) Concerning other strategic orientation types, we do not find any significant direct impact of MO or LO on business performance. Thus, the findings partly support the hypotheses 1, showing that firm performance is driven primarily by EO.

In the complementarity effects model ($\chi^2 / df = 2.420$; GFI = .964; AGFI = .907; CFI = .935; RMSEA=.080), the results have shown that EO, MO and LO significantly load on the higher order construct (SO \rightarrow EO: $\beta = .763$; $p < .001$; SO \rightarrow MO: $\beta = .577$; $p < .001$; SO \rightarrow LO: $\beta = .537$; $p < .05$), providing support for the hypothesis 2a. The complementarity effect of the combined strategic orientation on firm performance was found to be positive and significant ($\beta = .231$; $p < .05$), and is larger compared to the individual effects, supporting the hypothesis 2b.

In the moderation model ($\chi^2 / df = .984$; GFI = .985; AGFI = .962; CFI = 1.000; RMSEA=.000), the results have shown a positive marginal moderating role of environmental hostility ($\beta = .166$; $p < .1$) in strategic orientation-performance relationship, providing a support for the hypothesis 3.

In a post-hoc analysis, we examined our findings with a supplemental hierarchical regression analysis, the results of which have supported SEM results, showing that the positive complementarity effect of the strategic orientation ($\beta = .312$; $p < .001$) is over and above their individual direct effects (EO: $\beta = .194$; $p < .1$; MO: .056, n.s.; LO: .081, n.s.). The moderation effect of hostility was also found to be positive ($\beta = .248194$; $p < .1$).

5. Discussion and Implications

The purpose of the study was to reveal the individual and the complementarity effects of EO, MO and LO on firm performance, examining the moderating role of environmental

hostility. The results from the statistical analysis lead to several principal findings, which are discussed below.

First, the analysis of individual effects model suggests that firm performance is primarily affected by EO. Entrepreneurial firms are more innovative, able to conduct risky activities and be proactive in the market (Covin & Slevin, 1989). Adoption of EO allows firms to discover and exploit emerging market opportunities, develop new products and services and quickly bring them to the market, which creates competitive advantage and can result in an increase in sales (Soininen et al., 2012). While EO is positively associated with firm performance, individual MO-performance and LO-performance relationships did not reveal significant results. In particular, as over time with the increased competition more and more firms become market-oriented, early MO adopters in the industry may be unable to further enhance their competitive advantage from having a high MO. Additionally, as MO has a greater focus on customer retention rather than customer acquisition, it may have a greater effect on firm profitability rather than sales growth (Kumar et al., 2011). Concerning LO, it may primarily drive qualitative rather than financial firm performance (Yilmaz et al., 2005).

Second, the results have shown that the combined effect of strategic orientations on firm performance was found to be positive, which implies that firms tend to simultaneously develop multiple strategic orientations to achieve better performance (Lonial & Carter, 2015). Furthermore, the combined effect of EO, MO and LO appears to be larger than the sum of their individual effects, which implies that these strategic orientations are complementary (Ennen & Richter, 2010; Milgrom & Roberts, 1995). Following the resource management perspective, the firm's ability to align several resources is crucial for value creation (Sirmon et al., 2007), and firms may benefit from the simultaneous adoption of EO, MO and LO, achieving better sales performance.

Third, the complementarity effect of EO, MO and LO was found to be contingent on the level of environmental hostility, being stronger in the highly hostile environments compared to the non-hostile ones. When firms face with a number of threats in their external environment, the simultaneous development of strategic orientations may result in the ability to quickly act in response to the environmental challenges by identifying emerging market opportunities, acquiring superior information on the customers' needs and competitors' actions, and challenging the current norms and behavior.

A general practical implication of the study is that managers of firms should develop multiple strategic orientations simultaneously to experience their complementarity effect on business performance, and construct models of firm strategic behavior in different ways taking into account contextual peculiarities of the markets.

6. Limitations and Further Research Directions

We are cognizant of several limitations of our study, which need to be borne in mind when interpreting its results. First, data on strategic orientations and firm performance were collected at one point in time which may pose difficulties to assess of causality links between the variables. Second, the study was based on the sample of firms collected from Finland and Russia, and replication studies using different samples will improve the external validity of the findings. In this study, we investigated the role of environmental hostility as a moderator of the relationship between combined strategic orientations and firm performance. Further research may consider investigating other contextual variables (external and/or internal) which may also moderate the relationship between strategic orientations and firm performance.

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Aleksandra K. Bordunos,
Doctoral Researcher, Organizational Behaviour and HR Management Department,
GSOM,
abordunos@bk.ru

Sofia V. Kosheleva,
Professor, Organizational Behaviour and HR Management Department, GSOM,
kosheleva@gsom.pu.ru

The role of external Human Capital Management reference models in improving performance by companies operating in Russia

Abstract: Theses provide results of the research that defines possibilities and problems in application of external Human Capital Management reference models in Russia, focusing on banks. Driven by social constructionist paradigm and Institutional Theory, we adopt a multimethod approach to refine conceptual grounding of the topic, to analyze disclosed measurements of success and role of employees' related practices in competitive advantage. The results suggest low acceptance of external Human Capital Management models as a reference for auditing, although reveal far-reaching possibilities and perceived value of them for learning and development perspectives.

Key words: *reference model, disclosure, human capital management, Russia, emerging markets, cHCM strategy*

Introduction

The **goal** of our research is to explore role of external corporate Human Capital Management (cHCM) reference models in improving performance for companies operating in Russia. Expected **outcome** is to identify possibilities and problems in their application.

Human Capital (HC) theory derives from the macroeconomic development theory, owing to scientists Theodore Schultz and Garry Becker. Khan et al. (2015), explaining how it is perceived on firms level, decompose HC in three categories: general HC, HC specific to the firm and HC specific to the task. The cHCM strategy refers to a systemized set of firm's initiatives helping to discover and improve employees' talents, gifts, knowledge, skills, abilities, attitudes, health, wellbeing, etc., covering in different proportion each of three mentioned by Khan et al. categories. Analysis of literature review allows to identify at least two motives to apply cHCM. Firstly, it should lead to higher productivity, involvement or/and commitment of the employees, as a mean for improving firm's performance. Secondly, it has to provide sustainable support in employees' wellbeing. In a sense it is very similar to "human resources management" (HRM), although the term HRM often misleads to illusion of a central role of HR manager, while cHCM implies split responsibility between top managers, direct managers, HR managers and employees. Withal shift to "cHCM" is expected to resolve insoluble debates about suitability of success measurement methods (Theeke, 2005), which has started in 1960 and recently brought to a preference of "soft" metrics. Institutionalists (e.g. Schwan, 1976) empirically proved that company's value for stakeholders depends not only on cHCI success results, but mostly on the fact of disclosing employees' related facts, even in a narrative manner, driven for instance by a positive accounting recommendations, e.g. 3BL (Elkington, 2004), GRI (2006), HERO (Salanova et al., 2012). However, using "soft" metrics is suspected to be a convenient instrument for manipulation to increase political power of HR department or to legitimize firm in a response to the external environment requests. Henceforth, debates about the role of external reference models gained its relevance and resonance. There is a national cHCM standard in Russia - GOST R "System of national standards in the field of personnel management", although it is not disclosed yet (2015). Additional attention to Human capital was brought by "New national policy of civil service leadership reserve", and the "Concept of the long-term socio-economic development of the Russian Federation until 2020", by highlighting a need to ensure the effectiveness and elasticity of the labor market, alongside with a high quality of the human capital (HC). The Concept discloses high labour costs and low productivity caused by institutional voids and immaturity in managing staff, suggesting corporate and non-government organizations to share with civil service HC related duty. This is another reason that motivated us to select cHCM strategy as a core for **the research unit of analysis**, instead of more narrowed "people/talent management" (PM/TM) or "human resources/human capital development" (HRD/HCD) approaches.

In our **methodology** we follow social constructionist paradigm (Burkitt, 1996) as a basement for main epistemological assumptions. Social constructionism relies more on viability (Raskin, 2012), then reliability or validity. We divide our research into four steps, based on research questions (they will be presented at the corresponding part of the theses). Complex structure led us to the multimethod design. The steps order was inspired by Mats Alvesson's division of perceived reality into three layers: 1). Ideology, which is "shaped by better minds", but "not credible"; 2). Hyper-reality, which is "embellished for aesthetical reason perception of reality"; 3). Perceived real life, which is considered as boring, thus usually barely disclosed.

Three out of four research steps refer to banks operating in Russia as main **empirical units**, due to its higher transparency, big diversity, turbulent environment and important role for Russian economy. We focus on the cHCM related information disclosed in annual reports,

media, on career- and corporate web-sites. Main contribution contains moderate levels of both theory testing and theory building for a very particular sector. So the third step represents an attempt to bring up initial findings to the national level, although this part is still in progress, so only initial findings will be introduced. The fourth step links results of the empirical investigation with the ideology.

At the concluding part of the theses we illuminate contribution in more details, providing summary, discussion, conclusion and further steps.

Part 1 //“Hyper-reality”¹//: Banks in Russia generally prefer similar cHCM approach

The task is to formulate possible external reference set, taking as main inputs a snapshot on how banks in Russia perceive their cHCM strategy and how they postulate success in it. We also controlled for matureness of the process, by answering four key Hammonds’ (2005) questions, as low matureness of cHCM could mislead us from spotting exact patterns which should enable us to state existence of a particular Reference model.

Methodology. Specificity of the empirical unit assumes possible embellishment of the disclosed data and low awareness on the unit of analysis from a conceptual perspective. Thus we applied theoretical thematic analysis on a latent level (Braun & Clarke, 2006). It guided us through a precise data set examination to find repeated patterns of meaning. The method is based on a constructionist paradigm and thus helps to examine the underlying ideas, assumptions and ideologies, which are theorized as shaping the semantic content of the data, regardless initial motivation of individuals involved. Following a random sampling approach we selected 21 banks for analysis. Table #1 (Appendix) provides information on the sample. Almost half of the banks are medium-sized banks, the third part is represented with large banks, another three representatives are small banks, and one bank does not disclose employees amount due to license withdrawal. We consider our sample as well-balanced except from the equity structure.

Findings. Analyses revealed high homogeneity of the cHCM approach across the firms, except from Gazprom Bank with seeming clustered approach. Generalized cHCM model would be comprised of: 1). market-oriented performance-based *compensation and benefits system*, where individual part of bonus would depend mostly on position and overall corporate success than individual contribution, with detailed frequently revised policy with title close to Bank Vek’s “About the management and assessment of the risks of financial motivation”; 2). “Know your employee” PM approach (a title is referring to Marine Bank’s staff policy), when employees are considered to be a part of a potential operational risk (rarely reputational, law or labour risks), with instructions for every position and process, MBO and KPI based planning and with high orientation on productivity and key facts awareness assessment followed by online or classroom training to cover the gaps; 3). *recruitment strategy* involving high relying on experts from the external labour market, especially for a leadership position; 4). employees’ *well-being initiatives* comprised of engagement in holiday events or charity, like in NovikomBank recognizing crucial role of employees who were “collecting donations for seriously ill children, were holding lectures on financial literacy in orphanages, were organizing humanitarian aid for IDPs from Ukraine, donated blood, volunteered for St. Alexievskaya hermitage”. There is an evident void of information about *e-HRM, effective communication and people involvement strategy*. Only two banks mentioned engagement as their key mean of strategic success – Accent bank (without additional explanations of the meaning though) and GazpromBank considering it as part of maximization of ROI in personnel within initiatives aiming to foster innovation potential of employees. Implied reactive role of employees, leads to perception that success is mainly driven by the owners of the banks, and by the top management. SBI bank even explicitly states that market

¹ The research was held in June-September 2015, the data set involves annual reports for 2014, career and corporate web-sites of financial institutions operating in Russia.

attractiveness of the bank is driven as well by personal connection between shareholders, top managers of the bank and heads of organizations which are potential customers of the bank. If companies include pictures to reports, there are usually an owner, a Board Chairman and other representatives of top management. Prevalence of monetary focus in disclosed cHCI related information, central place of cost-cutting strategy and controlling for salaries benchmark, supports fear of K.H. Hammonds (2005) about forfeiting long-term value for short-term cost efficiency. Successes in HR area were more vividly described with connection to areas outside of bank's core activities, like charity. The word "efficiency" with regards to employees was used mainly without explanation or without supporting it with numerical evidence. HR managers seem loaded with tasks related to labour related regulations, holidays for employees and charity.

Conclusion. The processes are mature enough to provide needed snapshot, but due to high homogeneity the cHCM strategy companies cannot use it for valuable competitive advantage.

Part 2 // "Perceived reality"² //: Disclosed cHCM measurements are not informative

The task. At the previous stage we discovered high homogeneity of cHCM strategy. We assume that it might be a result of overall high homogeneity of banking performance. So the goal of this step is to explore level of homogeneity in banks' efficiency, and to challenge expediency behind disclosed cHCM measurements.

Methodology and findings. Broad institutionalist tradition states that preferences of HR practices and willingness to disclose them are conditioned by the national context, through coercive (forced), mimetic (copied from best-achievers) and normative (shaped by business area) forms of isomorphic adjustments (DiMaggio&Powell, 1983). For example, due to coercive isomorphism, banks measure costs related to compensation and training initiatives. This could lead to discovered before dominance of corresponding cHCM practices. To reach our goal we collected the most commonly disclosed data. At the first stage we calculated technical efficiency of each bank, in order to check level of homogeneity in performance. On the second stage we apply regression analysis to explore expediency behind disclosed evidences of cHCM initiatives.

Firstly, we applied SFA (Kumbhakar&Lovell, 2000). This method is based on a production function, expressing the maximum amount of output (y – log income) obtainable from a given input bundles (x_1 – log wages, including salaries and social taxes, x_2 – log training, and x_3 – log other costs) with fixed technology. We performed analysis in Stata13, shifts from assumptions about half-normal (TE-h) to exponential distribution (TE-e) did not influence results strongly (Table#2). In order to check validity of the method (Weill, 2004) we correlated results for technical efficiency with ROA and ROE. The correlation was positive high and significant, so the results of SFA analysis are worth of being taken into consideration. We can state high homogeneity in technical efficiency, but it could be also explained with the small part of employees' related expenses among other costs. To obtain higher variety in technical efficiency, we applied DEA, following guidelines of Ji and Lee (2010). The variables were similar, only costs for employees' education and wages were added jointly. The efficiency is measured in terms of proportional change in inputs and outputs. In Table#3 we present results of DEA analysis and method validation.

Table2

Table3

² The research was held in December-March 2015, the sample was comprised of 150 banks with biggest amount of assets, which disclose number of personnel in the company. We used data for 2013: quarterly reports of the issuer of the securities, profit and loss account (Form 102), annual consolidated financial statements, ranking "Top 1000 Russian Managers", employer brand ratings: Leadership Index, ranking by headhunter.ru and "ECOPSY", Universum Top 100.

Variables	SFA, (TE-h)	SFA, (TE-e)
logWages	4%*	4%*
logTraining	0,7%*	0,7%*
logOther costs	95%*	95%*
TE mean	99,976%	99,86%
TE min/max	99,975%- 99,976%	99,856%- 99,875%
Correlation with ROE/ROA	75%*/ 77%*	87%*/ 87%*

Variables	CRS	VRS
TE mean/median	88,5%/ 89%	91,7% / 92%
TE min/max	73% - 100%	77% - 100%
Correlation with ROE/ ROA	26%*/ 31%*	23%*/ 26%*
Correlation with TE-h/TE-e	49%*/ 52%*	46%*/ 50%*

* 1 % significance level

Homogeneity is still high, but already enough diverse to move to regression stage, although validity of this method is lower. In regression to explain technical efficiency we used variables: percentage of employees with high education, average training expenses per employee, nomination in HR branding rating and employing professionals nominated for best employer rank. Only Top Employee ranking proved to be significant for such explanation and it has the highest beta coefficient (adjusted R-squared – 0,27%, n of obs.-102). Top 10 effective banks, whose employees are recognized as top talents are: UniCredit Bank, Alfa Bank, Home Credit Finance, Sberbank, VTB, VTB24, ReiffeisenBank, Bank of Moscow, Binbank and Prosvyazbank.

Conclusion. Two discovered facts could explain why banks treat employees within revealed before productivity-based cHCM approach: low portion of employees' related expenses compare to other costs and overall homogeneity of banks technical efficiency, when importance of financial capital is dominating over other capitals.

Part 3//“Perceived reality”³:// **Best companies rely on normative isomorphism in cHCM**

The task is to define possibilities and problems in utilizing external reference standards for leveraging matureness of a corporate Human Capital Management (cHCM) system. Additional priorities for the research is exploring if banking industry differs much from other business areas, and if there is a gap between Russian and foreign companies in terms of cHCM reference models acceptance.

Methodology. We focus on the real cHCM practices. To achieve high level of honesty within semi-structured interviews with insiders we used convenient sampling, although balanced it to gain ability to compare results. The article contains initial findings after first 4 interviews: FMCG and Pharmaceutical companies – are large well-known abroad and in Russia leaders on several market niches, which take care about all their stakeholders, including shareholders, customers and employees. Two engineering companies – are small firms successfully operating on a very narrow market niche for more than 20 years, doing sales, which requires special level of service and expertize.

Findings. The variety in answers was vast, although similarities were dominating:

- *Preferences in adoption of cHCM.* All companies stated that productivity-based cHCM reference model, revealed on the first stage, was a base – crucial for setting up, but not important for a corporate success. Only processes of the first reference model were adopted, but not attitude towards employees or values. Although all 4 companies stated that they have clustered approach towards staff: firms pre-define key employees, based on their function, and apply different strategy then to the rest. The most crucial outcome for key employees is engagement. From the rest engineering and FMCG companies expect only productivity, although FMCG company business- partner confesses that this is a matter of trust: as soon as

³ Research has started in May 2015 and is still on. The core of it should form 9 semi-structured interviews: 3 with HR Business Partners and HR directors of the best in their niche foreign companies operating in Russia (FMCG, Engineering and Pharmaceutical company), another 3 interviews with HR and Business leaders working in best in their niche Russian companies (FMCG, Engineering, Investment), final 3 interviewees are representatives of consulting services who's task is to comment on initial findings.

the whole factory proves readiness for its autonomy, showing high performance and effectiveness, its employees will be treated from the commitment perspective rather than from the productivity one. In the Pharmaceutical firm all of rest employees are treated from engagement perspective, although in a more controlled way, then key employees, which shows still big role of the productivity focus.

- *Who is responsible for HCM?* Absolutely all companies defined high role of managers in HCM, especially middle managers for large companies and directors for the small ones. All routinized administrative tasks were internally outsourced to provide HR responsible managers freedom and time to deal with strategic HCM tasks.

- *Possibilities and problems in utilizing external cHCM reference standards.* All four companies were skeptical about the initiative. Foreign companies (and Russian company with regards to foreign MNCs) shared high dependence on the headquarters in major initiatives. They confessed that adoption of external reference set could happen only as a request from the chief responsible for cHCM. Although this dependence makes effectiveness of such changes even harder, as just within current cHCM initiatives, which emerged internally, there is a big role of national context, and companies highly rely on the local HR directors in adoption of major initiatives to local needs. With regards to Russian companies all four interviewees agreed that there should be high will of the owner or share-holders in such changes, and current financial situation makes HCM changes not the first priority. Another main concern was about possible developers, testers and auditors. So the best alternative to creation of new national cHCM reference model is providing education to business leaders and top managers on how to manage HCM and raise awareness about existing models as examples to learn from without a need to be audited.

Conclusion: cHCM related processes is still a black box even for HR leaders, mimetic isomorphism is dominating, although changes are welcomed, merely not from coercive, but normative isomorphism.

Part 4//“Ideology”//: cHCM reference set moderates transferring of inputs to performance

The task is to define and illustrate ideology behind external cHCM reference models, qualifying it for the Russian context.

Methodology. This part is based on analytical literature review about external reference set. Comparison of existing reference models leads to impression that they contradict each other, like Watson Wyatt’s HCI contrary to British “Investors in People” or Irish “Excellence through People” highlights negative relationship between corporate performance and employees’ access to training needed for career advancement or enhancing communication as a key goal in implementing HR Service technology. McCracken and Wallace (2000) hypothesize that the reason might lay in cHCM matureness. Posthuma et al. (2013) provide additional insight on the reason in their review of High Performance Work Practices (HPWP) related articles – to overcome contradiction companies should firstly strive for alignment of underlying HR reference set with the organizational architecture: corporate ideology with HR principles, strategy with policies, tactics with practices, corporate capabilities with employees’ competencies. Thus, the idea behind effectiveness in cHCM leads to two steps action: 1). match selected cHCM approach with the corporate strategy; 2). ensure matureness of the processes within adopted reference model.

On top of that, for companies Kaplan and Orlikowski (2014) define the most crucial challenge is “making strategy under the uncertainties posed by turbulent environments, intensified competition, emerging technologies, shifting customer tastes and regulatory change”. Barlett and Ghoshal (2002) put attention to bigger barrier - managers’ outdated understanding of strategy, failure to recognize changes in both external strategic imperatives and internal strategic resources, many companies continue to have outmoded strategic perspectives. So, pure match between applied strategic objectives and implemented cHCM approach is not enough for competitive advantage, but high matureness of cHCM might start shaping strategy (McCracken and Wallace, 2000).

Barlett and Ghoshal predefine three main options for strategic objectives – the most widely spread is a competitive strategy model - in it most of today’s leaders were trained. The second strategic objective became popular after 1980th and is focused on an internal-competency assessment and search for resources and capabilities, which could be more difficult to imitate. Final objective is based on continuous self-renewal. Such attitude allowed Ingham (2007) to define which cHCM approach is driven by each of three corporate competition strategies. He does not name them, but preliminary literature review allows us to correspond:

1) the set, driven by defensible product market position as strategic objective, to Productivity-based HR configuration (Lepak&Snell, 2002), Transaction-based HR practices (Tsui et al, 1995) and other High-Performance Work Practices inspired by “taylorism”, neoclassical and neoinstitutionalists assumptions. We will entitle it **the *Productivity-based cHCM reference set***. Examples of external reference models corresponding to this cHCM strategy are ISO 9001 up till 2015 (EU), GOST-ISO 9001 (Russia). Whitener (2001) classifies the set as “control” practices, which aims to increase efficiency and reduce direct labour costs, so they are based on strict procedures, sanctions and base reward on the output. This is the reason why Kaman et al. (2001) entitled the set as “bureaucratic” HRM practices and explained their role in helping managers to formalize their expectations towards employees. So we hypothesize that due to special requests from Russian Labour Law to bureaucratize HCI related practices, this set will be dominating for companies operating in Russia.

2) the set, driven by sustainable competitive advantage as strategic objective, to Commitment based HR system (Collins and Smith, 2006), Commitment-oriented HRM system (Zhou et al, 2013), Commitment based HR configuration (Lepak and Snell, 2002),

High Commitment approach (Walton, 1995), High Commitment HRM practices (Bryson et al), High-Commitment Management (Wood 1996) and other High-Performance Work Practices inspired by Resource-Based View concept. We will entitle it **the *Commitment-based cHCM reference set***. Examples of external reference sets corresponding to this cHCM strategy are Investors in People (UK), Excellence Through People (Ireland), AS GB 027.2-2006 managing human resources (Australia), HB 190-2006 Success through knowledge, PAS 2001:2001 Knowledge management, PD 750(0-6):2003 Knowledge management, NF X50 190:2000 Knowledge asset management, DIN PAS 1062(3) Implementing knowledge management, SA 8000:1997 «CSR», ISO 26000:2010 “CSR”. Whitener (2001) classifies the set as “commitment” practices implying focus on increasing effectiveness and productivity through ensuring conditions that encourage employees to identify with the goals of the organization and work hard to accomplish them. In the Strategy of Innovative Development of Russian Federation 2020 learning and absorption of foreign practices and technologies was mentioned as a main strategy, so we hypothesize that this cHCM reference model might become aspirational for Russian companies, although we do not expect fast shift from the first reference model.

3) The set, driven by continuous self-renewal as strategic objective, to Collaborative-based HR configuration (Lepak and Snell, 2002), High Involvement Management (Forth et al, 2004; Lawler et al 2003), High-Involvement Management Practices (Bryson et al, 2005) and other High-Performance Work Practices inspired by ideas of Deming and, Lean philosophy, Shumpeter and Blue ocean strategy, etc., so we will entitle it **the *Involvement-based cHCM reference set***. Examples of external reference sets corresponding to this cHCM strategy are ISO 10018:2012 (EU), HB 10143-1997 total quality through people (aviation), ISO 9001 since September 2015, etc. Guy and Michel (2007) notices that higher involvement helps stand out in turbulent environments and is achievable by several drivers, for example: empowerment (through increased tasks involvement companies increase intrinsic motivation, which leads to faster problem-solving), competence development (job rotation, mentoring and development can foster innovative work behaviour), information-sharing practices (synergizes working relationship), fair reward practices (especially important for service firms). Due to vague financial perspectives we hypothesize that companies will not be focused on this cHCM, but will include small proportion of it for a particular category of employees, like IT or Marketing department representatives.

In order to illustrate each of the discussed above reference sets, we purposefully selected three the most vivid and homogeneous examples of its implementation by companies operating on the Russian market: Bank of Moscow (BM) for the first cHCM, Goldman Sachs (GS) for the second and bank Tochka (BT) for the final one, based on Lepak and Snell (2002) survey. However we had adopted it to the initial Ingham (2007) ideology, as the authors partly merged the second and the third reference models into one reference set.

Bank of Moscow is state-owned company through VTB Bank. It employed 9 thousand employees and served 120 thousand corporate clients and 9 million private users. The role of employees is similar to mechanical metaphor for “taylorism”: “it shares that employees are a wheel of the bicycle, where the second wheel are customers”, and highlight that employees could also be customers. The headquarter is in Moscow.

Goldman Sachs operates on 4 banking niches: 1. Investment banking; 2. Institutional client services; 3. Investing and lending; 4. Investment management. Top management is focused on all best practices, for instance, HCM department is responsible for attracting, development and management of employees – “biggest asset” of the bank, departments like the Global Leadership and Diversity team, Talent Assessment Group and Graduate Recruitment managers replaced more common HR structure. The headquarter is in New York. In Moscow operates one office with 72 employees, although totally 32 000 employees.

Bank Tochka (previously known as Bank24.ru) operated as a monoliner, after 2014 was embedded into Open Bank (rus. “Otkrytie”). Before been acquired, it employed almost 1000 people, served more than 35 000 active customers, the headquarter was in Sverdlovsk region.

Findings and conclusions. Even though banks do not reveal full information needed for checking all markers, it is already evident that banks employ one cHCM reference set as the main one and could borrow from other reference models words, concepts, practices and other fragments. For instance BM and GS disclose several facts about employees’ engagement into innovations. Although from additionally disclosed details it is evident that in the first case company restricts employees involvement, and in the second case innovation is perceived as the outcome of the lifelong learning; in both cases innovations needs are centered around core banks’ challenges rather than driven by intrinsic motives. Besides, our analysis did not reveal high awareness of cHCM reference models in Russia.

Conclusion

Summary. By research we aimed to define possibilities and problems in utilizing external reference models for a corporate Human Capital Management in Russia. Driven by social constructionism paradigm and Institutional Theory we came to a conclusion about the preference of external reference models to other methods of measuring effectiveness of cHCM activities. We indicated three major models, which could possibly become part of a national standard, moreover that companies operated in Russia already apply them.

As main problems we identified low awareness of alternative cHCM models, low perceived role of employees in achieving success, lack of sustainable corporate strategy, skeptical attitude towards external standards (especially national), intuitive corporate Human Capital Management – lack of deliberate strategic approach, high dependence on top management and headquarter decisions.

As main possibilities we identified perceived value of external reference models for learning and development perspectives – to develop managerial competencies and help HR leaders to develop conscious strategies, aligned with corporate strategic objectives.

The first part of the research highlighted high dominance of the productivity-based reference set. Observed lack of diversity within sample makes HR reference set rather operational tool then a method for gaining strategic advantage.

The second part confirmed our guess about limited possibilities for employees to bring valuable contribution, although made possible to form best-achievers sample for further in-depth research.

The third part revealed institutional void in advancing HCM practices, so companies highly rely on normative isomorphism – placing outcomes of cHCM related research in the learning and development niches.

The final part linked findings with literature review, revealing high similarity on the conceptual level, but difference in perception of its usefulness.

Discussion. Initially external reference models were created as a solution against possible opportunistic behavior of firms (externally) and HR managers (internally), although this issue was not relevant for any of observed by us firms. Within Russian context the opposite challenge became more important – despite the choice of cHCM model, companies tend to mimicry towards Performance-based reference set. Explaining the reasons behind could be part of other researches.

For different parts of our research we used different approach towards sampling: we used random sampling to observe hyper-reality, convenient sampling to find true beliefs of HR managers and finally purposeful sampling during deductive approach. Methodological discussion about role of sampling could become part of other researches. From our perspective purposeful sampling provides more vital results, meaning that same method

applied for the part one of our research, but with sampling comprised of banks selected based on the method applied for the part two, would intensify role of other cHCM models as mean of ensuring competitive advantage.

Contribution. The research contains moderate levels of both theory testing and theory building. We managed to match outcomes of previous empirical investigation of HPWP with predefined by Ingham J. (2007) three reference models, which helped us to entitle three cHCM options. We also qualified applicability of each of them for Russian context and analyzed acceptance of HR professionals of the very idea to use them as external reference model.

Further steps. The role of the research was to qualify the role of cHCM reference set in improving performance. It was done on theoretical level, so the next step will be in creating survey to test qualified concept (Image 1) within quantitative study.

High dominance of the productivity-based reference set makes topical qualitative exploration of the other two models – how companies operating in Russia cope with general expectation to observe the first cHCM model, while more valuable competitive advantage, as hypothesized, will provide the other two.

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Appendix

Table 1: Comparison of sample with overall range⁴

Area of comparison	Sub-category	In Sample		Overall range		Difference
Location	<i>Central Region</i>	57%	12	60%	505	3%
	<i>Other</i>	43%	9	40%	337	
Not active		5%	1	10%	86	-5%
Groups based on assets netto	<i>1-5</i>	4,8%	1	0,6%	5	4,2%
	<i>6-20</i>	4,8%	1	1,8%	15	3,0%
	<i>21-50</i>	4,8%	1	3,6%	30	1,2%
	<i>21-200</i>	23,8%	5	17,9%	150	5,9%
	<i>201-500</i>	33,3%	7	35,8%	300	-2,4%
	<i>501 and more</i>	28,6%	6	40,4%	339	-11,8%
Equity structure	<i>Russian</i>	95%	20 (2 are ex foreign)	609	73%	22%
	<i>Includes foreign investment</i>	5%	1	225	27%	
Credit organization	<i>Banks</i>	95%	20	783	94%	1%
	<i>Not banks</i>	5%	1	51	6%	

Table 4: Comparison of cHCM reference sets in literature review with disclosed ones (truncated)

Item	Productivity			Commitment			Involvement		
	Reference	BM	Comments and examples	Reference	GS	Comments and examples	Reference	BT	Comments and examples
General markers: your company...									
<i>...is strongly affected by highly turbulent environment</i>	V	V	First was acquired by VTB, in 2016 will be merged with VTB with the loss of brand	R	R	In 2013 Russian government hired GS to improve investment image of Russia	V	V	In 2014 banks' license was withdrawn for “suspicious transactions and loss of liquidity”, the bank merged with Open Bank (rus. “Otkrytie”)

⁴ For random selection we firstly used randomus.ru/num901119 to select 20 banks. Bank Lada-Credit is highly associated with Novikombank with more mature practices, so the last one entered the sample instead. After comparing distribution of banks within 6 groups based on assets netto in the sample with the corresponding national distribution, we decided to add one more bank into the sample as we missed representative from the first group (randomus.ru/num902633). National data is based on the cbr.ru.

<i>...produce highly innovative products, opening new niches</i>	<i>R</i>	<i>R</i>	Support innovations of other companies by offering them special treatment				<i>V</i>	<i>V</i>	Bank nurtured “Knopka” project which eventually grew into independent company. Top solutions in remote confirmation. Despite refusal from credit cards and deposits bank entered top100 profit ranking list among banks.
<i>...refers to employees as</i>			Wheel, client		Assets				Team

V – applied, R – reversed coding

Bystrova Julia
PhD student, Strategic and International Management Department,
St.Petersburg University GSOM
juliatus@mail.ru

Shirokova Galina
Professor, Strategic and International Management Department,
St.Petersburg University GSOM
Director of the Center for Entrepreneurship, GSOM
shirokova@gsom.pu.ru

New venture changes and performance: configurational approach.

Abstract: This study is designed to shed light on the relationship between different types of organizational changes and performance of Russian new ventures. The objective of this paper is to define and analyze the peculiarities of various types of organizational changes in new ventures and to examine their influence on firms' performance implementing configurational approach. Hypotheses on the relationship between new ventures' performance and four types of changes introduced specifically for new ventures by authors such as administrative, technological, marketing and changes to secure legitimacy are developed for econometric analyses. Findings make theoretical contribution extending knowledge of specific types of organizational changes in new ventures and direction of their influence depending on configurations of relative types.

Key words: *Organizational change, new venture, firm performance, emerging markets, configurational approach.*

Introduction

Today we are living in a constantly growing and dynamic global business environment, where change has become the norm and rule for organizations in order to sustain their success, existence and competitive advantages. Organizations are constantly striving to align their operations with a changing environment (Ackoff, 2006; Burnes, 2004; By, 2005; Hailey, Balogun, 2002; Kotter, 1996; Mintzberg, 1979; Moran, Brightman, 2001).

Business has entered a new era of hyper-competition, shifting dramatically from slow-moving and stable to complicated and unpredictable environments in which competitive advantage is no longer sustainable over the long term (D'Aveni, 1994). Instead, advantage is continually created, destroyed, and re-created through strategic maneuvering and organizational change by new ventures (Griffith, Harvey, 2001; Lichtenthaler, Muethel, 2012).

New ventures are of particular interest for the investigation of the relationship between organizational changes and their performance, primarily because through changes they interact with business environment, gain experience, learn how to avoid errors and improve performance indicators in the future (Nicholls-Nixon, Cooper, 2000). Usually, at the stage of new firm creation entrepreneurs already have some expectations about business environment, but unfortunately they are not always correct and thus changes represent an opportunity to adapt the business environment conditions (Bhave, 1994; Cassar, 2010). Because new ventures have constantly to maneuver between survival, death and growth changes are more common phenomenon for them, rather than for large companies.

In response to the rising theoretical and empirical interest in new ventures, there is an important question: "How and why different types of organizational change influence the performance of new ventures?" The objective of this paper is to define and analyze the peculiarities of various types of organizational changes in new ventures and to examine their influence on firms' performance implementing configurational approach.

Recent studies (Damanpour, 2010) introduce the integrative view, which advocates that instead of continuing to search for how each change type can be individually understood, future research should focus on examining the relationship based on change types synchronously introduced (Damanpour, 2010).

Of course market failures are the norm rather the exception and development is based on trial and error processes (Kiss, 2010). Therefore it is supposed to provide a deeper insight into special features of new ventures in the Russian context for comprehensive analyses and better understanding. Based on these special characteristics it is obvious that specific types of organizational changes should be considered for them. The empirical part will focus on Russian new firms, which are defined as firms at the age from 1 to 8 years. Special classification of organizational changes for new ventures is developed and introduced in this paper.

1. Theory and research hypotheses.

There are a number of reasons why new ventures consider organizational changes as a primary tool for adaptation to business environment. Changes in new ventures are associated with dynamic capabilities, which are defined as a firm's behavioral orientation to constantly integrate, reconfigure, renew, re-organize, and re-create internal and external resources and capabilities and, most importantly, to upgrade and reconstruct their operational capabilities in response to rapidly shifting market environments in order to attain and sustain a competitive advantage (Teece & Pisano, 1994; Teece et al., 1997; Winter, 2003). Such capabilities enable new ventures to adapt to complicated business environments (Teece, 2007). Zahra et al. (2006) conclude that there are differences between value and meaning of organizational changes in new ventures and the same changes in established companies.

Organizational changes force the development of new operational capabilities and can be considered as an important source of sustainable competitive advantage (Zahra et al., 2006; Salunke et al., 2011). Through effective dynamic capabilities, business firms are able to transform information into innovative products, services, and processes, thus leading to better technical and administrative outcomes. There is quite much significant evidence in number of studies on organizational changes (Lee et al., 2002; Zahra, George, 2002; Zott, 2003; Jantunen et al., 2005; Wu, 2007).

For example, Lee et al. (2002) elaborate on Schumpeter's concept of creative destruction, believing that changes are a source of sustainable competitive advantages. Zahra and George (2002) find that changes influence the nature and sustainability of a firm's competitive advantages. Zott (2003) shows that readiness for changes of new ventures create and shape their resource positions and capabilities, which in turn determine performance.

The preceding arguments suggest that new ventures may use dynamic capabilities to influence their behavior and to add greater value in developing new capabilities so as to introduce new products, services, and management systems in response to the environment so as to achieve better outcomes (Wang & Lin, 2012).

1.1. Definition and characteristics of new ventures.

In the academic literature there are quite many approaches to define new ventures. Some researchers base their definition of new venture on the age of the company (Batjargal, Hitt, Tsui, Arregle, Webb, Miller, 2013; Hao, Alon, Chun Kwong Koo, Yu Cui, 2013; Amason, Shrader, Tompson, 2006; Ostgaard, Birley, 1996; Zahra, 1996; Brush, 1995; Reynolds, Miller, 1992), while others take into consideration the stage of the life cycle of the organization (Klotz, Hmieleski, Bradley, Busenitz, 2014; Chrisman, Bauerschmidt, Hofer, 1998), and some combine both approaches (Shirokova, 2007).

Based on different approaches to definition of new ventures we suggest to understand under new venture the company at the age from one year to eight years that is in the first stage of its life cycle and is the end result of the process of creating and organizing a new business that develops, produces, and markets products or services to satisfy unmet market needs for the purposes of profit and growth.

According to existing literature new ventures often suffer from various liabilities such as 'liability of newness', which means that "a higher proportion of new ventures fail than old" (Stinchcombe, 1965, p.148) because of their limited resource capabilities, liability of smallness (Aldrich, Auster, 1986) and liability of adolescence (Fichman, Levinthal, 1991; Bruderl, Schussler, 1990). Researchers suggest that liability of newness include a new venture's lack of legitimacy, lack of routines and capabilities, lack of stable links to clients, supporters, or customers, lack of experience, and lack of limited resources (Stinchcombe, 1965; Carroll, Delacroix, 1982; Freeman et al, 1983).

Aldrich and Auster (1986) by liability of smallness supposed that populations of larger organizations have lower risk than small ones. In addition, the small size of the firm makes it unstable to the dynamic market changes (Kale, Ardit, 1998).

In 1990 Bruderl and Schussler were the first who introduced the term "liability of adolescence", according to which the level of risk of firm losses or failure grows in the initial stages of life cycle and then significantly reduces. Thus, the relationship between the risk of failure and the age of the firm appears in inverted U-shaped dependence (Henderson, Twerski, 1999).

Thus, all these characteristics can be somehow classified by dividing into two groups: (1) main characteristics and explaining and (2) arising characteristics.

To the main characteristics can be attributed various liabilities: "liability of newness", "liability of adolescence" and "liability of smallness".

Into the second group of characteristics such as explaining to “liability of newness” and “liability of adolescence” and as arising due to “liability of smallness” and “liability of newness”: lack of resources, lack of legitimacy, growth orientation, imprinting, owner dependence can be included.

1.2. Types of organizational changes in new ventures.

Change type can be defined as the essential characteristics that describe the kind and form of change and the qualities that make change what it is. This study proposes that when the change type is clearly identified, then a manager can choose the most appropriate

An analysis of research on organizational change shows that scholars have long studied typologies of organizational change and the characteristics of various types of such change. The majority of such studies distinguish between incremental and radical change (evolutionary and revolutionary, cumulative and discrete). This distinction was first made in the early 1970s, when Watzlawick et al. (1974) introduced the concept of first- and second-order changes. The former was understood as ‘a variation on a basic theme,’ the latter as a critical breakthrough not related to the past. This classification seems somewhat general, and it may be interpreted as related to content and process, or to both simultaneously. On one hand, this is an obvious advantage of this classification (high degree of generalization); on the other hand, it creates some confusion in the literature on organizational change.

Meyer et al. (1990) classifies change types based on two dimensions. The first dimension is the level at which change is occurring: the organization’s level vs the industry level. The second dimension is the type of change taking place: continuous change vs discontinuous change. Goes et al. (2000) classify change based on three dimensions. The first and the second dimensions, as in Meyer et al. method, are the level and type of change. The third identified dimension is the mode of change: deterministic and prescribed vs generative and voluntary in type. Such classifications and other organizational aspects have been considered when developing the change types in the taxonomy shown of this paper. Change types are grouped under two categories: scale of change and duration of change.

In the context of new ventures important to consider their characteristics which were discussed earlier. Existing change classifications and other organizational aspects of new ventures should be considered while investigating changes in new ventures. Thus we introduce for further analyses developed classification of organizational changes specifically for new ventures.

Our classification contains four types of organizational changes in new ventures: (1) administrative, (2) technological, (3) marketing and (4) changes to secure legitimacy, based on two dimensions: (a) level of OC (organizational and functional) and (b) focus of OC (internal and external effect).

In administrative organizational changes we include changes in organizational structure and administrative processes, which relate indirectly to the basic work activities of an organization and are more directly related to its management (Damanpour, 1991; Tsoukas, 1996). Important to mention that unlike technological changes they do not require much additional resources.

Various institutions of the environment cause firms’ responses. It is generally accepted that, regardless of the type of responses, the main goal is to adapt to the institutional structures and firms’ attempts to gain a competitive advantage (Farashahi, 2009). This goal can be achieved through administrative organizational changes by adjusting work on specifics of business and institutional environments. Tsoukas and Chia (2002) further argue that, in the current turbulent environment, change may constitute reality, and organizations must embrace change more openly and consistently to achieve superior performance. Moreover in case of Russia it is characterized by low management, as many other developing countries according

to the recent study conducted by the European Bank for Reconstruction and Development (EBRD) (Diversifying Russia..., 2012). Therefore administrative changes can be also perceived as a way to compensate lack of management knowledge and experience through cut and try method. Based on this evidence, we suggest the following hypothesis:

Hypothesis 1. *Administrative changes are positively associated with new venture performance in emerging markets.*

By technological OC we suppose changes concerning products, services and processes (Damanpour, 1991; Brown, Duguid, 1991). Technological change is a risky decision, due to required significant investments, so managers must have legitimate reasons and compelling incentives to break their existing routines. In support of technological changes firm-level studies have found that successful firms are those, which can manage to innovate (Golikova et al., 2008). As Brown and Eisenhardt (1997) observe, many successful firms, such as Intel, 3M, Hewlett-Packard, and Gillette, have undertaken constant, rapid changes, particularly in their new product development.

Majority of emerging market countries are in a difficult position in relation to global competitors. They are squeezed between hi-tech Europe and low-wage Asia. For instance Russian manufacturing and service sector companies face strong competition in terms of product quality and market price in the global market (Frye et al., 2009). Supposed negative impact of technological changes can be also hidden in low level of technological development in emerging markets. Russia according to the recent research of EBRD lag behind developed countries in technological innovations (Diversifying Russia..., 2012). The historic underdevelopment of the service and manufacturing sectors left them ill-suited to make the transition to a more market-oriented economy (Frye et al., 2009). Based on these arguments we propose next hypothesis:

Hypothesis 2. *Technological changes are negatively associated with new venture performance in emerging markets.*

Marketing changes represent changes in the way of sale of goods and services, including distribution channels, pricing, advertising campaign of the company, positioning of goods or services on the market, as well as the selection of the target segment. Marketing policy of the organization is made up of marketing techniques and concepts that are closely linked with each other (Xiao, 2014).

According to (The Business Environment ..., 2012), marketing changes include: the use of various advertising and promotion practices of goods or services, such as the use of new media, presentation to the end user of the new brand image, logo or trade mark; the use of a new method for the product or service, or the range of other channels and markets, which may include, for example, the licensing of the goods or services, franchising, switching to direct sales, internationalization; changes in pricing strategies; differentiation of product or service.

Effective marketing strategies and techniques allow companies to obtain competitive advantages, to capture new segments and additional share of the relevant market. Due to lack of experience and knowledge in new venture in this area the only right way would be to experiment – to conduct permanent changes of marketing practices in order to find and sustain the target segment of the market, distribution channels, develop the effective pricing policy. Following this discussion, we propose next hypothesis:

Hypothesis 3. *Marketing changes are positively associated with new venture performance in emerging markets.*

New ventures usually suffer from lack of legitimacy. In turn, for the execution of the strategic choices new venture needs enough resources (Arthurs, Busenitz, 2006). To obtain these resources become one of the most difficult tasks for the manager during first stages of firm life-cycle, due to the lack of reputation, the insufficient level of legitimacy and an increased risk of failure in the eyes of potential resource providers (Brush, Greene, Hart, 2001). Zimmerman and Zeitz (2002) pointed out that the legitimacy could be considered as an important resource for new venture, since it provides access to other necessary resources for further success and growth. Delmar and Shane (2004) argue that attempts to get legitimacy by new venture significantly reduce the risk of failure and facilitate the transition to the next stage of firm life-cycle.

Thus, for the new venture is very important to obtain legitimacy as soon as possible. Legitimacy is "a generalized perception or assumption that the actions of the subject of legitimate, useful and appropriate within a particular social system of norms and values»" (Suchman, 1995, p. 574). Thus, change to secure legitimacy is change, the purpose of which is to achieve the recognition of the new firm and obtain reputation in the eyes of other business players. Legitimacy significantly increases the chances of success, as the company gains access to previously closed resources (Shepherd, Douglas, Shanley, 2000; Chrisman, Bauerschmidt, Hofer, 1998; Singh, Tucker, House, 1986). This lead to the following hypothesis:

Hypothesis 4. *Changes taken by a new venture to secure legitimacy are positively related to new venture performance.*

Recent studies (Damanpour, 2010) introduce the integrative view, which advocates that instead of continuing to search for how each change type can be individually understood, future research should focus on examining the relationship based on change types synchronously introduced (Damanpour, 2010).

Based on this argument there was made a decision to implement configurationally approach in order to investigate how different combinations of different types of organizational changes may affect new ventures' performance. It make sense to follow this direction as it is obvious that usually while conducting one type of change as for example technological there is important and necessary to conduct simultaneously another type of change as administrative or change to secure legitimacy.

While conducting technological change usually it is necessary to obtain permission or a license. Introducing new product or service in order to avoid copying by competitors it is important to obtain a patent for maintaining competitive advantage. New ventures often tend for innovations (Blazenko, Pavlov, Eddy-Sumeke, 2012; Campos, José, Parellada, 2012; Lin, Li, 2013; Nambisan, Baron, 2013), which lead to introduction of radically new or significantly improved goods or services to the market. Due to "liability of newness" (Morse, Fowler, Lawrence, 2007; Li, Zhang, 2007; Turcan, in 2013; Bengtsson, Johansson, 2014), "lack of resources» (Dibrell, Craig, Moores, Johnson, Davis, 2009; Hatton, 2011; Rabbiosi, Santangelo, 2013; Danes, Craft, Jang, Lee, 2013; Nagy, Blair, Lohrke, 2014), "liability of smallness" (Thornhill, Amit, 2003, Cotae, 2011; Turcan, in 2013; Bengtsson, Johansson, 2014) mature companies represent threat of copying and legitimacy of new venture in this case can play important role in order to avoid copying.

Patents, licenses, different types of permits for certain types of activities necessary for production of goods and services and represent recognition of the actions of the subject (new ventures) legitimate, reasonable and appropriate in the social system of norms and values [Suchman, 1995]. Therefore, while technological changes are conducted in new venture, it is important to simultaneously obtain the relevant patents for products or services, permits for

the use of new equipment, licenses to make operations, etc. Thus we propose the following hypothesis:

Hypothesis 5. *The more changes to secure legitimacy new venture takes, the less negative is the relationships between number of technological changes taken by new venture and its performance.*

Administrative changes help to obtain legitimacy for new venture. The organization is considered legitimate if its actions, culture, processes and procedures fit into the established system of society values, norms, rules and beliefs (Dowling, Pfeffer, 1975; Suchman, 1995). When legitimate functioning of society will "provide support and approve of the existence of the organization» (Elsbach, Sutton, 1992, p. 699). Administrative organizational changes in new venture can be considered as an instrument to create necessary norms, rules and values corresponding to relative society, which will contribute to ensuring a higher level of legitimacy and, in turn, positively affect the performance of new venture. Thus, we introduce the following hypothesis for further testing:

Hypothesis 6. *The more administrative changes new venture takes, the less positive is the relationships between number of changes to secure legitimacy taken by new venture and its performance.*

While conducting marketing changes new venture obtain necessary experience in this field and find its place in the market due to the interaction with the participants of the business environment (Chiasson and Saunders, 2005; Sarasson et al, 2006). Usually this knowledge and experience is obtained through series of experiments. On the other hand in order to achieve legitimacy, it is necessary to create a "feeling" of the stability in the eyes of partners and other players in the business environment, to show sustainable position and confidence. Frequent changes in marketing, that directed to external environment may indicate dynamic nature and would not provide the "feeling" of stability and certainty in the eyes of the players in the business environment. Therefore we can make the following assumption:

Hypothesis 7. *The more marketing changes new venture takes, the less positive is the relationships between number of changes to secure legitimacy taken by new venture and its performance.*

Administrative changes are able to facilitate the technological changes and ensure the successful outcome (Barras, 1990; Damanpour, Evan, 1984). For new venture due to lack of knowledge and experience and limited access to financial resources in Russia for such firms (Doing Business ..., 2012) is particularly important in order to minimize risk of technological change to facilitate the process. Results (Zheng et al., 2006) show that the administrative changes indirectly by influencing the technological changes, can improve performance of the company. Therefore based on these arguments we propose our last hypothesis:

Hypothesis 8. *The more administrative changes new venture takes, the less negative is the relationships between number of technological changes taken by new venture and its performance.*

2. Methodology.

The empirical research is carried out on the basis of data from the Business Environment and Enterprise Performance Survey (BEEPS) conducted in 2012 by the European Bank for Reconstruction and Development (EBRD) and World Bank. For the first time survey was conducted in 1999 and covered approximately 4000 enterprises in 26 countries of Eastern Europe and Central Asia to get information upon the environment for private companies and business development. Since first round the survey was repeated 4 times approximately every 3 years. The goal of the surveys to get feedback from companies from Central and Eastern Europe, which represent emerging markets, about business environment and conditions, in which firms are operating. Overall one of the goals is to collect data period by period, in order to monitor changes in the business conditions and environment over the time. The survey includes questions, which reflect the conditions and quality of the business environment, information about firm's operations and represent relationships between companies, the country's environment and their various performance indicators.

The empirical research is based on the survey of the fifth round. The fifth round of the BEEPS started in Russia in 2011-2012, covering 4220 enterprises in 37 regions. Obtained data from this survey is coded and standardized. This allows using it further to suggest possible reasons for particular relationships between variables (different types of organizational changes and new ventures' performance). Therefore it can be considered that survey, as an empirical research strategy will be used. The survey is represented as a questionnaire. In order to test hypothesis and make analyses, sampling of companies at the age of 1-8 years considered as new ventures (will be done. Initial sample from available by today data includes 2126 Russian new ventures.

Multiple regression models are used to obtain results. We suggest controlling for firm's size (measured as the number of employees), industry (nominal variable, which represents three industries: core, manufacturing and services) and manager's experience (number of years). The dependent variable (performance) is measured as sales per employee. Independent variables as (1) technological OC; (2) administrative OC; (3) marketing OC; (4) changes to secure legitimacy are represented as number of relative changes which took place.

First four hypotheses were tested in order to investigate direct effect of each change type on new venture's performance. The last four hypotheses were tested through moderation affect in order to reveal whether different combinations of various types of change may affect the performance of new venture.

Conclusion

Our results suggest that organizational changes can be both harmful and useful for new venture's performance depending on their type and combination of different types. Consistent with entrepreneurship research, we got evidence that marketing and administrative changes in general allow new ventures to adapt to business and institutional environments of developing countries and may have positive impact. However, these results are also consistent with population ecology research in that technological changes and introduction of new knowledge system disrupt internal routines and undermines ventures' ability to learn, which constantly resets the firm's liability of newness clock and can be dangerous to a new venture's performance.

It was revealed that changes to secure legitimacy make influence of technological changes less negative, probably because of the fact that when company obtain legitimacy it automatically get access to necessary resources for conducting technological changes.

At the same time results indicate that marketing changes may affect negatively influence of changes to secure legitimacy.

Also it was found out that manager's experience matter and have inverted U shape relationship. It can be explained by previous results that show positive effect of previous experience but to a certain level (Chrisman, McMullan, Hall, 2005) when it can limit recognition of new opportunities due to established view.

Findings make theoretical contribution extending knowledge of such phenomenon as organizational change in new ventures and giving better understanding of the nature and consequences of conducting combinations of different types of changes in new firm. Especially this research will contribute to the discussion in the context of emerging markets.

This paper can be also of practical value to practitioners, policy-makers, and advisors providing additional insight into main aspects of organizational changes' influence on the performance of new ventures. Managers of new ventures, which are characterized by liability of newness, liability of smallness and liability of adolescence and have constantly maneuverer between survival, death and growth, can be aware about consequences of different types and forms of organizational changes in such companies. This may help in decision making whether to conduct or not reformation in enterprise or in the choice of relative organizational change that could match firm's goals and strategies.

Our study's findings should be considered in the context of its limitations. According to scholars there is no perfect performance indicator (Penrose, 1959). In this study we consider the ratio of annual sales to number of employees as it is quite tricky to measure growth of new ventures at the age of 0-2 years. Also the majority of new firms are established in mature industries in order to satisfy demand on local market and do not pursue the goal to grow (Reynolds et al., 2003). Therefore great interest is represented to investigate influence of organizational changes on such indicators of new venture performance as firm's revenue, international activity or R&D investments, etc.

Secondly, in order to generalize results and make them applicable for other emerging markets research in other county contexts could be carried out on the similar topic.

Moreover it is important to analyse the influence of changes in long term rather than in short run as outcomes may differ greatly.

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Liubov Ermolaeva
Doctoral candidate
Graduate School of Management,
St. Petersburg State University, Russia
l.a.ermolaeva@gsom.pu.ru

Andrei Panibratov
Professor
Graduate School of Management,
St. Petersburg State University, Russia
panibratov@gsom.pu.ru

Determinants of international M&A abandonment: evidence from Russia

Annotation: Multinational companies from emerging markets continue enhance their international operations. Mergers and Acquisitions remain primary entry mode for those firms however abandoned M&A are still not rare. In this paper we aim to investigate the reasons of M&A abandonment focusing on institutional factors. We analyze deals of Russian firms at country and industry levels in 10 years period (2002-2012). The result shows significance of such institutional factors as control of corruption and rule of law, as well as industry sensitiveness correlates with lower probability to complete the deal.

Introduction

The transition of Central and Eastern European countries, former Soviet republics, as well as developments in several East-Asian countries - particularly China - has opened up new markets and production opportunities for emerging market firms to locate operations abroad. Over the last decade, prominent scientific works on cross-border mergers and acquisitions (M&A) of multinational enterprises from developing countries such as Brazil, China, India and Russia have been published in respectful academic journals. Some of these academic papers have provided interesting descriptions of the principles and motives behind cross-border M&A, while others have set the focus on the performance or financial impact of these acquisitions on emerging market firms. However, very few articles investigate abandoned deals as from micro as from macro perspective.

Empirical evidence says that about 25% of firm's acquisition attempts fail (Dikova, 2010), but the question what are the reasons of this phenomenon remains unanswered. In our paper we aim to answer this particular question focusing on institutional factors in the context of international M&As of two big emerging markets Russia and China. More concrete, the research questions of the paper are: (1) What impact do institutions have on M&A deals completion or abandonment? (2) How does company's experience affect the success of failure of M&A?

Literature review

Due to the shift towards institutional and sociocultural theories and amazed by the above discussed dynamics scholars became interested in the topicality and started to further investigate the phenomenon of cross-border M&A activities of emerging market firms. Douglas et al. (2007) investigated different experience forms of multinationals from developing countries, notably "alliance experience with developed market firms, previous failure experience in developed markets, and number of prior entries into developed markets" and how these experience forms have an impact on the market entry and the survival in the developed market. The underlying theory of the study is based upon organizational learning. The study finds that although firms from developing countries have a resource disadvantage, the experiential factor generally has a positive impact on the success of market entry and survival of firms from emerging markets entering developed markets. From the alliance experience factor, the study provides evidence that alliance experience can contribute to multinationals in the way in which that they can mistakenly enter a developed market when the probability of survival is comparatively low, due to sub-optimal decision-making based upon prior experience. From the previous failure argument, the study found that executives of firms from developing markets might miss market opportunities due to the lack of experience in developed markets. Moreover, the study also found evidence that the possibility of survival can be increased due to failure experience, as executives are more careful or even may avoid developed markets completely. However, the scholars also highlight the fact that a firm can exit a market with having failed. According to the scholars, the reason for such a move could be the reallocation of resources to more promising markets. However, it is difficult differentiate whether an exit is a result of a strategic decision or a failure to survive in a developed market. Therefore, additional research on the executives' motives for leaving particular markets should be undertaken (Douglas et al. 2007).

Peng et al. (2008) argue that while thinking about international business strategies, the study of institutions does not fundamentally differ from earlier work, notably work on resource- and industry-based views, but should be considered as a complement. Further Peng et al. suggest that the study of institutions also complements the internalization and transaction cost theories that have been discussed earlier in the literature review. Finally,

institutional theory is compatible with coevolution literature that has recently become popular (Teegen et al. 2004). Similar to institution-based view where the focus lies on the “rules of the game” and the question of “how to play according to those rules when they are not known and changing?” research on coevolution tries to answer the question of “how firms coevolve with their environment?” (Lewin and Volberda 1999). According to earlier studies of Peng and Zhou (2005), the difference might be the increased uncertainty in emerging markets resulting from environmental changes and institutional transitions. While studies on coevolution remain rare, research on political strategies suggests that firms operating in developed countries actively try to shape the “rules of the games” and for firms operating in emerging markets (including some entrants from foreign countries) it is even “natural to expect” (Ring et al. 2005). Answering the question of “how these companies do that?” in a non-transparent regulatory and political environment is a great challenge and leaves us with an interesting opportunity for further research.

Another study worth mentioning in this literature review, also with a focus on Indian multinationals, was published by Elango and Pattnaik (2011). The scholars investigate the way in which emerging market firms from India acquire foreign firms to increase value, build new capabilities and learn from their activities abroad. In order to find evidence, the study tested a sample of 175 M&A deals from 2000 to 2006. The findings of this study support the argument of previous experience in cross-border acquisitions, particularly when target firms are acquired fully (100% ownership). From the learning aspect, it further seems that firms that intend to acquire 100% ownership consider industry-specific experience before taking on acquisitions as essential, while this is not the case for ventures, where ownership and control is split and shared among all engaged parties. The study further calls attention to the complexity of group experience and acquisition value. This complexity similarly reflexes the role the parent firm plays in the group: Dividing and distributing resources between subsidiaries when gained experience and know-how can be leveraged; and diversifying the investment-portfolio throughout markets. In their model, Elango and Pattnaik (2011) used several control variables. Cultural distance and full ownership have a positive influence on the value of acquisitions. In the case of Indian firms being the acquirers, the study found that most deals were conducted in culturally distant countries (developed markets). In comparison to culturally similar countries such as Pakistan or Bangladesh, developed markets offer access e.g. to advanced technologies. As this study is based only on M&A deals of Indian firms and a market that has developed its own characteristics limits the applicability and leaves space for future research (Elango and Pattnaik 2011).

At the macro level (also referred to country level) Douglas North (1990; 1994; 2005) probably more than other researchers has developed a common understanding for institutions (Dunning and Lundan 2008: 578). North divides institutions into “formal rules” (laws, regulations, economic rules, etc.) and “informal rules” (standards of behavior, traditions, sets of widely accepted rules, etc.). North calls the institutions itself but also the implementation and the enforcement “the rules of the game that shape human interactions” and organizations need to follow these rules to achieve their goals. An institutional framework can only be seen as complete when both institutional aspects, formal and informal, are taken into consideration. It is also worth mentioning that North uses theories from human nature to support his study. While North’s framework builds on the cognitive limitations of humans, it is based upon the impact that formal and informal institutions can have on an individual’s actions because of his or her limitations. North argues that people develop and implement those institutions that best satisfy their needs. However, it is not guaranteed that these institutions that are developed to meet people’s needs actually make sense from an economic perspective and neither for the society as a whole (Dunning 2008).

On the one hand, when firms internationalize they are faced with the institutions of the host country. According to Kostova and Zaheer (1999), institutional systems that are the result of regulatory, cognitive and normative frameworks of host-environments have a strong impact on a company's external and internal legitimate practices and standards. Kostova and Roth (1999; 2002) further argue that the host-institutions either impede or facilitate the transfer of corporate practices or strategies of the parent company to its subsidiary. The discussed impact on multinationals led scholars to develop new terms; for instance, Zaheer (1995) and Sethi and Judge (2009) came up with the terms "liability of foreignness" and "liability of multinationality", respectively.

On the other hand, the constellation of the home country institutions also determines the internationalization process of multinational firms. According to Buckley et al. (2007), the ability and motivations of firms to internationalize and invest abroad strongly depend on home institutions. For example, stable and liberal policies encourage cross-border investments, while discretionary policies that are often changed and adjusted will lead to the contrary (Zhang et al. 2011: 227). The aforementioned article of Scott (2002) provides evidence that the strategies of Chinese multinationals are shaped by the specific features of the home country institutions, which are "formally and informally enforced" by the Chinese government. Warner, Hong, and Xu (2004) find that in the case of China state support for internationalization, the entering and penetrating of a foreign market, of Chinese domestic firms is becoming the standard.

While taking both home and host country institutions into consideration, scholars have derived new terms; for instance, Kostova and Roth (2002) implied the term "institutional dualism." The differences between home and host country institutions as well as their impact on the strategic formation of firms have further been discussed and argued by several scholars. For example, Xu and Shenkar (2002) argue that the difference between host and home institutions have a significant influence on the location choice and entry mode of firms, while Dikova et al. (2010) finds that the distance between institutions has an influence on the likelihood whether a cross-border acquisition is successful. Similar to Dikova, Zhang et al. (2011) apply institutional theory and find that the likelihood of a Chinese cross-border acquisition is lower in the case when the host countries have a lower institutional quality.

In this study, we use institutional theory in order to investigate why certain cross-border M&As of emerging market firms are abandoned and how institutional factors affects the success or failure. The success or failure of M&As is determined by various factors on different levels, notably the country, industry and firm level. In this study, we will use a multi-level approach considering factors from two levels – country and industry. At the country level, we assume that the probability of an M&A deal is determined by the quality of the host country's institution and development of home country's institutions as well as cultural distance between the merging parties. At the industry level, we argue that industries that are determined from strict institutional constraints determine M&A deal value and probability of its success or failure.

Hypothesis development

According to Luo, Xue and Han (2010) multinationals from emerging markets face competitive disadvantages in the competitive global business environment compared to those firms from developed markets. This is supported by internationalization theories that focus on latecomers. It is argued that these latecomers from emerging markets act more aggressive and risk taking in order to catch up with firms from developed markets (Luo & Tung 2007; Luo & Rui 2009). We argue that this aggressive and risk taking behavior of emerging market firms in developed host country markets where institutions are strong leads to a greater possibility of M&A deal abandonment. As a result, we derive the following sets of hypotheses:

Hypothesis 1. The bigger the institutional distance between Russia and target market, the higher the number of abandoned cross-border M&A deals of Russian firms.

In addition to formal institutional factors of a host country, cultural distance between host and home countries has also an impact on the success or failure of M&A deals. According to Stahl and Voigt (2008), cultural distance has an influence on: (1) the learning and synergy stimulus; (2) the potential competency and knowledge transfer; and (3) the transaction cost resulting from intercultural contact and geographic diversification. Therefore, a firm's ability to generate value by capitalizing on assets of distant cultures depends on its "capacity to overcome and use this distance." Morosine, Shane and Singh (1998) argue that the larger the cultural distance between two countries becomes, management styles and practices as well as corporate values tend to differ remarkably. These differences lead to cultural shocks and conflicts between the different resources that result from ambiguity. Hagendorf and Voss (2010) further mention that implementation problems and incompatibility while integrating an acquired firm with high cultural differences can actually harm synergies and learning. The value that an acquirer attributes to assets that are knowledge-intensive and available when an acquisition appears is directly related to cultural distance and its moderating role in learning and sharing such kind of information. Therefore, Hagendorf and Voss (2010) argue that a lower cultural distance between merging parties has a positive influence on the value of the shared intangible assets. This is particularly a result of employees who have similar values that facilitate learning, interaction and resource exchange. By contrast, a high level of cultural distance results in higher transaction costs, which can further hinder the transfer of competencies and thus reduce the value of the diversification. Based upon these considerations, we derive the second set of hypotheses:

Hypothesis 2. The higher the cultural distance between Russia and a target country, the higher the number of abandoned cross-border M&A deals of Russian firms.

When M&A deals are announced, firms will be facing reactions of diverse stakeholders, citizens, the public and other interest groups and need to be in compliance with all the regulations (domestic and international) to pass all the regulatory instances. If this is not the case, it can become a major issue potentially hindering an acquisition from being completed. Zhang et al. (2011) names national security as a particular relevant motive when investigating the internationalization of emerging market firms. Countries not only implement rules and laws to regulate competition but also to protect industries that are "sensitive to national security or sovereignty."

Taking this into account, the success or failure of M&A deals can certainly not be described by financial or economic relations only. Due to perceived threats of national security and other political concerns, a host government can hinder an acquiring firm from completing certain deals in the name of national security or from protecting certain firms from competition (Toth 2008). Examples of such sensitive industries where governmental authorities might quash certain deals include military equipment, critical infrastructure, natural resources, energy production, etc.

Zhang et al. (2011) calls industries that are of high political interest and where cross-border M&A deals might therefore face resistance "sensitive industries." This goes in line with Mihailova and Panibratov (2012) and Annushkina and Colonel (2013) who prove that industries matter and both suggest that future research should include industries. In this thesis, we will stick to definition of Zhang et al. (2012) and hereafter also use the term "sensitive industries." Based upon this, we derive the next set of hypotheses:

Hypothesis 3. The more sensitive an industry, the higher the values of abandoned cross-border M&A deals of Russian firms.

Methodology

To test the hypotheses we use a dataset containing of 761 cross-border M&A deals. The data for M&A deals are cropped from Zephir Bureau van Dijk's deal information database.

We decided to focus on the period of time between rumors and deal announcement as this stage of M&A is less studied by scholars. Thus the data includes all the deals with status rumored from 2002 to 2012. The dependent variable is binary: it is 1 if after rumors deal was announced and 0 otherwise.

In line with the developed hypothesis, we chose a set of explanatory variables from the country and industry level. At the country level, we use Worldwide Governance Indicators (WGI). The dataset is a result of a survey and summarizes the different views on the quality of governance.

As a measure for informal institutions we chose cultural proximity checking whether target country was the member of USSR what supposes common cultural and historical past or not.

At the industry level, we use three dummies as a measure for sensitive industries: (1) *finance*, (2) *high technology* and (3) *natural resources*.

For the control variables we use World Development Indicators (WDI) notably *gross domestic product (GDP)* and *GDP per capita* of the host countries. *GDP* is a popular control variable for market attractiveness

We run logistic regression in order to test our hypothesis.

Results and Discussion

The proposed hypotheses 1 of the role of institutional distance was not supported by the regression. However we observe interesting results for institutional indicators. We get significant results for rule of law and control of corruption in the target country. Better rule of law associates with higher probability the deal abandonment. At the same time corruption control indicator shows negative correlation with M&A deal announcement. Home country institutional factor also affect result of the deal. Political stability in Russia and more control of corruption positively correlates with probability of deal's completion, whereas government effectiveness negatively. This result requires further investigation. It can be concluded that multinationals from Russia rely on rule of law in foreign countries and their ability to deal with corruption based on their experience at home.

The hypotheses 2 of cultural distance is not supported by the empirical analysis. We cannot conclude whether common historical past affects success or failure of M&A deal or not. It is worth to include other cultural variables in order to understand the role of non formal institutions in this process in further research.

The results show that industries matter. Our industry hypotheses were supported.

From the country-level analysis it can be concluded that the institutional conditions of the host country have a strong impact on the number of abandonment cross-border M&A deals of emerging market multinational firms.

Limitations

The empirical study is not without weaknesses and has limitations, particularly the lack of available data regarding a few of the explanatory variables used in the model for the country-level analysis (e.g. cultural variables).

Furthermore, it is important to keep in mind that an exit from an M&A deal not necessarily is a result of deal failure. It could also be a result of a strategic management decision. Thus firm-level analysis including executives' motivations is needed.

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Fomin M.
PhD student, Graduate School of Management, St. Petersburg State University
mxfomin@gmail.com

Analysis of M&A deals of Russian Metallurgical Companies

Abstract: Strategic management and business cycle theory place emphasis on the importance of contracyclical business cycle management practices (BCM), among one of them is M&A policy. According to contracyclical M&A policy companies should acquire core assets during periods of recessions when prices and valuations are low and sell assets (if necessary) during boom years to make corporation profitable and sustainable. Analysis of M&A activity of four Russian metallurgical companies shows that contrary to the BCM acquisitions were procyclical rather than contracyclical and debt - financed which increased insolvency risk. Whether a company can overcome insolvency risk can be explained not only by the degree of implementing procyclical policies, but other factors including direction of geographical expansion and corporate governance.

Keywords: *M&A, metallurgical industry, business cycle, insolvency, bankruptcy, corporate debt*

1. Introduction

The existence of business cycles in different industries is beyond any reasonable doubt, yet strategic management provides little research in this area (Daily, Dalton, 1994). According to the formal definition of business cycle by NBER, business cycle is «repetitive, not necessarily periodic fluctuation of prices» (Roberts, 2009). Business cycles are usually characterized by changes in prices and length of period when they are generally high or low.

Empirical research on metal prices shows that there are statistically significant fluctuations in prices, which cannot be addressed by using standard random walk models (Roberts, 2009; Erten, Ocampo, 2013). Another stream of research confirms existence of such phenomena as «super cycles». Empirical research reveals several super cycles on commodities market, the last one finished in 2011 – 2013 (Jerret, Cuddington, 2008). The last super cycle is usually linked to growth of demand and industrial production in emerging markets, especially from China. There is evidence that business cycles are linked not only with industrial production, but also with other macroeconomics variables (Labys, Achouch, Terazza, 1999).

Research of business cycles in strategic management is limited (Daily, 2004; Broomiley, Navarro, Sottile, 2008). There is a stream of literature devoted to management of declining firms and empirical research on factors affecting bankruptcies. From the strategic management perspective bankruptcy procedure is a mechanism of changing relationships with stakeholders, change focus of activities and implementing strategic changes (James, 2015). Not surprisingly, researches find the link between corporate strategy and finance (Balakrishnan, Fox, 1993).

There are two alternative positions regarding incorporating business cycle into corporate strategy. The first is business cycle management concept (BCM) which provides general recommendation to pursue contracyclical policy to ensure profitability and sustainability in long – term. In case of mergers and acquisitions (M&A) the recommended policy is to acquire enterprises during period of industry slump when prices and valuations are low (Bromiley, Navarro, Sottile, 2008).¹ BCM is not limited to M&A or finance in particular but provides similar recommendation for any field of corporate activity. Empirical research shows that few firms follow these practices and even those which do, only follow in several fields (for example, relationships with customers and suppliers). In case of metal market, consulting agencies in the mid-2000s were forecasting end of business cycle and called metallurgical companies to consider business cycle in their strategy (McKinsey, PwC).

Merger wave theory (Garfinkel, Hankins, 2011) provides alternative view. According to it companies acquire enterprises a) when they estimate future prospects high enough to justify expansion (either in the form of new investment or acquiring existing enterprise) and b) when they have sufficient financial resources. Even if corporations follow BCM and have strong financial position, they may not invest due to uncertainty and unknown industry prospects. Decisions to engage into M&A activity are also influenced by uncertainty in cash flows which serves as an incentive for vertical integration (which was common practice in metallurgical industry). According to the theory, companies can be provided with financing if lenders have confidence in the growth of industry which may happen only during industry boom. In other words, M&A policy is inherently procyclical. Some support for this theory is provided by research, which shows that mergers increase default risk (Furfine, Rosen, 2011).

¹ In finance the idea is not new. It is similar to value investing by Benjamin Graham and David Dodd and goes back to 1930s.

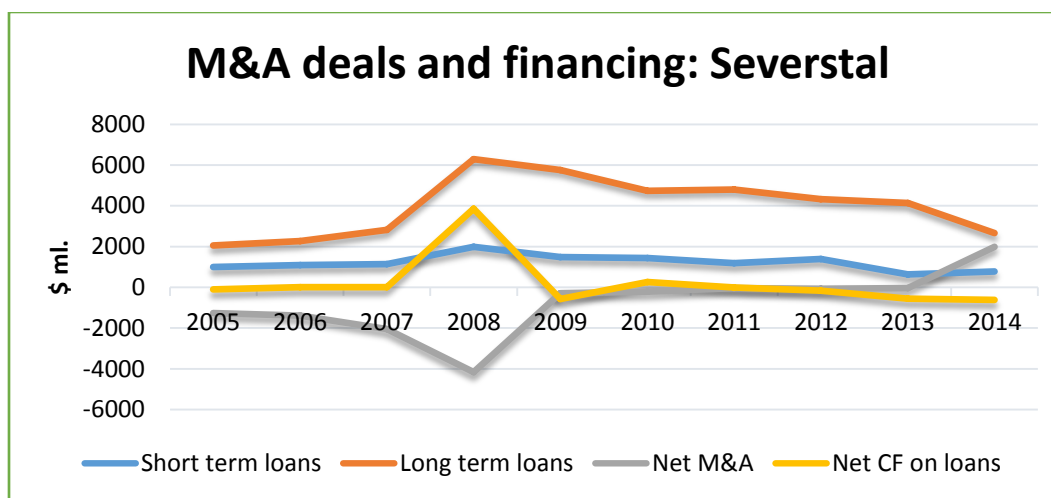
The goal of the paper is to provide analysis of M&A activity of Russian metallurgical companies. The first issue is to evaluate type of policy with respect to business cycle (procyclical or contracyclical). It addresses the question whether companies were following according to BCM practices. The second issue is to reveal factors explaining why some companies were successful in avoiding insolvency risk while other failed to do so. The paper proceeds with section 2 devoted to methodology and cases. Section 3 summarizes M&A policies of selected companies. Section 4 provides conclusions.

2. Methodology and M&A activity description

The paper uses case method to reveal the type of M&A activity and factors affecting ability to overcome insolvency during industry downturn. Four companies were selected for the research: Severstal group, NLMK group, Rusal group and Mechel. All companies pursued expansionary M&A policy during recent boom in metallurgical industry. During industry downturn Severstal and NLMK were able to avoid insolvency. Rusal had to make agreements with creditors to change debt terms and has overcome insolvency. Mechel could not agree with creditors regarding full solution and has missed several interest payments. Consequently, creditors sued the company in the court. The insolvency case of Mechel Company is not completed yet.

2.1 Severstal Company

Severstal is one of the leading integrative steel and steel products in Russia. It produces a wide range of metals, metal alloys and pipes. The controlling shareholder is Alexey Mordashov (80%). Initially established as steel manufacturer in Russia, it expanded geographically in Russia, Africa and North America. The strategy of the company during boom period in the industry was expansion through M&A in several key regions. The purpose was twofold: to acquire mining plants to become resource – independent producer, and to move production close to strategic markets. In 2008 geographical expansion was reflected in organizational structure – the company and its subsidiaries were divided into two groups: «Severstal Resource», «Severstal International» and «Severstal Russian Steel».



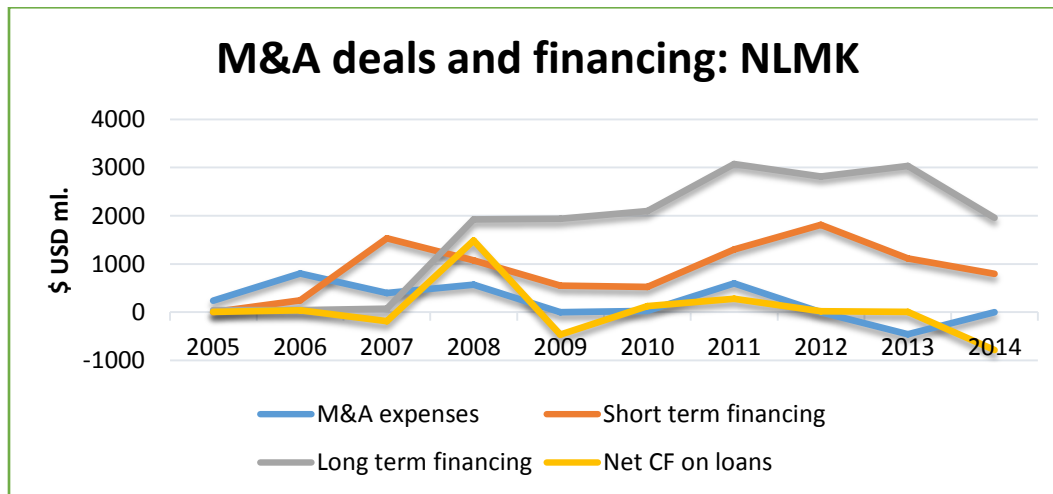
Graph 1. Financing of M&A deals in Severstal: short – term, long – term loans and net cash flows on M&A (proceedings from sales – new acquisitions). Source: corporate annual reports.

The graph shows gross corporate debt (long – and short – term) and cash flows from investing in M&A. To finance acquisitions the company issued USD and RUB denominated loans and attracted five credit lines from big banks. Two of them were explicitly labeled as for M&A purposes. Some of the loans were issued by companies’ subsidiaries. In addition the companies issued bond in Moscow Stock Exchange at amount 50 bl. rub. and \$4.5bl. during 2003 – 2013.

After the crisis in the industry (in 2011 – 2013) the company has issued new dollar – denominated debt to cover short – term debt obligations. It also has sold almost all previously acquired assets in North America to meet debt payment needs. Estimated value of proceedings form sales is approximately \$2 bl., which implies \$800 ml. loss on acquisitions (the company has invested previously \$2.8 bl.). However, the company managed to avoid insolvency risk even without debt renegotiation.

2.2 NLMK Company

The NLKM group is one of the key metallurgical companies. It is present in markets in Russia, Europe and USA. It produces different types of metals, metal alloys and steel. The controlling shareholder is Igor Lisin (83%).



Graph 2. Financing of M&A deals in NLMK group: short – term and long – term loans, net cash flows from M&A (proceedings from assets sales – new acquisitions). Source: corporate annual reports.

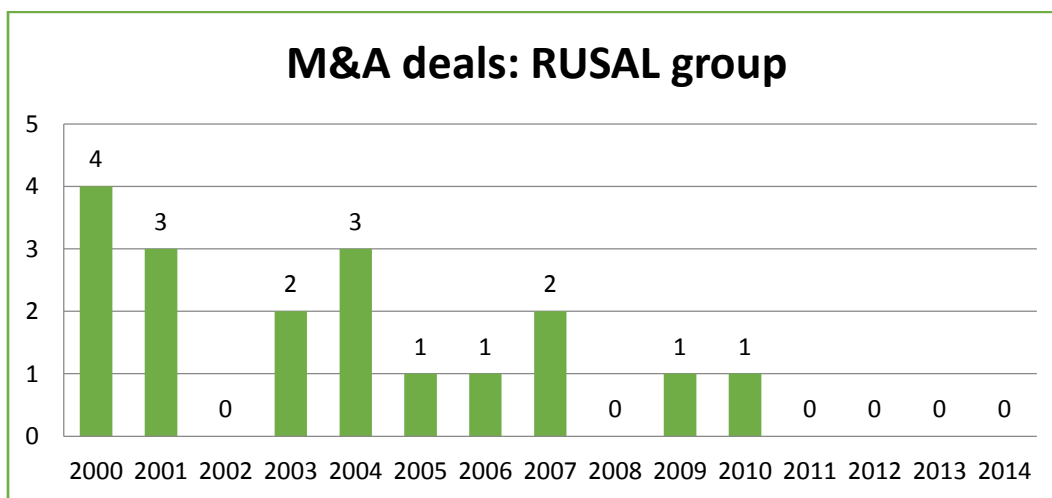
The graph shows long – term, short – term financing of the company and net expenses on M&A. It shows that the company was acquiring mining and metal enterprises during 2000s, deals were financed by issuing new debt. Rapid expansion was reflected in new organizational structure. According to it, three divisions were formed: NLMK Russia, NLMK Europe, NLMK USA (mining plants and other enterprises were classified geographically). To finance

acquisitions NLMK issued bonds of 35 bl. rub. and \$1.3bl. In 2014 the company began to reduce debt.

After the end of boom in commodities markets, and especially in metal markets, the company managed to deal with debt and has not faced the risk of insolvency. Like Severstal, the company changed its strategy from rapid expansion and capital investments to low cost production.

2.3 Rusal group.

United Company Rusal is one of the main aluminum and alumina producers in the world. The company emerged in 2007 as the result of merging «Russian aluminum» (Oleg Deripaska), SUAL group and aluminum enterprises of Glencore. Ownership structure is follows: Oleg Deripaska controls 48%, Mikhail Prohorov – 17%, Sual partners – 16%, Glencore group – 9%, 10% are in free float.



Graph 3. Number of M&A deals of Rusal Group (Russian aluminum). Source: corporate annual reports.

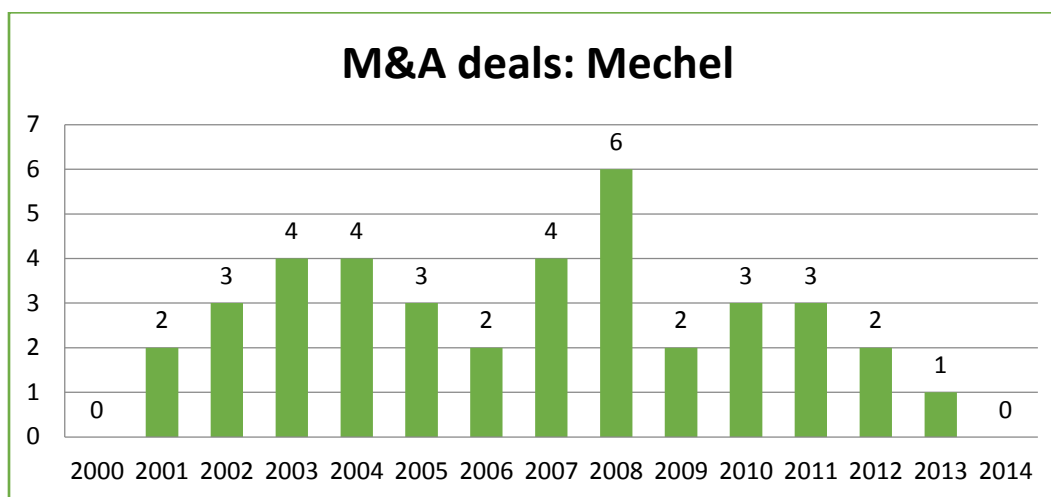
The graph shows number of acquisitions performed by RUSAL group during 200s. It shows that enterprises were mostly acquired during industry booms.

In 2009 the due to upcoming maturity of some of its debt and global crisis the company was near to insolvent state. At the beginning of 2009 the group accumulated \$16 bl. in debt. To avoid bankruptcy shareholders and creditors signed agreement. According to it one of the creditors (associated with Onexim Group – shareholder) wrote down \$2.7 bl. for additional equity in the company (later in \$2010 the company attracted \$2 in secondary IPO to further reduce debt burden). Sberbank refinanced debt due to Development Bank. The rest of the debt was restructured and several constraints and covenants were imposed. Interest payments were linked to LIBOR and excess operational cash flow (above minimum required for continuing operations), company accepted limitations on dividends and promised to sale assets if it is unable to fulfill minimum interest payments.

Overall, the company managed to escape the insolvency through debt renegotiation. Key factor that affected the outcome were dual claims of one of the stakeholder (as shareholder and as creditor).

2.4 Mechel

Mechel Company is metallurgical vertically integrated company. It produces metal coal, alloys and several special steel kinds. Controlling shareholder of the company is Igor Zuzin (67%). Unlike Severstal and NLMK the company acquired metal and mining enterprises mostly in Russia and Ukraine.



Graph 4. Number of M&A deals of Mechel Company. Source: corporate annual reports.

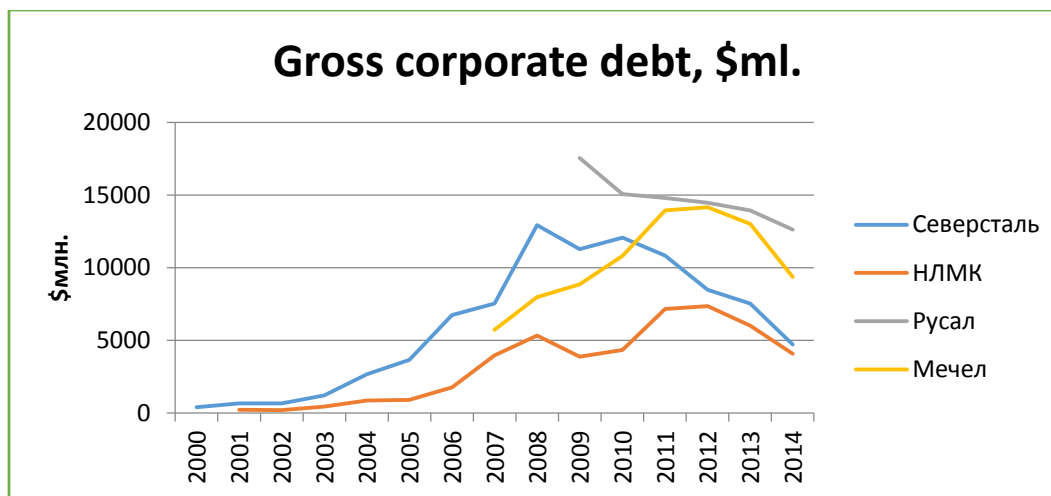
The graph shows amount of acquisitions performed by Mechel during 2000s. It shows that Mechel was acquiring enterprises during boom years, even after metal market downturn. Although such actions are in line with BCM, the company was already close to financial distress: further expansion threatened its solvency. Comparison of amount of RUSAL and Mechel deals shows that the former company implemented more deals than the former. In other words, it pursued aggressive strategy more deeply than the former. This fact can explain that the financial distress in Mechel was more severe than in case of RUSAL group.

Financial distress for Mechel began in 2013 when prices of metals declined. In late 2013 capitalization of Mechel fell by 40%. By that time, the company attracted almost \$10 bl. in debt. Crisis in the metal industry was exacerbated for the Mechel due to crisis in Ukraine. In case of Mechel controlling shareholder declined to convert part of debt for equity (due to fears of losing control). During 2014 – 2015 the company was renegotiating debt with its major creditors – state banks Sberbank, VTB and Gazrombank. The company has missed payments on some of its debt. The process of debt renegotiation was slow: by the beginning of 2015 year the company was still negotiating \$6.8 bl. (half of the debt was issued by state banks). However, in the third quarter of 2015 Mechel has made several agreements with key creditors to postpone debt redemption to 2017 – 2018.

3. Summary of selected companies M&A activity

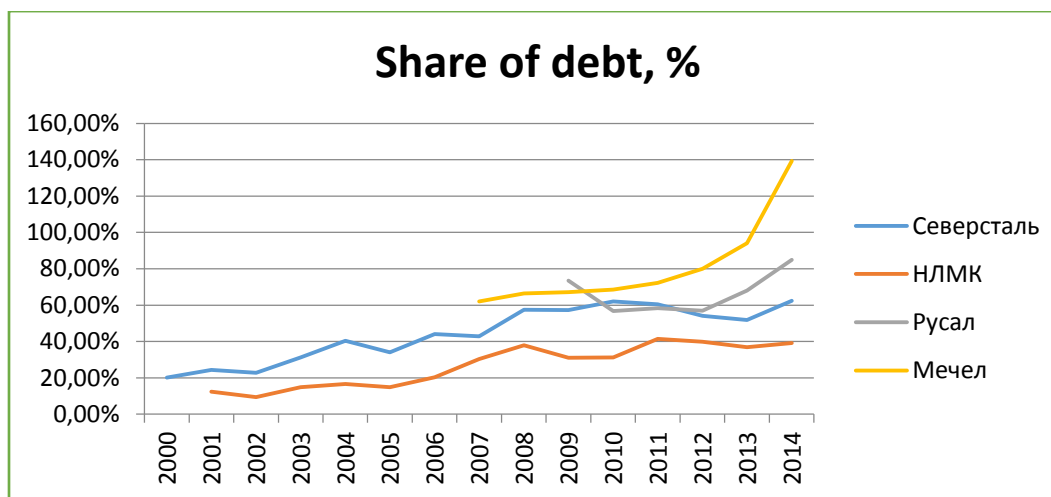
Analysis of M&A deals shows that all companies pursued procyclical M&A policy during boom period with exception of NLMK, for which net effect on M&A was close to neutral.

In the practice, several approaches to overcome insolvency risks can be identified: sale of assets, changing terms of debt (increasing maturity and interest reduction), conversion of debt to equity («bondholder haircut»). Selected metallurgical companies relied primary on asset sales as the main method to repay the debt. However, because assets were acquired during periods of industry boom and high valuations subsequent sales were done at lower price. For example, Severstal group sold key factories in USA for approximately \$2 bl. while acquisition price was approximately \$2.5 bl. Geographical direction of prior expansion determined ability of selected companies to sale assets back. For example, Mechel Company was constrained in its ability to sells assets in Ukraine and Russia since 2013.



Graph 5. Gross corporate debt of selected companies.

The graph shows that after reversing business cycle in metal industry in 2011 – 2013 selected companies tried to reduce previously acquired debt. Severstal and NLMK group managed almost to halve the debt after reaching price peak in metal markets. Rusal and Mechel managed to decrease the debt by approximately 30%. However the important difference is that debt reduction has solved problems in Severstal and NLMK while exacerbated problems in Rusal and Mechel.



Graph 6. Share of debt of selected companies.

The graph shows divergence in relative debt of selected companies. While Severstal and NLMK managed to keep debt ratio constant, the share of debt of Rusal and Mechel increased due to significant price discounts (compared to acquisition price). As for 2015 Mechel has negative equity.

After non-strategic asset sales Rusal and Mechel turned to debt restructuring. While Rusal has managed to restructure debt quickly in 2009 – 2010, the Mechel insolvency problems are still ongoing since 2013. Second significant difference is that in case of Rusal shareholders and creditors reached an agreement to exchange debt for equity while in Mechel case they failed. Capital structure of companies points to the fact that in Rusal case there are several big shareholders and one of them is also a creditor. In case of Mechel there is single controlling shareholder and thus he can lose control if equity is diluted.

4. Conclusions and further research

The goal of this research is to evaluate M&A policy of four Russian metallurgical companies with respect to business cycle and insolvency risks. According to the business cycle management concept (BCM) companies should pursue contracyclical policies: to expand core activities when prices and valuations are low and sell assets (if necessary) during boom period. Following such policy is aimed toward insuring profitability and sustainability in the long – term. According to the alternative theory (merger wave theory) corporations expand their activities when they have positive prospects and are provided with financing. This happens during early stage of boom period in the industry when outlook for industry is positive and financial institutions are likely to provide financing. As the result companies can expand activities either by making new investments or acquiring existing companies. Due to uncertainty and negative industry prospects during industry slump corporations are unlikely to engage in M&A deals even if they have financial resources, thus, M&A activity is inherently procyclical.

Four metallurgical companies were selected for the analysis. Metallurgical industry is widely viewed in research as linked to business cycle fluctuations due to elasticity of metals demand and industrial production being key driver for the industry. Empirical literature on metal prices has shown existence of several «super» cycles (the last one ended in 2011 - 2013). Among four selected companies are «Severstal», «NLMK group», «RUSAL group» and «Mechel». The first two companies were chosen as examples of success in avoiding insolvency and the last two as negative examples. RUSAL group managed to overcome insolvency through debt conversion and renegotiation and Mechel insolvency as for 2015 is still ongoing.

The research shows that all selected companies pursued procyclical M&A policy which is contrary to business cycle management concept and supports merger wave theory. The biggest share of deals was signed in the last half of industry cycle in 2004 – 2007. Several sale deals were signed in the 2008 – 2009 when prices and valuations of assets were low. After short crisis period companies began buying assets again (notably Mechel). The M&A activity also shows itself in the increase of leverage of companies which increased insolvency risk. Because of the debt burden degree of pursuing procyclical strategy is related with higher insolvency risk during metal industry downturn.

In addition to degree of pursuing procyclical policy several other factors related to whether company can avoid insolvency were revealed. Among them are geographical direction of M&A expansion and corporate governance factors. The direction of geographical expansion (Severstal – USA, Europe, NLMK – Europe, Mechel – Russia and Ukraine) influences the ability of an asset to generate cash flows during industry downturn and its liquidity. This means that geographical expansion plays important role in assets sale as a method to mitigate insolvency problem. Despite that all companies were selling at least partially some of core assets, in case of Mechel this has led to negative equity and exacerbated the insolvency problem. Corporate governance (in particular, capital structure) affects debtors' incentives to exchange debt for equity and change its terms. If there are several large shareholders and if some shareholders are also creditors than it is easier to change debt terms and reduce debt.

Further comparative research including metallurgical companies from India and China can reveal other factors affecting M&A policy and insolvency risks during industry downturns. It also can provide additional evidence on procyclical type M&A policies of metallurgical companies.

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**Ksenia Golovacheva — PhD Student,
Graduate School of Management
St. Petersburg State University
golovacheva_k@mail.ru**

Consumer Response to Price Increases: the Moderating Role of Framing and Consumer Knowledge

Abstract: The study investigates how consumers react to unit price increases framed in an overt vs covert way (total price increase vs product downsizing). Using experimental data, covert (vs overt) unit price increase is proved to lead to a more positive consumer response in the short term when consumers have no access to external information and can rely only on their internal knowledge on covert pricing tactics usage. In the long term, when consumers have access to external information on covert pricing tactics usage, the effect of covert (vs overt) pricing tactics tends to become less favorable for companies: there is a deterioration of product attitude and producer trust judgements, acceleration of price unfairness perception, and lower purchase intention. The long-term effect is moderated by the source of consumer knowledge on pricing covert tactics usage.

Keywords and phrases: *consumer behavior, consumer knowledge, unit price increase, pricing tactics, product downsizing, total price increase.*

1. Introduction

Price increases are a widespread phenomenon in a variety of markets. Such increases can be driven by market factors or by a desire of the company to increase profit margins. Regardless of the purpose of price increases, consumers usually negatively react to them as they has a detrimental effect on their wellbeing. To mitigate the negative consumer response to a price increase, companies can manage the way a price increase is presented to the market. Instead of raising the price for a product, the company can decrease the quantity/size of a product and remain the price of the product item unchanged. On the one hand, it allows keeping the product available for consumers; on the other hand, it makes hard to compare prices directly, which could be potentially perceived by consumers as unfair or deceptive (Zaltman, 1978; Hardesty, Bearden, Carlson, 2007).

The motivation of marketers behind using pricing tactics that can mislead consumer from making an optimal choice is the possibility to get additional benefits. Marketers may not necessarily be trying to deceive consumers, but they are often affected nonetheless (Manning et al. 1998; Sprott et al. 2003). Misleading marketing practices once successfully implemented can become a source of consumer dissatisfaction over time, as consumers learn and develop their marketing expertise together with marketers. Getting financial benefits at the expense of consumers' welfare due to consumer's inattention or limited knowledge in something can bring significant losses to the company, once consumers gain persuasion knowledge in the field.

The questions the study intends to answer are the following: What are the potential and lost benefits, if any, for companies that use covert pricing tactics as compared to overt pricing tactics? What are the impacts, if any, of covert pricing tactics, both on the short-term and long-term relationships between a company and its consumers? How do the impacts of covert pricing tactics differ among consumers who possess the different kinds of knowledge on the usage of such pricing tactics in the marketplace?

2. Theoretical Background

2.1. The Framing of Price Increases: Total Price Increase vs Product Downsizing

The price and its impact on consumers has always been a focal point in the economic and management disciplines. Traditional economic models treat price as the monetary sacrifice a consumer makes to acquire a product or service (Stigler, 1987) and assume that an individual should make the same choice when faced with equivalent decision problems. Although these principles have been usefully applied to a variety of marketing problems, recent research on the psychological aspects of pricing suggests that the way price information is presented, termed price framing (Tversky, Kahneman, 1981), often significantly influences perceptions of deal value.

The nature of framing appears to differentially affect consumer perceptions of deals that are equivalent on a unit-cost basis but worded or presented differently (Sinha, Smith, 2000). The framing of price increases in an overt (total price increase) or covert way (product downsizing i.e. reducing the volume of product per package without a proportional decrease in package price) leads to different consumer responses to changes that are equivalent on the unit-price basis. In a range of articles that compare the consumer demand sensitivity to an equivalent price increase and product downsizing, it is demonstrated that consumers are more sensitive to price over quantity/size changes because of either their unawareness of product size, inattention to unit prices, or relative uncommonness of product downsizing in the marketplace (Gourville, Koehler, 2004; Cakir, Balagtas, 2014). However, some studies does not prove that the differential sensitivity to differently framed price increases exists (Imai, Watanabe, 2014).

Presumably, the difference in the response to overt vs covert unit price increase can be found not only at the level of behavioral achievements, but also at the level of consumer perceptions of alternatives. Numerous studies have shown that consumers' acceptance of a price, particularly a price increase, depends on considering it "fair" (Kahneman, Knetsch, Thaler, 1986). Price fairness judgments involve a comparison of a price or procedure with a pertinent standard, reference, or norm (Xia, Monroe, Cox, 2004). In case of pricing, the overt raise of price per product could be regarded as such a fair standard, because such a way to increase price is clear and does not demand additional cognitive costs to evaluate the extent of price increase. On the contrary, product downsizing can be regarded by consumers as a manipulative intent of the company to mislead consumers from an optimal choice and thereby gain from consumer limited attention or unawareness.

2.2. Consumer Knowledge on Pricing Tactics Usage

Pricing tactics include marketers' efforts to generate favorable price perceptions regarding their brands, stores, and offerings (Hardesty, Bearden, Carlson, 2007). Marketers use a variety of tactics to attract customers and persuade them to buy the product. Some pricing practices mislead consumers leading to a suboptimal choice. When faced with the practice in routine life the consumer can be unaware of practice usage. The understanding of practice nature can be gained with experience. Consumers are more likely to accurately learn about the persuasive intent behind pricing tactics upon greater exposure to them in the marketplace (Carlson, Bearden, Hardesty, 2007). "Over time consumers develop personal knowledge about the tactics used in these persuasion attempts" (Friestad, Wright, 1994). Friestad and Wright (1994) introduced the Persuasion Knowledge Model (PKM) that describes how people's persuasion knowledge influences their responses to persuasion attempts, in particular, how people use their persuasion knowledge to refine their attitudes toward products and marketers. Persuasion knowledge guides consumers' attention to aspects of an advertising campaign or price presentation, providing inferences about possible background conditions that caused the agent to construct the attempt in that way (Friestad, Wright, 1994). When choosing a pricing tactic, producers are per se trying to find a persuading pricing message that will appeal to consumers in a better way. It considers the marketer to be the agent of persuasion, the consumer to be the target of persuasion, and the pricing tactic to reflect the persuasion attempt. Pricing tactic persuasion knowledge (PTPK) represents a form of domain-specific knowledge gained through experience (Hardesty, Bearden, Carlson, 2007).

Marketing-literate consumers and those who are not armed with enough marketing knowledge and experience react differently to tactics employed by marketers. After conducting a series of experiments (Hardesty, Bearden, Carlson, 2007) identified that less knowledgeable consumers are more susceptible to such marketing practices as quantity surcharges and tensile claim offers and to making suboptimal decisions. (Kachersky, 2011) investigates consumer reactions to the practice of increasing unit prices of products by either reducing product content or increasing total prices. According to results, higher levels of PTPK lead consumers to infer different motives behind the two types of unit price increases, with content reductions being attributed to firm motives to increase profit margins and total price increases being attributed to firm motives to maintain profit margins in the face of situational factors such as cost inflation. Second, higher levels of PTPK lead consumers to look less favorably on product brands when the product content is reduced compared to when the total price is increased, and that this outcome is driven by inferred motives. Third, in contrast to high PTPK consumers, lower levels of PTPK lead consumers to alter their evaluations not of the product brand but of the retailer.

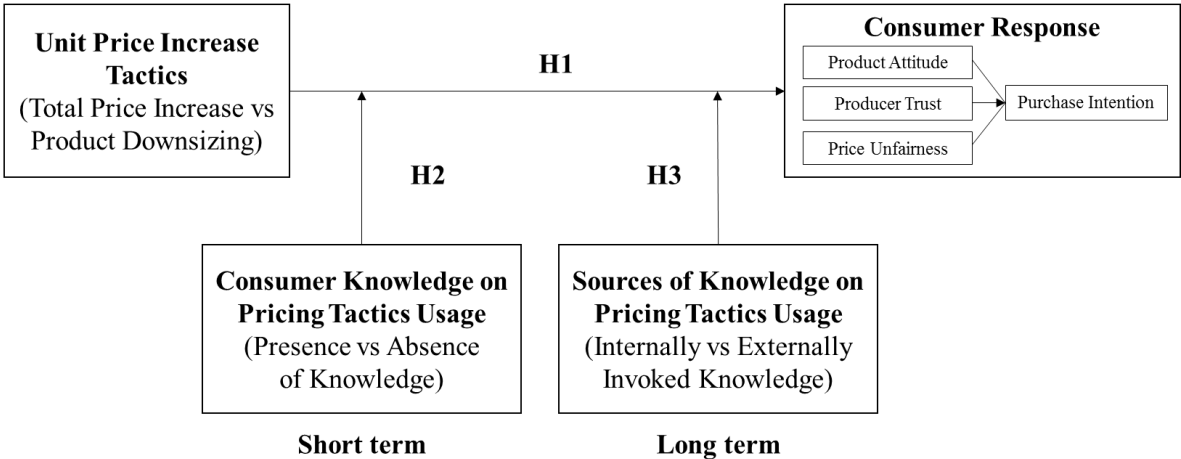
3. Hypotheses Development

When studying the behavior of consumers in the marketplace, the actual behavioral achievements are actually considered to be a consequence of psychological stances of the consumer. The theory of planned behavior proposes that a behavioral intention is formed based on the attitude towards the behavior (Ajzen, 1991), and if projecting the theory into the domain of consumer behavior, a buying intention can depend on such variables as consumer attitude to the product and trust to the producer of the product. The former construct has long been given a crucial role in bringing customer satisfaction, and gaining his loyalty (Olshavsky, Miller, 1972). Similarly, there are studies that describes consumer trust as a pivotal cornerstone and a key factor in the establishment of the relational commitment between firm and consumers (Reichheld, Schefter, 2000).

Taking into account the possible misleading effect of the pricing tactic under review, it is possible to include the variables related to consumer fairness perceptions and judgments into the consumer response set. Price fairness being a buyer's judgment of a seller's price can significantly affect consumer behavior. Price fairness is a consumer's assessment and associated emotions of whether the difference (or lack of difference) between a seller's price and the price of a comparative other party is reasonable, acceptable, or justifiable (Xia et al, 2004). Price fairness judgments may be based on previous prices, competitor prices, and profits (Bolton et al., 2003). In this case, the social norms are the rules that the community agrees sellers should follow when setting prices (Garbarino and Maxwell, 2010). Although consumers are able to quickly identify unfair situations, it is conversely more difficult for consumers to assess whether a policy is fair – that is why some studies use the concept of price unfairness instead (Bolton et al., 2003). Whether or not a pricing scheme improves the firm's profit, the attribution of a negative motive to it will cause the perception of price unfairness (Campbell, 1999).

Thus, three theoretically and managerially relevant antecedents of purchase intentions are identified for the analysis: product attitude, producer trust, and price unfairness. When proceeding with the hypothesis development, a more favorable effect of price increase on the specified variables is considered to have higher product attitude and producer trust evaluations, lower price unfairness evaluations, and higher purchase intention scores.

Figure 1. Conceptual Framework



In previous studies which compare the demand sensitivity to total price increase vs product downsizing, product downsizing is often proclaimed to be more effective (Gourville, Koehler, 2004; Cakir, Balagtas, 2013; Snir, Levy, 2011); however, there is also an evidence that the effect of these alternative practices could be the same (Imai, Watanabe, 2014). After

closer examination of articles that produced the different conclusions, the contradiction can be attributed to (1) firstly, heterogeneity of consumers: consumers in different markets can have different apriori knowledge on pricing tactics used in the market and, thus, are different in terms of their ability to notice the product downsizing and validly evaluate the unit price change; (2) secondly, the time span covered by the analysis: superior effect of product downsizing is observed in the articles that investigate short-term effect of this pricing tactics, while the article that equates the effectiveness of total price increase and product downsizing covers a relatively longer time span.

To address the existing research gaps and contradictions, there is introduced a conceptual framework that incorporates the consumer heterogeneity and variability over time (Figure 1). Later on, we will refer to the short term as a period when consumers have no external information on the pricing tactics used in the marketplace and can rely only their personal internally invoked knowledge, while in the long term the consumer knowledge on pricing tactics usage can be externally invoked.

Based on the conceptual framework, the following hypotheses are formulated:

H1. The marginal benefit of product downsizing vs total price increase on consumer response is higher in the short term than in the long term.

H2. The presence or absence of consumer knowledge on pricing tactics usage moderates the consumer response in the short term.

H3. The source of consumer knowledge moderates the consumer response in the long term.

4. Research Design

4.1. Method

To test the specified hypotheses, the study uses an experimental method. Web-experiment including both within-subject and between-subject designs is employed to compare the behavioral and psychological responses of different consumers to overt vs covert price increases over time. The survey structure is represented in Table 1.

Table 1. Survey structure

Time	Description of Interaction
Time 1	– All respondents are provided with a concise description of the market situation and the picture of the product with a price (see Appendix 1 (a)): <i>«The Russian company Ostankino sells milk under the brand name "36 cents" on the Russian market. Picture and description of the product are given. Please indicate whether you agree with the following statements»</i>
Time 2	– Respondents are randomly assigned to one of the two conditions (product downsizing vs equivalent overt price increase) in the proportion 60/40. Respondents are still provided with a concise description of the market situation (the same for all respondents) and the picture of the product with a price (different pictures depending on the assigned condition (see Appendix 1 (b) and (c) for product downsizing and overt price increase conditions): <i>«The company decided to implement some changes to the product and adjust its price. Prices of other milk brands have not changed. Picture and description of the product, taking into account the changes are given. Please indicate whether you agree with the following statements»</i> – All respondents are asked to evaluate the extent of price change by choosing one of the given options with different percentage changes. – The respondents exposed to product downsizing are asked whether they have noticed the size change. Depending on the answer they are divided in the two groups: Treatment 1 – those who detected the size change, and Treatment 2 - those who did not detected the sized change.
Time 3	– All respondents regardless of their previous answers are provided with the information on the extent of price increase. The respondents exposed to product

downsizing are also informed that the price increase was partly accomplished through the reduction of the product quantity from 990 to 900 ml: «Price per 1 liter increased by 13.6%. This was achieved by reducing product packaging from 990 to 900 ml (only for product downsizing condition). Have you changed your attitude to the product and the manufacturer after receiving this information? To answer this question, please indicate whether you agree with the following statements».

At the second interaction (Time 2) the design of the product was slightly changed. It was done to distract consumer attention from the price change. The same redesign was accomplished for both product downsizing and overt price increase conditions. This practice is often used by marketers in the real market settings. Moreover, the general dynamics of the survey resemble the real-world flow of actions: as the prices on the market goes up, consumers modify their market behavior as a response to a price change depending on their personal judgments and perceptions (Time2), and afterwards consumers are provided with the exact information on the market price change that can go from either the official statistical sources, the media or the fellows (Time 3).

At each interaction consumers are offered to evaluate whether they agree with particular statements which are intended to measure several conceptual constructs: purchase intention product attitude, producer trust, and price unfairness. The constructs are the same throughout the interaction timeline. Both unidimensional and multidimensional constructs are used. The reliability of multidimensional constructs are quite high at each time (see Table 2).

Table 2. Construct indicators, measurement items, and reliability of measures

Measures	Items	Time 1 (α)	Time 2 (α)	Time 3 (α)
Purchase intention	I am ready to pay the stated price for the product.	.86	.89	.88
	I would purchase this product in the store.			
	I could buy this product on the next visit to the store.			
Product attitude	I find this product interesting.	.78	.84	.92
	I like this product.			
Producer trust	I trust the producer of this product.	-	-	-
Price unfairness	I consider the stated price of the product acceptable.	.88	.88	.88
	The price of the product is unreasonably high.			
	I think this price is unfair to consumers.			

Note. – All items are measured using 7-point Likert scale with the points labeled as 1 = strongly disagree; 2 = moderately disagree; 3 = slightly disagree; 4 = neutral; 5 = slightly agree; 6 = moderately agree; and 7 = strongly agree. The reliability of multi-items scales is measured using Cronbach's alpha.

Considering all the above consumer response variables, it is hypothesized the variables will behave differently in consumer groups exposed to different treatments (overt price increase vs product downsizing) over the consumer-product interaction trajectory. In addition, the different responses are expected among those consumers who detected the product downsizing vs those who did not detect that. Thus, three consumer groups are identified in the study: a) Control group (respondents who are randomly assigned to the total price increase condition); b) Treatment 1 (respondents who are randomly assigned to the product downsizing condition and detected the product downsizing); c) Treatment 2 (respondents who are randomly assigned to the product downsizing condition and did not detect the product downsizing).

4.2. Sample and Context

The experiment embraced 71 respondents of whom 48 respondents submitted a questionnaire via a social network in March 2015 and 23 respondents submitted the questionnaire in a printed format in April 2015. The purpose of the study is to investigate how the consumer response changes as a reaction to a unit price change. Consumers who initially gave maximum or minimum scores are deprived of a possibility to further change their opinion in a more positive or negative directions respectively, which can confound the results. To eliminate a possible confounding effect, only overlapping observations were taken for the analysis, while the observations with extremely low and high values at the pretest intervention were excluded. Following this logic, 8 observations were excluded from the analysis (4 observations from the Control group; 2 – from the Treatment 1 group, and 2 – from the Treatment 2 group). The analyses proceeds with 63 observations: 19 observations in the Control group, 22 observations in the Treatment 1 group, and 22 observations in the Treatment 2 group.

5. Results

5.1. ANOVA

To test hypotheses the repeated-measures ANOVA is used as a method appropriate to longitudinal experiments in the marketing literature, in general, and exact research questions under investigation, in particular.

Prior to running repeated-measures ANOVA, the data was checked for the existence of significant between-group differences at the baseline level (Time 1) using between-group ANOVA. The analysis revealed that there are no baseline differences among groups for all dependent variables: purchase intention ($F(2,60) = 0.51, p = 0.60$), product attitude ($F(2,60) = 0.90, p = 0.41$), producer trust ($F(2,60) = 0.06, p = 0.94$), and price unfairness ($F(2,60) = 2.23, p = 0.12$). As the analysis does not reveal any differences among groups at the pretest interaction (Time 1), any differences among groups at the following interactions can be attributed to the treatment and moderation effects.

Repeated-measures ANOVA was run on each of the consumer response indicators. Means and standard deviations across groups over time are provided in Table 3. Table 4 presents the test statistics of main effects.

Table 3. Descriptive Statistics on Consumer Response Measures (Means and Standard Deviations)

Dependent variables	Control group (n = 19)		Treatment 1 (n = 22)		Treatment 2 (n = 22)		
	Mean	SD	Mean	SD	Mean	SD	
Purchase intention:							
Time 1	3.51	(0.98)		(1.02)	3.73	(1.27)	
Time 2	2.96	(1.30)	3.86	3.61	(0.99)	3.64	(1.13)
Time 3	2.93	(1.23)	3.42	(1.02)	2.98	(1.13)	
Product attitude:							
Time 1	4.37	(0.86)	4.11	(1.02)	3.93	(1.13)	
Time 2	3.82	(1.45)	3.64	(1.01)	3.84	(0.99)	
Time 3	3.71	(1.36)	3.50	(0.88)	3.48	(1.10)	
Producer trust:							
Time 1	4.21	(1.40)	4.09	(0.90)	4.14	(1.01)	
Time 2	4.05	(1.28)	4.00	(0.95)	4.14	(1.01)	
Time 3	4.11	(1.17)	3.77	(1.20)	3.36	(1.33)	
Price unfairness:							
Time 1	4.30	(1.37)	3.71	(1.19)	4.45	(1.00)	
Time 2	5.19	(1.25)	4.53	(1.05)	4.52	(1.15)	
Time 3	5.26	(0.96)	4.56	(1.20)	5.05	(1.03)	

Table 4. Results of Repeated Measures ANOVA

Dependent variables	Between-group effect	Within-group effect	Interaction effect
Purchase intention	F(2,60) = 1.14, p = 0.33	F(2,120) = 17.44, p = 0.00	F(4,120) = 2.02, p = 0.09
Product attitude	F(2,60) = 0.30, p = 0.74	F(2,120) = 14.58, p = 0.00	F(4,120) = 0.89, p = 0.47
Producer trust	F(2,60) = 0.30, p = 0.74	F(2,120) = 5.57, p = 0.00	F(4,120) = 2.08, p = 0.09
Price unfairness	F(2,60) = 2.02, p = 0.44	F(2,120) = 28.65, p = 0.00	F(4,120) = 3.00, p = 0.02

The results of repeated measures ANOVA indicate that there is a statistically significant within-group effect for all dependent variables i.e. there is a tendency of all consumer response variables to change in the same direction over time within all experimental groups. In particular, there is observed a deterioration of product attitude and producer trust, and acceleration of price unfairness perceptions over time, which results in the reduction of purchase intention.

Between-group effect proved to be significant only as a part of interaction effect, which signifies that despite there is a common tendency within all experimental groups to react similarly in response to experimental interventions, the severity of consumer responses to interventions is different among groups.

5.2. Analysis of Mean Differences

Since the treatment-by-time interaction is significant, there is a need to explain the interaction. For further insight into the hypotheses, the analysis of mean differences is undertaken. The statistical significance of mean differences among groups is presented in the Table 5.

Table 5. Results of Post-Hoc Analysis of Mean Differences

Dependent variables	Control group (Total price increase)	Treatment 1 (Product downsizing, Internally Invoked Knowledge)	Treatment 2 (Product downsizing, Externally Invoked Knowledge)
Purchase intention			
Time 2 vs Time 1	-0.54 ***	-0.26	-0.09
Time 3 vs Time 1	-0.58 ***	-0.44 ***	-0.74 ***
Product attitude			
Time 2 vs Time 1	-0.55 ***	-0.48 ***	-0.09
Time 3 vs Time 1	-0.66 ***	-0.61 ***	-0.45 **
Producer trust			
Time 2 vs Time 1	-0.16	-0.09	0.00
Time 3 vs Time 1	-0.11	-0.32	-0.77 ***
Price unfairness			
Time 2 vs Time 1	0.89 ***	0.82 ***	0.07
Time 3 vs Time 1	0.96 ***	0.85 ***	0.60 ***

Note. – The significance of mean differences is tested using t-statistics. The asterisks signify the following significance levels: * p < .10; ** p < .05; *** p < .01.

The analysis of mean differences indicates that in the short run a statistically significant reduction in purchase intention in response to price increase is observed only when consumers are exposed to total price increase, while product downsizing does not lead to a significant reduction in purchase intention for both treatment groups. The short-term stability of purchase intention for the Treatment 2 group is explained by the unchanged antecedents of purchase intention (product attitude, producer trust, and price unfairness). On the contrary, the rapid shrinkage of purchase intention for the Control group is driven by the movement of

antecedents (product attitude and price unfairness) to a less favorable direction. Despite the same trajectory of intention antecedents is observed in the Treatment 1 group, the intention does not change in the short run analogously to the Control group. The possible explanation of such a contradiction is that even when consumers are able to detect the product downsizing, they tend to err in their judgments regarding the price change and underestimate the scope of price increase.

The differences in consumer response to product downsizing depending on the presence or absence of consumer knowledge in the short run support the hypothesis 2 (H2): consumers who detect product downsizing change their product attitude and price unfairness judgements in the short run, while those who does not detect product downsizing keep all consumer response variables unchanged.

In the long run all experimental groups demonstrated a significant shrinkage of purchase intention. However, the Treatment 2 group underwent the most rapid reduction of purchase intention mostly driven by the deterioration of producer trust judgements, which supports the hypothesis 3 (H3) according to that the source of consumer knowledge moderates the consumer response in the long term.

Such variability of consumer response to product downsizing over time supports the hypothesis 1 (H1) according to that the marginal benefit of product downsizing vs total price increase on consumer response is higher in the short term than in the long term.

6. Conclusion

The study can contribute to the existing research in several ways. Firstly, it interprets the existing research contradictions through the introduction of several moderating variables related to consumer knowledge. Secondly, it tries to go beyond the investigation of short-term effect of covert vs overt pricing tactics by simulating the long-term development trajectory of consumer-product relationships.

The analysis revealed that even when consumers are able to detect the product downsizing, they tend to err in their judgments regarding the price change and underestimate the scope of price increase. That could be driven by the limited abilities to conduct valid mathematical calculations when both the nominator and denominator (that is, product size and total package price) change. Even in the absence of product downsizing, consumers did not provide a valid evaluation of price change scope, and product downsizing being a more mentally challenging way to frame a price change accelerates the tendency to make mistakes among consumers. Based on such mental limitations, covert (vs overt) unit price increase is proved to lead to a more positive consumer response in the short term when consumers have no access to external information and can rely only on their internal knowledge on covert pricing tactics usage.

In the long term, when consumers have access to external information on covert pricing tactics usage, the effect of covert (vs overt) pricing tactics tends to become less favorable for companies. The long-term effect is moderated by the source of consumer knowledge on pricing covert tactics usage: consumers who managed to internally invoke the knowledge on pricing tactics usage react differently to covert unit price increase in the long term than those whose knowledge on pricing tactics usage was externally invoked.

The narrow scope of the study in terms of analyzed sample and product categories being a limitation for the generalization of results becomes an alarm for future research with more broad and representative empirical data.

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**K.V. Klepneva, National Research University Higher School of Economics,
ksenia.klepneva@gmail.com**

A Competency Model of Personnel Customer Orientation

Abstract. The present paper discusses the results of the first (theoretical and methodological) stage of research work aimed at introducing a theoretical competency model of personnel customer-orientation (PCO competency model) in a multinational company operating in developed and emerging markets. The author clarifies the notion of employee customer orientation, determines a set of its factors and indicators and creates a theoretical PCO competency model. The paper also discusses directions for further research and practical implications that could be of interest to human resource professionals and people managers.

Key Words: *personnel customer orientation, competency model, superior customer value creation, human resource management*

1. Introduction

Nowadays in order to gain a competitive advantage multinational companies tend to focus not only on driving their sales indicators and penetrating new markets but also on establishing and maintaining long-term and mutually beneficial relations with different stakeholders, first and foremost with their clients. To this end, organizations strive to become more market oriented, i.e. more effective in creating “*sustainable superior value for [their] present and future target buyers*” (Narver and Slater, 1990).

Market orientation of an organization presupposes that the organization’s workforce is customer oriented, i.e. it has a set of attributes enabling it to demonstrate client centric behavior, meet and exceed customer expectations.

Despite growing interest in the topic of employee customer orientation on the part of academics and different organizations (especially, multinational companies and large consulting firms operating on developed and emerging markets), for the moment, there seems to be a lack of a common approach to defining the notion in question and a common theoretical model outlining key factors and indicators of employee customer orientation.

In practice, organizations do not seem to have the necessary programs and tools that could be used to manage personnel customer-orientation in general and the more so in the context of developed and emerging markets.

According to Sheth (2011), marketing theory, strategy, policy and practice (including such core assumptions as, for example, market orientation) is different in emerging markets as compared to the traditional industrialized capitalist societies. The same seems to be true with regard to human resource management in emerging markets, which are typically characterized by a different social, political, economic and cultural context (e.g.: Budhwar and Varma, 2011).

The purpose of the research work carried out by the author in terms of her PhD thesis consists in creating a model for managing personnel customer-orientation as a factor of the company’s market orientation. This entails creating a competency model of personnel customer orientation (PCO competency model), which is expected to further clarify the notion of employee customer-orientation and provide for a methodology for managing employee customer-orientation in a multinational company operating in developed and emerging markets.

Empirical object of the research work is client-facing employees working for a multinational B-to-B market research company operating in developed and emerging markets; theoretical object is these employees’ customer orientation. The subject of the research work in question is managing customer orientation of the company’s client-facing employees.

2. Theoretical Framework

The notion of competencies was introduced in the early 1970s by McClelland, professor of Harvard University, in his article “Testing for competence rather than for intelligence” published in the American Psychologist Journal in January, 1973. The scholar noted that outstanding job performance cannot be always predicted by intelligence or academic aptitude tests. Indeed, there should be even better predictors of success on the job, i.e. competencies. According to McClelland (1973), competencies include not only such cognitive skills as e.g. writing and reading but also what traditionally has been referred to as personality variables, e.g. communication skills, patience, moderate goal setting etc. McClelland also argued that competencies are task and organization specific. Further to this, Boyatzis (1982) stated that “*a competency is an underlying characteristic of the person that leads to or causes effective or superior performance*”. Building on Boyatzis’s research work,

Spencer and Spencer (1993) defined a competency as an “*underlying characteristic of an individual that is casually related to criterion-referenced effective and/or superior performance in a job or situation*”. The scholars have also introduced the so-called “Ice-berg competency model” comprising the following five competency attributes including motives, traits, self-concept, knowledge and skills. Bazarov et al. (2014) believe that a competency is “*a combination of knowledge, abilities, skills, motivational factors, personal qualities and situational intentions that enables the actor to efficiently perform specific tasks in a specific organization in a specific job and in a specific production community*”. The scholars maintain that a competency model should be created for a specific organization because even within one and the same industry companies vary by size, corporate culture, structure etc.

In accordance with Dubois and Rothwell (2004), even a small improvement in an employee’s competency profile can lead to a significant increase in their performance outcomes, which, in turn, should contribute to the company’s business performance. Therefore, competencies should be taken into consideration, assessed and developed throughout the whole human resource management process (e.g. when recruiting, training and developing, assessing and rewarding employees).

The first academic articles dedicated to the topic of customer orientation appeared in the middle of the XXth century. Those studies focused on analyzing a wider phenomenon of market orientation and various practical aspects of applying market orientation principles within a company (e.g.: Levitt, 1960; Barksdale and Darden, 1971). According to Narver and Slater (1990), market orientation is “*the organizational culture that most effectively and efficiently creates the necessary behaviors for the creation of superior value for buyers and, thus, continuous superior performance for the business*”. Market orientation is also an organization-wide market intelligence generation, dissemination and responsiveness to market needs (Kohli and Jaworski, 1990).

Saxe and Weitz (1982) introduced the term “customer oriented selling” to denote “*the degree to which salespeople practice the marketing concept by trying to help their customers make purchase decisions that will satisfy customer needs*”. Shavrovskaya and Apenko (2010) stated that employee customer orientation presupposes “*a combination of knowledge, abilities, skills, which, thanks to the relevant motivation, values, affirmations and personal qualities, conduces employees towards a specific behavior, establishment and maintenance of client relations in view of obtaining the necessary result*”.

Further research into the subject of employee customer orientation dealt with such issues as the link between personality traits, skills, motivation (e.g. extroversion, conscientiousness, neuroticism, agreeableness, openness to experience, technical skills, social skills) and customer orientation (e.g.: Periatt et al., 2007; Hennig-Thurau, 2004); the organization’s strategy, structure, systems, shared values, corporate culture and customer orientation (e.g.: Guenzi et al., 2011; Deshpande and Webster, 1989); human resource management practices (e.g.: recruitment, training and development, evaluation/assessment) and customer orientation (e.g.: Strong and Harris, 2004; Shavrovskaya, 2011); national culture dimension of individualism/collectivism and customer orientation (Hofstede, 1980; Hofstede and Bond, 1988; Huff and Kelley, 2005).

3.Methodology

The research work undertaken by the author comprises two stages:

Stage 1: academic literature review, qualitative research and theoretical PCO competency model development. This stage has been completed by the author and its main results are discussed in the present paper.

Stage 2: quantitative research in view of validating and extending the theoretical PCO competency model; elaboration of a program/set of methodological recommendations on managing and raising the bar on employee customer orientation within multinational companies operating in developed and emerging markets. This stage represents the next step in the author's research work.

In accordance with the above, by now the author has completed an academic literature review as well as empirical research using the following qualitative research methods: participant observation and interview. Two types of semi-structured interviews were held:

- interviews of the first type were held with client-facing associates working in managerial roles in a number of subsidiaries of a multinational B-to-B market research company;

- interviews of the second type were held with associates working in managerial roles on the client side and acting as key points of contact for the first group of associates or their counterparts in other countries.

Overall, the author interviewed 14 (8 male and 6 female) manager-level associates of the multinational B-to-B market research company and 7 (4 male and 3 female) associates working on the client side. The study encompassed both developed (e.g.: France, Germany, Switzerland, Italy, Belgium, Denmark, the Netherlands) and emerging (e.g.: Russia, Kazakhstan, Ukraine) markets.

Academic literature review enabled the author to create a preliminary version of the theoretical PCO competency model, which was further enhanced through participant observation and the abovementioned interviews. The use of qualitative research methods also allowed the author to consider the notion of employee customer orientation from the "company's" and "clients'" perspective, and, therefore, further clarify the concept in question.

4.Results and Discussion

In accordance with the above, the author has identified the following key characteristics of employee customer orientation:

- knowledge of the company's product and service portfolio;

- knowledge/understanding of the client's business, including its key challenges, opportunities etc. This also entails the employee's understanding of the relevant industry, its key players, trends and competitive environment;

- technical skills;

- social skills;

- ability to leverage the relevant knowledge and skills in view of creating superior customer value;

- motivation.

The theoretical PCO competency model (depicted in Figure 1) comprises individual factors (e.g.: field of education, job tenure, job satisfaction), organizational factors (e.g.: decision-making authority, business process formalization, functional role clarity, a customer-oriented company strategy, corporate culture, human resource management practices) and external factors (e.g.: the level of market development, national culture dimensions) all of which are related to employee customer orientation.

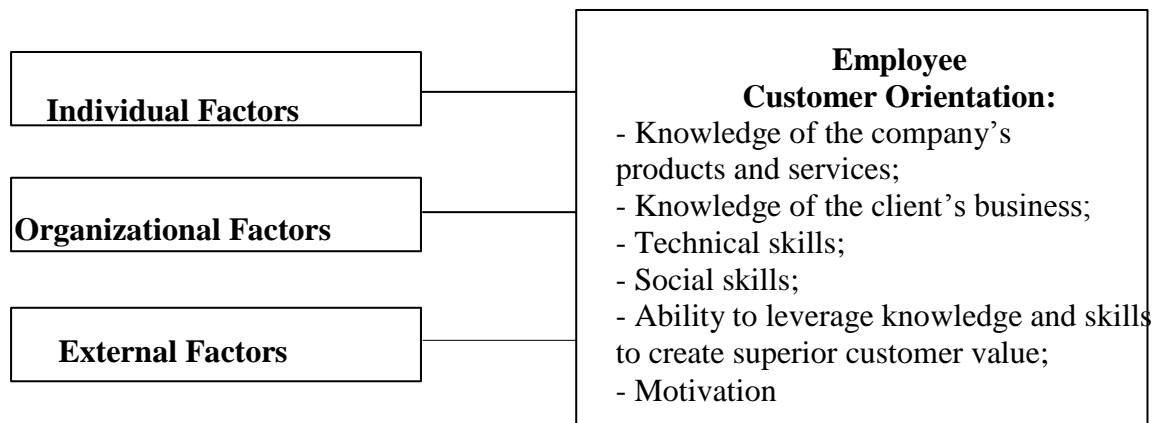


Figure 1. A competency model of personnel customer orientation (PCO competency model)

In line with the above, the author's contribution to academic research consists in further developing the theory of employee customer orientation via clarifying the notion of employee customer orientation, determining a set of factors and indicators of employee customer-orientation and creating a theoretical competency model of personnel customer-orientation (PCO competency model).

The research results also offer important managerial implications, e.g.: employees should be able to leverage their knowledge and skills in a way that would enable them to suggest solutions meeting and exceeding their clients' needs; the idea of employee customer orientation should be a shared value well ingrained in the company's corporate culture; employees should have enough clarity about their roles and responsibilities to create superior value for their customers; employee customer orientation should be assessed as part of the company's recruitment and performance management processes.

With regard to limitations of the present study, we should acknowledge that no analysis of intrapersonal factors (i.e. personal qualities/traits) has been undertaken by the author. This is conditioned by the fact that, on the one hand, these factors are highly volatile (Guenzi et al., 2011) and, on the other hand, they may not necessarily be managed within an organizational context (e.g.: via employee training and development activities) and, therefore, should constitute the subject of a separate study possibly within the field of psychological research.

As far as other suggestions for further research are concerned, as previously stated, for the moment, only the first stage of the author's research work has been completed. During the second stage of the research work in question the author will hold a survey among client-facing associates working in a number of subsidiaries of a multinational B-to-B market research company operating in developed (e.g.: Great Britain, France, Germany, Italy, Spain, USA) and emerging (e.g.: Russia, Brazil, Mexico, China, India) markets. The use of quantitative research methods at this stage should enable the author, on the one hand, to validate and extend the theoretical PCO competency model presented in this paper. On the other hand, this will serve as a basis for creating a program/set of methodological recommendations aimed at helping multinational organizations to improve customer orientation of their human resources working in developed and emerging markets.

5. Conclusion

The research work carried out by the author has enabled her to further clarify the notion of employee customer orientation in the context of a multinational B-to-B market research company, determine factors and indicators of employee customer orientation and provide suggestions for further research. The author has also proposed a theoretical PCO competency model and a few practical considerations stemming from it. The model may be used by multinational companies and their subsidiaries to create their own PCO competency models to improve customer orientation of their workforce and thus contribute to making these organizations more market oriented.

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**A. Laskovaia, St. Petersburg University, Graduate School of Management
an.laskovaya@gmail.com**

**G. Shirokova, St. Petersburg University, Graduate School of Management
shirokova@gsom.pu.ru**

National Culture and Venture Cognitive Logic Relationship to New Venture Performance

Abstract: Effectuation theory proposes alternative to the traditional decision-making logic that may overcome shortcomings of rational thinking in uncertain environment. We suppose that specific context may form entrepreneur's decision-making logic. Therefore in our study we aim to analyze what role particular characteristics of national culture play in formation of two cognitive logics – effectuation and causation – and how they relate to new venture performance. Our findings indicate that venture cognitive logic is significant predictor of new firm success. We also found that venture cognitive logic mediates the relationship between national culture and new venture performance that allows us to assume particular characteristics of national culture promote effectual or causal logic during venture creation.

Key words: *Effectuation, causation, new venture performance, student entrepreneurs, national culture, GUESSS.*

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1. Introduction

Investigation of the essence of entrepreneurs' reasoning and behavior, their motives and decision-making logic is of high interest to entrepreneurship scholars (Krueger et al., 2000; Mitchell et al., 2002). Some scholars argued that better understanding of entrepreneurial cognition promotes additional impetus to the further development of entrepreneurship research (Mitchell et al., 2002). One of the aspects of entrepreneurial decision-making that received increasing attention is venture cognitive logic that refers to "the entrepreneurial process of working with opportunities and launching and growing a new venture" (Dutta and Thornhill, 2012). In entrepreneurship literature there have been identified two venture cognitive logics – effectuation and causation – firstly mentioned by Sarasvathy when she presented effectuation theory as a new heuristic approach to new venture creation under uncertainty (Sarasvathy, 2001).

Effectuation as a decision-making logic appeared as an alternative to neoclassical approach to business creation based on causal reasoning (Sarasvathy, 2001). Both approaches are used by entrepreneurs during new venture creation and they are both used successfully. Effectuation theory was developed in relation to cognitive processes of experienced entrepreneurs (Sarasvathy, 2001). The pivotal role of experience in entrepreneurial cognitive processes has received a lot of attention in effectuation research (e.g. Gabriellsson and Politis, 2011; Sarasvathy, 2001). Consequently, there is missing point in the literature about cognitive processes of non-experienced entrepreneurs that opens promising research direction in effectuation literature about implications of effectual logic for non-experienced entrepreneurs. In our study we examine the relationship between venture cognitive logic and new venture performance on international sample of 3616 student entrepreneurs from 25 countries adding extra insight into effectuation research streams about the meaning of effectual reasoning for nascent non-experienced entrepreneurs.

National culture in our view is one of the most important and pervasive environmental factors. We perceive characteristics of national culture as exogenous variables that may influence firm performance indirectly through their impact on entrepreneur's cognition and decision-making logic. While earlier works on entrepreneur's decision to found a business suggests that this decision may vary across cultures (e.g. Muzka et al., 1991; Shane et al., 1991), we assume country-specific cultural characteristics may shape decision-making process during new venture creation. Therefore, the purpose of this study is to answer the following research questions: *How does venture cognitive logic relate to new venture performance? How do characteristics of national culture relate to venture cognitive logic? and In what extent the culture-performance relationships is mediated by entrepreneur's venture cognitive logic?*

Our research contributes into entrepreneurship literature in several ways. Firstly, our findings support prior discussion in the literature that causal and effectual reasoning are not opposite constructs but they may be both implemented simultaneously (Sarasvathy, 2001). Secondly, we ensure evidence that both entrepreneurial decision-making logics – effectuation and causation – positively influence new ventures performance. Thirdly, we develop effectuation theory revealing that national culture characteristics' influence entrepreneurs' venture cognitive logic performing as its antecedents. Finally, we contribute to effectuation research stream referring effectual logic to nascent non-expert entrepreneurs. We support previous findings about the importance of experiential learning for student entrepreneurs as they may learn using effectual reasoning for venture creation under particular conditions. Thereby we provide additional knowledge for entrepreneurs about successfully combination of effectual and causal logics during venture creation.

The paper is organized as follows. We start by presenting our conceptual framework and hypotheses. We then move to a description of our sample, methodology, and our

empirical insights. Next we discuss our findings and then conclude with the implications and limitations of the research.

2. Theory and Hypotheses

The venture creation process has been considered by scholars through the lens of effectuation theory (Chandler et al., 2011), that introduces two venture cognitive logics – effectuation and causation – which entrepreneurs apply during decision-making processes. Effectual logic assumes the use of available means and commitments with stakeholders for controlling unpredictable future and leverage contingencies (Sarasvathy, 2001). Alternatively, causal logic is based on rational reasoning with pre-existing goals and opportunities, planning process and resource identification.

Effectuation was introduced as a cognitive logic of expert entrepreneurs during new venture creation under uncertainty (Sarasvathy, 2001). Expert entrepreneur's reasoning differs from nascent entrepreneur's thinking and behavior. To be an expert it is not enough to have experience, what is more important is to have an ability to learn from that experience for self-improvement (Baron and Henry, 2010) and be repeatedly engaged in critical activities (Greeno and Simon, 1988). Experts are more likely to apply effectual logic during new venture creation as they tend to think heuristically and use rather analogical than analytical thinking (Dew et al., 2009), when one generates knowledge based on previous experience. Thus, literature studying the application of effectuation theory to the inexperienced entrepreneurs' decision-making process is still in its infancy.

Existing studies show contradictory results concerning the importance of effectual reasoning for student entrepreneurship (Politis et al., 2012; Schleinkofer and Schmude, 2013). As student entrepreneurs are perceived as non-experts, this result can be explained by the lack of knowledge and experience student entrepreneurs have. Universities mostly teach traditional entrepreneurship programs where courses on business planning, market and strategic analysis are of the main focus (e.g. Honig and Karlsson, 2004). Students are taught preparing business plans, formulating predetermined goal and recognizing opportunities. Notwithstanding, there are students with relevant managerial and entrepreneurial experience, who may have critical thinking and not just follow textbook's prescriptions. Moreover, there is contemporary stream in research and education on experiential learning (e.g. Morris et al., 2013) that encourages students to experiment, learn what works and amend their experience.

Two different alternative viewpoints have been identified in the entrepreneurship literature concerning university milieu's the influence the way student entrepreneurs create new ventures (Polities et al., 2012). One opinion is that student entrepreneurs are taught to apply a planning approach during new venture creation in university that leads to their preferences for predetermined goals and use of formal plans (e.g., Honig, 2004; Karlsson, 2005). Planning and goal setting, in turn, favor causal thinking and behavior in process of starting a business. Additionally, Karlsson (2005) revealed that new ventures created within university context are influenced to produce a written business plans. Another point of view is that in universities students learn to build networks, use creative reasoning and use acquired knowledge that stimulate flexibility and experimentation in venture creation processes and comply with effectual cognitive logic (e.g., Baron, 2006). Instead of favoring one of these viewpoints we suppose that student entrepreneurs may use two approaches during venture creation – effectuation and causation – and get benefits for their ventures from both these venture cognitive logics (in line with Polities et al., 2012).

While an effect of such common tools of causation approach as strategic planning, marketing and competitive analysis, pre-existing goals and effectual approaches as control, experimentation, building alliances and flexibility are proved to affect firm performance (e.g. Brinckmann et al., 2010; Capon et al., 1994; Porter, 1980), the studying of particular causation and effectuation constructs' benefits for ventures is still on incipient stage.

The evidence from the literature about significant positive impact of different causal tools on venture performance allow us to assume causation as a decision-making process can lead to improved venture performance. Thus, we suppose that the investigation of the relationship between causation and new venture performance may help better understand value of formal planning and prediction logic (including strategic planning, competitive analysis and market analysis) for new venture success.

The relationship between effectual logic and new venture performance has recently begun to study in entrepreneurship literature. Read with colleagues (2009) were among the first researchers to test this relationship empirically. The authors conducted a meta-analysis of the relationship between four principles of effectuation (means, partnerships, affordable loss and leverage contingencies) and new venture performance summarizing data on 9897 new ventures. It was revealed that three of four effectual heuristics – means, partnerships and leverage contingences are positively related to new venture performance (Read et al., 2009). Other studies revealed effectuation itself has a positive effect on new venture performance (e.g. Cai et al., 2014). Additionally, it was found that focusing on effectual principles provides fewer failures in investments (Wiltbank et al., 2009) and promotes further benefits for highly innovative R&D projects (Brettel et al., 2012).

The ability to experiment is one of the characteristics of entrepreneurs applying effectual logic. Effectuators are prone to experimentation with products, services and business models as a way to test their ideas before finding a business concept that works (Sarasvathy, 2001). Entrepreneurs relying on available resources they have at hand follow trial-and-error path in business development by creatively combining these resources in a low-cost way. Experimentation therefore leads to the best business model selection and improve performance of a company. Another characteristic of effectual logic is that entrepreneurs take into account the amount of resources they afford to lose rather than expected future incomes they want to gain. Focusing on affordable loss principle allows effectuators manage risk of loss of invested resources, not only financial but social and intellectual resources as well. One more peculiarity of effectuators is that they perceive every new unexpected contingency and change as resources rather than unwilling events that should be prevented (Read et al., 2011). This ability brings firm more benefits than less flexible competitors and results in better performance. Therefore, we hypothesize that:

H1: Venture cognitive logic is positively associated with performance of new ventures created by student entrepreneurs.

National culture is defined as “shared motives, values, beliefs, identities, and interpretations or meanings of significant events that result from common experiences of members of collectives and are transmitted across age generations” (House et al., 2004: 57). Culture has a wide impact on people’s behavior and their social interaction and communication.

While the relationship between venture cognitive logic and firm performance has received certain attention in entrepreneurship literature, antecedents of venture cognitive logic remain unexplored. Based on literature review we may also conclude that the most studies on effectuation are focused on analysis of individual characteristics of entrepreneurs such as entrepreneurial expertise (Read and Sarasvathy, 2005) and resource logic (Polities et al., 2012). Harms and Schiele (2012), for instance, examined antecedents of effectuation and causation in the international new venture creation process. They considered personal international experience and uncertainty of environment as antecedents of venture cognitive logic in internationalization and indicated that “experienced entrepreneurs tend to apply effectuation rather than causation, while uncertainty does not have a systematic influence” (Harms and Schiele, 2012: 95). In modern conditions of unstable and constantly changing environment we cannot pay attention only on individual triggers of entrepreneurial cognition

without considering contextual environment. Perceiving national culture as one of the environmental factors that may form values and cognition of individuals, we state it shapes entrepreneurial thinking and decision-making logic.

One of the most important cultural characteristics is the tolerance of uncertainty (Hofstede and Hofstede, 2005). The uncertainty avoidance dimension refers to “the extent to which the members of an organization or a society strive to avoid uncertainty by relying on established social norms, rituals, and bureaucratic practices” (House et al., 2004, p. 11). It was claimed that uncertainty avoidance practices are negatively associated with entrepreneurial entry but not with tendency to growth (Autio et al., 2013). In cultures with high levels of uncertainty avoidance, people are more frightened of ambiguous situations. In such cultures members prefer regulations, expert knowledge and predictions as methods to reduce perceived uncertainty. In high uncertainty avoidance cultures individuals are intolerant towards risks that create a need for planning and predictability. In such cultures people are expected to follow initial plans and any deviation from them implies as high uncertainty. Causal logic is in consistence with high uncertainty avoidance cultures values as it relies on formal planning procedures. Entrepreneurs in high uncertainty avoidance societies may prefer more causal principles during new venture creation, and student entrepreneurs are even more prone to planning and prediction due to specific university milieu and obtained knowledge. Effectuation assumes constant experimentation, flexibility and adaptability through building alliances and networks with customers and partners (Dew et al., 2009). In high uncertainty avoidance cultures people perceive constant changings as risky behavior that may increase environmental ambiguity and uncertainty. In this way, causal logic may be considered by student entrepreneurs as more appropriate way for new venture creation. Based on these arguments, we hypothesized that:

H2: Venture cognitive logic mediates the relationship between uncertainty avoidance and performance of new ventures created by student entrepreneurs.

One more dimension of national culture refers to the preference for individualistic or collectivistic values and behavior. In individualistic societies, people are expected to emphasis on self-interest and take care of only themselves or their immediate families (Hofstede and Hofstede, 2005). In such cultures, individuals’ behavior is driven more their personal needs and attitudes. In individualistic cultures, people consider themselves to be independent from others, value freedom, not associate themselves with a particular social group and pursue individual interests rather than group ones. Student entrepreneurs in individualistic cultures will be more autonomous and independent from the other people’s opinion. Having individual achievements as of the highest value goal and striving to self-realization student entrepreneurs will be more prone to application of competitive strategies and marketing analysis in business establishment which are key characteristics of causal reasoning. In collectivistic cultures individuals view themselves as integrated with other members of cohesive groups through social interactions. In these societies, the individual’s identity is based on group membership (Goktan and Gunay, 2011) and every member’s opinion is of high value (Hofstede and Hofstede, 2005). Collectivistic values may be perceived as a basis of effectual reasoning with its reliance on family relationships, partnerships, alliances and commitments. Thus, in collectivistic cultures student entrepreneurs are expected to apply more effectual principles during venture creation. Following the logic presented, we hypothesized that:

H3: Venture cognitive logic mediates the relationship between individualism/collectivism and performance of new ventures created by student entrepreneurs.

The masculinity/femininity dimension refers to the extent in which masculine values like assertiveness, performance based values, individual success, and competition

predominate making individuals more assertive and goal directed as opposed to accenting social relationships (Hofstede, 1991). Individuals in masculine societies are more goals oriented and prone to formal rules compliance. Masculine culture is characterized by norms for independent action as contrast to cooperation and unity (Doney et al., 1998). Feminine societies conversely characterized trust relationships, nurturing, partnerships and team spirit (Steensma et al., 2000). McGrath and O'Toole (2014) findings is also support the meaning of feminine values for network capability development that in turn helps to gain access to additional resources and overcome some of the environmental challenges (Walter et al., 2006). It is known that planning and goal-setting are characteristics of masculine cultures. As causation based on setting achievable goals and formal planning, it will be more applicable to cultures based on masculine values. Effectuation in opposite based more on feminine values trying to build relationships with customers and partners, relying more upon building networks and creating community (Sarasvathy, 2001). In masculine societies it is expected student entrepreneurs will follow causation approach in venture creation, while in feminine cultures they will rely more on partnerships and commitments (principles of effectual reasoning) during creation of new firm to be in congruence with values of society. Thus, it is hypothesized that:

H4: Venture cognitive logic mediates the relationship between masculinity/femininity and performance of new ventures created by student entrepreneurs.

3. Method

3.1. Sample

In the study we utilize the data collected during the Global University Entrepreneurial Spirit Students' Survey (GUESSS) conducted in 2013-2014. This study was first carried out in 2003 by the Swiss Research Institute of Small Business and Entrepreneurship at the University of St.Gallen. GUESSS is dedicated to studying students' entrepreneurial activity, attitudes and intentions through the lens of Theory of Planned Behavior (Ajzen, 1991) taking into account students' individual characteristics, university environment and socio-cultural context.

In 2013-2014, 34 countries took part in this survey with 103,010 students from 759 universities involved. All students were divided into three groups: students with no intention to be self-employed, intentional founders, and active founders. Following our study aims we focused on the group of active founders. The subsample of active founders counted 4438 usable answers from 32 countries after omitting exchange students and missing values. We excluded exchange students in order to provide unbiased estimators of cultural characteristics. Due to the type of control variables and antecedents we had missing values only for mediators and dependent variable. We decided to exclude all observations with missing values as replacing missing values with sample mean did not change the results. We also excluded firms aged above 6 years old as we consider a firm as a "new" venture when it is aged from 0 to 6 years old in consistence with previous studies (e.g. Brush and Vanderwerf, 1992; Robinson, 1995). The final sample of our study counted 3616 new ventures from 25 countries.

3.2. Measures

Performance. As a dependent variable we used subjective performance indicator based on self-reported performance measures. The respondents were offered to assess three indicators in comparison to their competitors since company establishment using a seven-point Likert scale (from 1=worse to 7=better) – sales growth, market share growth and profit growth. Cronbach Alpha statistics for this variable is 0.922; the performance variable was operationalized as an averaged score on all the items. We consider subjective measures as reliable indicators of firm performance as prior research has found strong empirical support of

the high correlations among objective and subjective measures of firm performance (Schulze et al., 2001) and convergent validity of subjective measures (Dess and Robinson, 1984).

Venture Cognitive Logic. For measuring venture cognitive logic we used the scale adopted from Chandler et al. (2011), except for pre-commitments dimension. It was found that this dimension is shared between effectuation and causation and not as strong as the rest components of the scale.

Causation was measured with a seven-point Likert scale and assessed by the following statements: “I designed and planned business strategies”, “I researched and selected target markets and did meaningful competitive analysis”, “I designed and planned production and marketing efforts”. Cronbach Alpha statistics for this variable is 0.895; the causation variable is operationalized as an average score on all the items.

Effectuation was measured with a seven-point Likert scale and assessed the following statements about founding process: “The product/service that I now provide is substantially different than I first imagined”, “I tried a number of different approaches until I found a business model that worked”, “I was careful not to commit more resources than I could afford to lose”, “I was careful not to risk more money than I was willing to lose”, “I allowed the business to evolve as opportunities emerged”, “I adapted what I was doing to the resources we had”, “I was flexible and took advantage of opportunities as they arose”. Cronbach Alpha statistics for this variable is 0.776; the effectuation variable is operationalized as an average score on all the items.

In line with Sarasvathy (2001) we perceive causation and effectuation as integral parts of human reasoning and consider they are constantly intertwined, overlapping and can occur simultaneously. In order to capture a real interrelation between causal and effectual logics for every respondent we calculate *causation/effectuation ratio* and use it as a mediator in testing our hypothesized model.

Cultural variables. In this study we adopted Hofstede’s model of national culture due to its wide recognition and dominance in the entrepreneurship literature (e.g. Hayton et al. 2002; Shane 1993). We utilized three out six Hofstede’s cultural dimensions – uncertainty avoidance, individualism and masculinity – as we consider these cultural characteristics as extremely important for venture cognitive logic formation. The chosen cultural characteristics were measured as each country’s cultural dimension score ranged from 1 to 100 (Hofstede et al., 2010).

Control variables. In our study we employed a number of common control variables that provide alternative explanations for firm performance (e.g. Ensley et al., 2002). Firm age was included in the model as number of years the venture had been in existence. Firm size was measured as a number of full time employees.

4. Results

To test hypotheses of our study we performed structural equation modelling (SEM) using AMOS 21.0. Our hypothesized model fits the data good: $\chi^2(6, N=3616)=10.9$, $p=0.091$, adjusted goodness-of-fit index=0.994; comparative fit index=0.998; normed fit index=0.996; root-mean-square error of approximation=0.011, meeting the common goodness-of-fit criteria (Hu and Bentler, 1999).

Hypothesis 1, relating venture cognitive logic to new venture performance was supported ($b=0.216$, $p<0.001$). In our study we analyzed the relationship between new venture performance and causation/effectuation ratio. Considering effectuation and causation approaches as simultaneously used during venture creation we can conclude that student entrepreneurs benefit from both these cognitive logics. Moreover, we claim that effectuation and causation are more beneficial when entrepreneurs use them in a certain ratio.

Estimating the effects of characteristics of national culture on venture cognitive logic we found uncertainty avoidance has positive impact on causation/effectuation ratio ($b=0.039$,

$p < 0.05$) while individualism has negative impact ($b = -0.2$, $p < 0.001$). Additionally, we found uncertainty avoidance positively influence new venture performance ($b = 0.055$, $p < 0.05$) and individualism negatively influence new venture performance ($b = -0.134$, $p < 0.001$). We found no significant relationship between both masculinity dimension and venture cognitive logic and masculinity dimension and new venture performance. To estimate indirect effects of national culture on performance of new firms we relied on bootstrapping approach that revealed venture cognitive logic partially mediates the relationship between uncertainty avoidance and firm performance and individualism and firm performance.

Altogether, the obtaining results provide support for Hypotheses 2 and 3 about the mediating role of venture cognitive logic in relationship between uncertainty avoidance and new venture performance and individualism and new venture performance. No support was found for Hypothesis 4 predicting the mediating role of venture cognitive logic in masculinity-performance relationship.

5. Conclusion

Presenting this study, we aim to contribute to the effectuation research stream and cross-cultural literature. We perceive culture as one of the external factors that may influence venture cognitive logic choice. We suppose that better understanding of entrepreneurs' cognition's antecedents and benefits from using causal and effectual reasoning for new ventures creation will help enhance performance of young firms. Thus, the present research shows that we can't lean just on the study of individual characteristics of entrepreneurs when trying to understand reasons of choosing effectuation or causation approach and new venture success' explanation. What is more, we should consider huge variety of environmental factors that may influence particular venture cognitive logic's formation.

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Melina Maunula, M.Sc. (Eng.), Lappeenranta University of Technology, School of Business and Management, LUT Kouvola

Biorefinery Innovation Networks in South-East Finland: Chemical industry and Forest industry Hub-firms

A substantial increase in sustainability of industry operations can be achieved through the emergence of regional bioeconomies. Creation of new networks and co-operation is critical to facilitate bioeconomy transition. To demonstrate how the transformation towards biobusiness can be orchestrated through the development of regional innovation ecosystem I compare bioeconomy innovation network structures in South-East Finland. Conclusions about two possible bioeconomy innovation networks are outlined and comparisons made with forest industry hub-firm based innovation network structure against one with a chemical industry hub-firm. Specific focus is directed on analysing the different opportunities for the industry leaders in the transformation.

Key words: *industrial transformation, bioeconomy, biorefining, chemical industry, forest industry, sustainability*

1. Introduction

The term bioeconomy has been defined by different writers and organisations in various ways (Rissanen, 2013; Schmid, Padel, and Levidow, 2012). According to the European Commission (2012) “the term ‘Bioeconomy’ means an economy using biological resources from the land and sea as well as waste, including food wastes, as inputs to industry and energy production. It also covers the use of bio-based processes to green industries” (European Commission, 2012). It must be noted that even the European Commission uses divergent and even contradictory definitions (Schmid, Padel, and Levidow, 2012) and organisations operating in different fields have different outlooks on the concept of bioeconomy. For example the Finnish Forest Industries Federation (2010) defines bioeconomy as the use of products made from renewable resources as well as the production and processing of renewable natural resources whereas a report by Sitra, the Finnish innovation fund operating under the parliament, states that “[bioeconomy] is much more than just biomass-based production or biotechnology” (Hellström, 2011).

According to the Finnish bioeconomy strategy (2014) “the bioeconomy will reduce our dependence on fossil natural resources, prevent biodiversity loss and create new economic growth and jobs in line with the principles of sustainable development”. The opportunities of bioeconomy transition have been recognised on both administrative and industry level but the current actions towards the transition are largely limited to industrial and technological and on the other hand political and legislative measures. However, the creation of new networks and co-operation is critical in order to facilitate bioeconomy transition (Luoma, Vanhanen, and Tommila, 2011).

The cross-cutting nature of bioeconomy allows it to address multifaceted problems without compromising economic growth (European Commission, 2014). Bioeconomy should be seen as a societal strategy (Luoma, Vanhanen, and Tommila, 2011) to reach environmental as well as social and economic sustainability. Regional bioeconomies (in other words distributed bio-based economy) are based on local closed-loop value networks in which waste from one process is rawmaterial for another (Luoma, Vanhanen, and Tommila, 2011) following the principles of circular economy, which aims to restore products, components and materials at their highest utility and value (Ellen MacArthur Foundation, 2013).

2. Research Background and Method

Bioeconomy related research tends to be either policy-oriented or industry oriented. Policy-oriented research focuses on designing policy-agendas and industry oriented research on developing and commercialising solutions or technology. Even though, it has been widely recognised that the bioeconomy transition requires new knowledge and networks, there is little research conducted on the possible bioeconomy innovation network structures. Especially for SMEs it would be very beneficial to recognise what roles they could have in different networks and what opportunities different network structures offer them.

In “Orchestrating industrial transformation to biobusiness – Case Finland” paper presented at The XXIV ISPIM Conference – Innovating in Global Markets: Challenges for Sustainable Growth in Helsinki (Maunula, Kutvonen, and Hinkkanen, 2013) we mapped the roles of each industry player in the regional bioeconomy cluster of South-East Finland based on their old value chains in their respective industries, and their new roles in the emerging bioeconomy.

We found that the role of hub-firms becomes significant in boosting the transformation process, and again that the hub-firms can, and should be identified already beforehand based on their individual capabilities.

The mapping of the possible roles of various industry actors in emerging regional bioeconomies provides bases for further describing regional bioeconomy innovation networks formed around different hub-firms. In order to be able to identify future opportunities the industrial transition towards bioeconomy offers in different regions for different organisations and networks, it is vital to grasp the extent of the on-going transition and the change in the innovation networks structure. By contemplating how an existing network can restructure and grow into countless new networks in bioeconomy the transition can be orchestrated in a regional level resulting in the emergence of a regional bioeconomy.

In order to showcase opportunities of bioeconomy transition I utilise a case-example from an on-going bioeconomy transition in South-East Finland. By considering the key factors of such regional innovation ecosystem that would facilitate a biorefinery centric bioeconomy in South-East Finland, I determine what are the strengths of chemical industry hub-firms in orchestrating industrial transformation to biobusiness in comparison to forest industry hub-firms. An innovation ecosystem can include many innovation networks and thus, both can simultaneously exist in the same region. However, it is important to consider the pros and cons of different innovation networks for actors to be able to choose and utilise the opportunities offered by different network structures with hub-firms from different industries.

The paper utilises empirical data from an online survey on which also the previously reported network analysis in “Orchestrating industrial transformation to biobusiness – Case Finland” paper (Maunula, Kutvonen, and Hinkkanen, 2013) is based on. The two industry cases presented in this paper are outlined to further demonstrate possible networks and the most important opportunities for the network orchestrator.

To cope with the complexity of the issue, a qualitative methodology was chosen. The employed data was collected in spring 2012 through an electronic survey to higher management of 288 companies in two regions of South-East Finland. In total 66 companies (23%) responded. The sample is well representative of the economic structure of bio-related businesses in South-East Finland.

3. Network Orchestration

Structural changes do not occur in isolation, but instead large scale systemic change requires collaborative endeavour where a critical mass of organisations act differently (Senge, Smith, Kruschwitz, Laur, and Schley, 2008). As exploring the inter-organisational linkages and the wider system, a company is viewed as a collection of productive resources and the network as a source of its value creation (Ryan, Mitchell, and Daskou, 2012).

According to Powell, Koput, and Smith-Doerr (1996) innovation networks thrive when sources of industry expertise are scattered and the knowledge base is complex and expanding. This is exactly the case in bioeconomy transition which expands the boundaries of relevant knowledge across industry fields and simultaneously transforms market structures, business models and competitive relations.

Ryan, Mitchell, and Daskou (2012) have determined four organisational level capabilities to enhance learning for sustainability. They include i) network vision capability, which means that the organisation can evaluate its role within the network as well as the means to achieve

collaborative change in the network and the system, ii) network orchestration and relationship portfolio management, which includes establishing the agenda by formulating the goals of the network as well as managing complex cross-sector relationships portfolios, iii) effective partnering and enabling radical change capabilities, and iv) ecological literacy capabilities which means understanding the basic principles of ecology as well as ability to challenge guiding assumption of the dominant organisational ideology.

Network recruitment process precedes the network management activities. At this stage the hub-firm has the possibility to design the network to suit its goals. The network design is of great importance, including factors of network memberships, network structure and network position. (Dhanaraj & Parkhe, 2006).

Hub-firms orchestrate network activities to ensure the creation and extraction of value (Kogut, 2000; Ryan, Mitchell, and Daskou, 2012). According to Nambisan and Sawhney (2011) the orchestration processes that hub-firms use to coordinate, influence and direct other firms in the innovation network, remain poorly understood in research. The orchestration activities can be viewed from innovation perspective and interfirm network perspective (Nambisan & Sawhney, 2011).

The orchestration involves knowledge transfer, maintaining network stability and ensuring the adequacy of innovation. Dhanaraj and Parkhe (2006) state that significant value cannot be created from the network if the specialised knowledge of each network member stays locked within the organisation. Maintaining knowledge mobility consists of identifying relevant and valuable information from the network as well as transferring it to where ever in the network it is needed. Innovation adequacy is ensured by communicating the common network goals, having access to innovation activities and creating trust among network partners. Maintaining network stability is important although it is inevitable that some companies will enter and some exit the network. (Dhanaraj & Parkhe, 2006)

4. Future Biorefinery Innovation Networks in South-East Finland

South-East Finland has long tradition of forest industry which gives solid bases for woody biomass based production in the region. During the last years the pulp and paper industry has faced significant structural changes due to overcapacity, mature market conditions in main markets, as well as low-cost production in South-America and Asia causing the prices of traditional paper products to decrease. The industry has reacted by enhancing efficiency and adjusting capacity (Hetemäki, 2006) which has resulted in shutting down factories. New product and process as well as business model innovations are needed to support the industry and regions suffering from the structural change.

It is safe to presume that in South-East Finland the emerging bioeconomy will arise from the structural changes as the strong regional forest cluster transforms into a bioeconomy cluster. The existing forest industry including factories and logistics offers great benefits for creating new business activities including biorefining, which can be assessed to be one of most promising solutions for upholding forest industry in South-East Finland. The biorefining concept can be determined as a process for fractionating and/or converting biomass (CO₂ neutral feedstock) into energy, chemicals or other biomaterials in an ecosystem-friendly way with the aim to maximise the value of biomass and to minimise the production on waste (Alén, 2011). Industrial symbiosis offers ways of integrating processes, rawmaterial streams as well as optimising yields and revenues among numerous end-products.

Availability of high quality woody biomass provides bases for sustainable production in

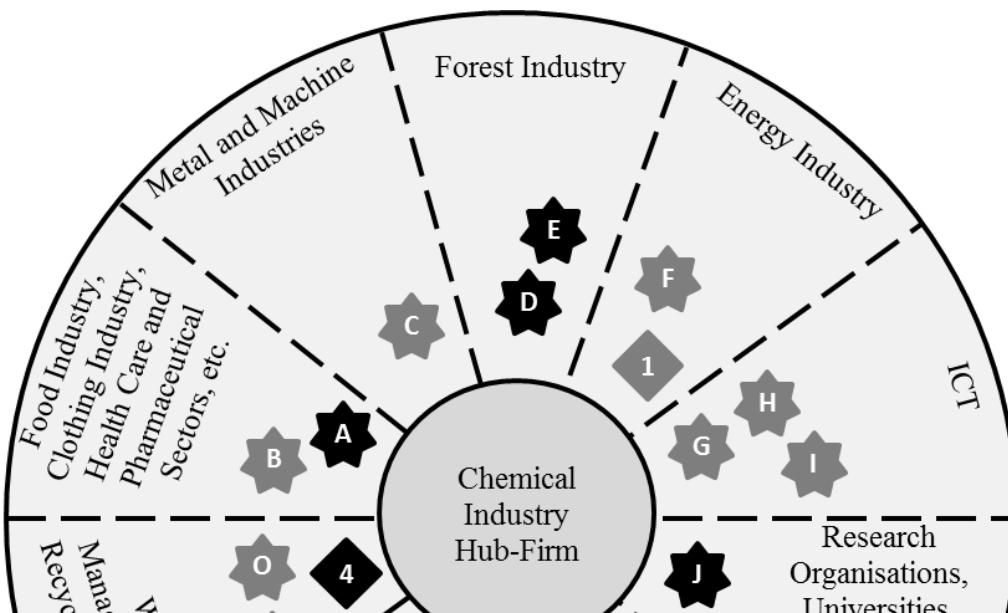
South-East Finland, but does not necessarily constrain the innovation ecosystem to evolve around the current forest cluster. Instead hub-firms can belong to other industry fields. Chemical industry companies benefit from wider expertise from different end-products, especially ones with high added value. Also the existing networks, research and development, as well as technologies of the chemical industry fit biorefining business. In fact, woody biomass based high value-added biorefining product innovations combine chemical industry and forest industry knowledge no matter from which sector the hub-firm leading the network eventually happens to arise from. Thus, it makes sense to compare the strengths and opportunities of i) networks orchestrated by a chemical industry hub-firm with ii) networks orchestrated by a forest industry hub-firm.

According to the survey made in South-East Finland for companies that could be part of an emerging bioeconomy network, the most commonly preferred business model from the given options is a networking based business model. The respondents also leaned on having partners to share the risks with and were interested in reaching more customer segments in order to get bigger revenues and benefits from mass production. However, at the moment only 26,6% of the companies are involved in research and development co-operation with other companies. Most companies (77,4%) were willing to co-operate with other companies in a network, but only a couple perceived that they could lead the network which demonstrates the need for a strong hub-firm.

4.1 Chemical industry hub-firm

Biorefining and green chemistry can be utilised to develop new and more sustainable processes for the chemical industry (Morais & Bogel-Lukasik, 2013). Integrating green chemistry principles into biorefinery concept requires knowledge of green chemistry which is a driver for chemical industry hub-firms in biorefinery innovation networks. The biorefinery concept has a lot in common with fossil oil refineries, in which fuels, basic chemicals, intermediate products and special products are produced from petroleum (Fernando, Adhikari, Chandrapal, and Murali, 2006; Cherubini, 2010). This means that many chemical industry companies already have experience from producing a spectrum of marketable products and energy, which is a major advantage in orchestrating a transition into biorefinery centric bioeconomy innovation network.

The following picture demonstrates the strengths and opportunities (stars) as well as weaknesses and threats (rhombus) of a chemical industry hub-firm in biorefinery centric innovation network in connection to different industry fields from which there would most likely be participants from in an emerging network. The picture is analysed and stars and rhombuses explained below the picture.



Picture 1. Chemical industry hub-firm in biorefinery centric bioeconomy innovation network.

A biorefinery can produce products with major added value, for example chemical for various purposes such as active components for pharmaceuticals, cosmetics and food additives. Also materials for fabrics and composites, as well as biofuels and bioenergy can be produced. The aim is to utilise the rawmaterial and sidestreams as efficiently as possible. The product portfolio of a biorefinery can be very wide which brings about the need for versatile knowledge and business skills as well as large networks.

Fibre-based cloths and composites as well as chemicals can be used in an extremely wide range of different end-products. They are also often some of the most value added products of a biorefinery. Many of the end-products are for consumer markets in for example food industry, clothing industry, health care and pharmaceutical sector. (A) As the product range of many chemical industry companies is already very wide and includes products that are used in similar industries, a chemical industry hub-firm can utilise the experience it already has. (B) The above mentioned industries have a great potential for new product innovations especially in high value added products and, thus, offer major business potential for also other bioeconomy network structures (see picture 2, A).

Metal and machine industry is an important partner for all industrial production as it has an important role in innovating and developing the needed equipment. (C) Major opportunities lie in green technologies and cleantech.

The influence of the forest industry cluster in South-East Finland is prominent in the chemical industry companies of the region. (D) The existing co-operation is largely based on the chemical industry providing chemicals for inter alia the pulp and paper industry. (E) In a biorefinery the sidestreams of forest industry production processes could be utilised for producing other products. Also, the sidestreams of other biorefinery processes may be exploitable in forest industry production.

(F) The sidestreams of production can be utilised for biofuels and energy production. (1) However, if the utilisation of wood in energy production significantly increases, it might cause shortage in available woody biomass. If the energy production is supported by governmental measures, the rawmaterial might be directed to energy production instead of other production that

would have more added value.

Innovations from the ICT sector have had and continue to have major effect on industrial processes. (G) The advances have made the production more efficient, automated and reliable and opportunities of the emergence of the internet of things are massive. (H) The ICT sector can also be beneficial in creating ways that would benefit in customer service and (I) in network and innovation management. It should be noted that the co-operation with the ICT sector is as beneficial for hub-firms from different industries (see picture 2, F, G, H).

The co-operation with research organisations, universities, and regional development organisations is undoubtedly very important and beneficial in structural changes like the bioeconomy transition. (J) In South-East Finland the chemical industry companies can and should increase this co-operation, especially if taking up a hub-firm role in an emerging bioeconomy network.

(K) Packaging industry has promising growth in the future and has not suffered the same setbacks as the pulp and paper industry. Thus, it is a good partner with lot of opportunities for innovation. Also, both the existing co-operation of providing chemicals for the production of packages and the creating of suitable packages for the products of chemical industry, give a good starting point for further co-operation. (L) Media connections are important for communication and branding, which is of course true for all possible hub-firms (see picture 2, K).

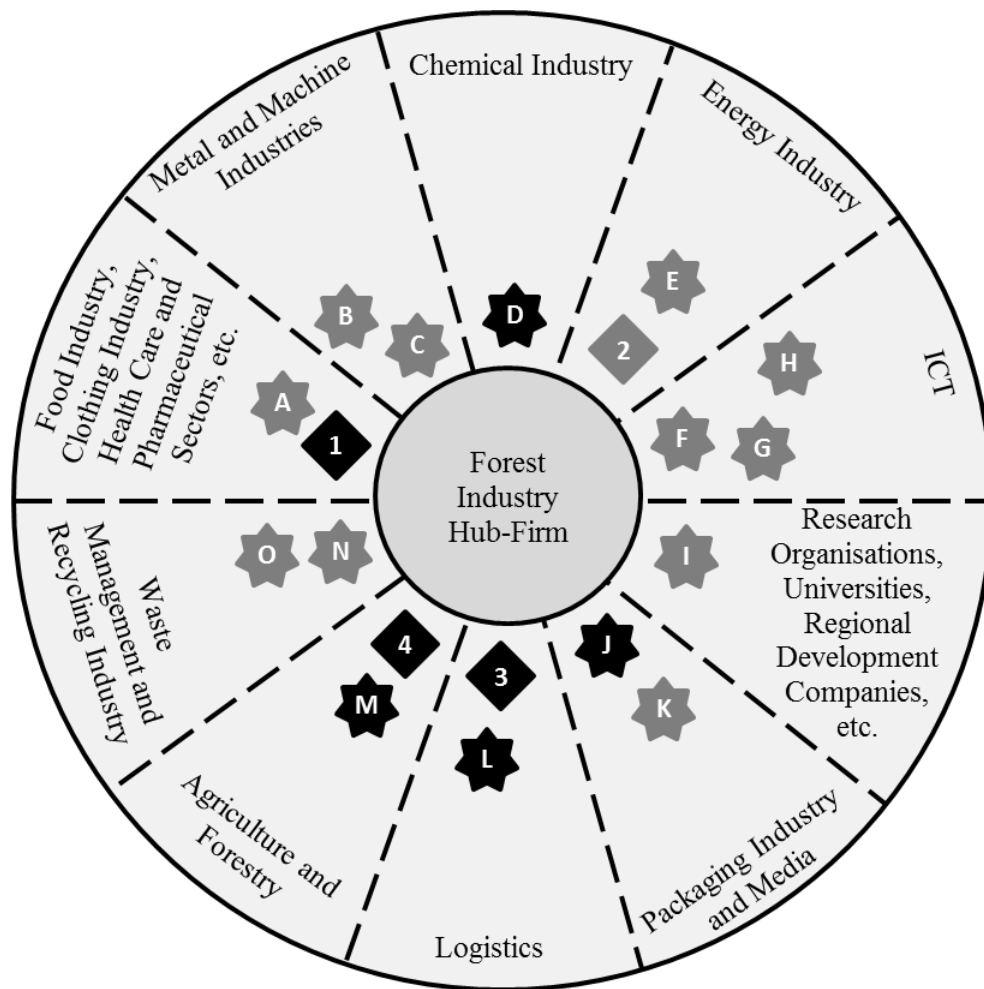
(2) As most of the rawmaterials utilised in current processes of the chemical industry are quite different than the biobased rawmaterials of a biorefinery, the logistic processes must be renewed. The volume of production has a big role in defining how the biomass logistics should be organised and how big role they have in the operations. (M) However, in comparison with the forest industry, the chemical industry companies have a lot more experience on the logistics of small scale end-products.

(3) Agriculture and forestry are in key position in ensuring the availability of suitable biomass for biorefinery production. The quality and volume of the rawmaterial have to be sufficient. Co-operation can also be utilised though the development of more suitable rawmaterials and processes for rawmaterial delivery.

(O) Waste management and recycling offer major opportunities, through developing circular economy. (4) Production of high value added products might cause large amounts of waste. (N) However, the waste could be utilised as rawmaterial for other production and on the other hand the waste from other processes could be utilised as rawmaterial in the biorefinery. The opportunities are also valid in the case of a forest industry hub-firm (see picture 2, O, N)

4.2 Forest industry hub-firm

Most companies (69,4 %) that responded to the survey are willing to co-operate with a large forest industry company. This gives solid bases for developing a biorefinery centric bioeconomy with a forest industry hub-firm. Among the most promising bioeconomy related products were mentioned pulp, paper and board products, which showcases the presence of a strong forest cluster. According to Sixta and Schild (2009) chemical pulping is the most suitable basis for implementing woodrefinery concept into practice.



Picture 2. Forest industry hub-firm in biorefinery centric bioeconomy innovation network

(A) Regarding the major opportunities food industry, clothing industry, health care sector and pharmaceutical sector etc. offer in biorefining, (1) the forest industry suffers from lack of experience in co-operating with such industries as well as producing such types of high value added products. This is a major drawback and causes the necessity for co-operation and long-term business development.

(B) The forest industry companies have long traditions in successful research and development co-operation with the metal and machine industry within the cluster. Existing contacts and knowledge in for example machine design and manufacturing can be utilised in developing for example integrated biorefinery solutions and adding new processes into the existing factories. (C) Cleantech solutions offer great opportunities in biorefining.

(D) Chemical industry has provided chemicals for the pulp and paper industry and has an important but not central role in the forest cluster. Further co-operation is needed for innovating high value added products for wood based biorefineries. It helps that the forest industry has accumulated a lot of knowledge on the chemistry of woody materials.

(E) The forest cluster is linked to the energy industry and the sidestreams can be utilised in fuel or energy production. In future the co-operation can be enhanced. (F) The benefits from co-operating with the ICT industry include among other utilising the concept of internet of things. (I) The forest cluster is very much involved in research and development activities in South-East Finland. (J) The packaging industry can be seen as a part of the forest industry and co-operation should be quite effortless.

(L) Existing biomass logistics offer major benefits for the forest industry also in biorefining business. (3) However, the logistics for high value added new types of consumer products do not currently exist.

(4) The forest cluster has long term co-operation in forestry. The co-operation with rawmaterial producers and the strong logistics also help to reduce the possible effects of raw material competition. (M) This is also a benefit if the requirements for rawmaterial are to change as the product portfolio and production processes change and there could arise a need for diversification in rawmaterial production.

5. Results and Discussion

According to the survey, the majority of companies that could be part of an emerging bioeconomy cluster in South-East Finland are willing to enhance collaboration with other companies as well as act in a broader co-operation network consisting of a number of players from different industry fields. Only couple of the respondents report that the company could and would like to be a hub-firm in an emerging bioeconomy network. The survey data suggests that most companies do not currently have networks and clusters that are sufficiently supporting their learning and innovation and ultimately the transition towards bioeconomy. This would imply that new networks led by actors from various industries would be welcome and there are plenty of companies willing to participate in biobusiness oriented ventures.

According to the survey the most significant shortcomings were in spotting business opportunities and overall risk averseness, resulting partially from uncertainty due to indecisive political action. According to Ryan, Mitchell, and Daskou (2012) companies need to accept the ambiguity and the relative truth of the continuously evolving network to be able to support effective partnering and to enable radical change. This is especially important for the hub-firm that orchestrates and sets the goals for the network.

Companies in South-East Finland are recognising the bioeconomy transition and sustainable business drivers but need leaders and co-operation to grasp the new opportunities. The recruitment process preceding the emergence of the network may be challenging as many of the small and medium sized companies in the region are weakly equipped to evaluate the opportunities of bioeconomy transition and what options would be most beneficial for them in the long run. Thus, the recruitment process is crucial not only from the point of view of the hub-firm but also for the companies that are facing the choice of joining an emerging network or not. The goals and structures of emerging networks will undoubtedly be versatile as the bioeconomy transition offers so many different opportunities.

The most important advantages of a chemical industry hub-firm in biorefinery centric bioeconomy in South-East Finland would be the ability to innovate and market high value added biorefinery products for a large and diverse customer base. The chemical industry companies would also benefit from deeper co-operation with research organisation and regional development companies. The viewpoints of green chemistry agree with biorefining concept very well and the companies could benefit from analogies with oil refineries.

The most important strengths of the forest industry are the networks of the existing forest cluster, especially regarding the woody biomass logistics. Many forest industry companies could also utilise existing production facilities with integrated biorefineries. The biggest challenges are in innovating high value added products and suitable business models for them.

In future research the network structure should be extended beyond businesses and research organisations as companies are increasingly co-operating also with local communities and non-profit organisations. In addition the inter-organisational relationships and their motives should be further studied to be able to more accurately vision future network structures and assess their pros and cons.

A substantial increase in sustainability, with economic, ecological and social benefits, can be achieved through the emergence of bioeconomy. Although, bioeconomy has been much discussed and politically promoted, at this time the transition is only at its very beginning. However, by identifying different innovation network structures and opportunities for co-operation the development of biobusinesses and emergence of regional bioeconomies can be promoted.

Although, this research is based on the current situation in South-East Finland, it is on many respects easily generalizable for other regions as the global trends causing the structural change in the region as well as the bioeconomy transition are visible all over the world. The regional analysis is most usable for companies examining their chances of stating or joining an emerging bioeconomy network in South-East Finland, as well as regional development organisations and policymakers supporting the emergence of a regional bioeconomy. However, the findings can also be used to provide views and a point of comparison on the development towards bioeconomy and sustainable innovation ecosystem also for wide range of other industries and regions.

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Minna Jukka¹, Kaisu Puumalainen¹, Kirsimarja Blomqvist¹,
¹Lappeenranta University of Technology, School of Business and Management,
P.O.Box 20, FI-53851 Lappeenranta, Finland
minna.jukka@lut.fi, kaisu.puumalainen@lut.fi, kirsimarja.blomqvist@lut.fi

Dimensions of quality in business relationships between developed and emerging markets - Finnish-Chinese relationships

Abstract: The relationship quality is typically in organizational buyer-supplier context defined using relationship quality dimensions of trust, commitment and satisfaction. This could lead to validity issues in empirical studies, because some of the dimensions could be context, culture, or role specific. We used the Repertory Grid Method to analyze how Chinese and Finnish managers will value personally important relationship quality dimensions. The representatives from 12 Chinese and Finnish companies were interviewed to collect qualitative data from 23 persons for inductive analysis. As a contribution to current discussion of relationship quality our study revealed the effects of buyer-supplier roles and different business cultures.

Keywords: *Buyer-supplier, Relationship quality, Repertory Grid, Sino-Finnish*

1. Introduction

In the past, managers working in emerging markets had less experience in international trade, and products were raw materials and other low value-added products. Recently the emerging markets have diversified towards international trade of higher value-added products. In addition, high purchasing power and market potential has emerged inside these markets, which is an interest of enterprises globally. Between emerging markets and other markets there could be, in addition to national cultures, differences in business cultures. These differences could affect the quality of cross-cultural business relationships.

Relationship quality in inter-firm buyer-supplier context describes the success of relationship from the perspectives of the business partners. However, "There is a lack of systematic theory construction on a commonly accepted definition of relationship quality" (Huntley, 2006, p. 703). Woo and Ennew (2004) reasoned that the main reason for the lack of consensus in definitions is that the nature of the construct may be rather context-specific. In addition, Ashnai et al. (2009) concluded that the variety of contextual factors: market dynamism, cultural determinants of relationships, and economic development influence the perception of relationship quality dimensions.

According to Athanassopoulou (2009) only three major dimensions of relationship quality (trust, commitment and satisfaction) have been generally validated in different contexts. Also the field suffers from lack of intercultural and qualitative studies to get more detailed insights of relationship quality dimensions. Most of the studies were made from the buyers' point of view. However, Johnston et al. (2004) stated that the business relationship cannot be viewed only from the buyer's perspectives, because the perceptions of suppliers affect the relationship development.

In this paper our aim is to find generic dimensions of buyer-supplier relationship quality, and explore dimensions of different contexts for the benefit of research and practice. We are going to use the Repertory Grid Method and utilize the examples of well- and poorly working buyer-supplier relationships to give the suppliers and buyers of Sino-Western sourcing to tell in their own words what issues matters most to them.

Our research question is: *What are the generic and the context specific dimensions of buyer-supplier relationship quality?*

2. Business relationship quality dimensions

According to past research inter-organizational relationship quality is multi-dimensional (Woo & Ennew, 2004). Relationship is higher-order construct consisting of distinct, yet related dimensions (Crosby, Evans & Cowles, 1990). It has also been said to be as "A higher level construct manifested in a customer's attitudinal evaluations of key components of the buyer-seller relationships" (Huntley, 2006, p. 712) or "As the degree to which both parties in a relationship are engaged in an active, long-term working relationship and is used to assess supply chain relationships" (Fynes, Voss & de Búrca, 2005, p. 342). Business relationship quality is typically defined using relationship quality dimensions e.g. trust, commitment and satisfaction (Athanassopoulou, 2009; Segarra-Moliner, Moliner-Tena & Sánchez-García, 2013; Ulaga & Eggert, 2006). Most of the quantitative studies (i.e. Brun, Rajaobelina & Ricard, 2014; Chu & Wang, 2012; Nguyen & Nguyen, 2010; Segarra-Moliner et al., 2013; Yeh, 2013) used trust, commitment and satisfaction as major dimensions of relationship quality.

Morgan and Hunt (1994) identified trust and commitment as the key variables of relationship quality. **Trust** could be defined as an expectation that one will not be harmed if in vulnerable position (see e.g. Blau, 1964; Luhmann, 1979; Lewis and Weigert, 1985; Granovetter, 1992). **Commitment** is "an enduring desire to maintain a valued relationship" (Moorman, Deshpandé & Zaltman, 1993, p. 316). Morgan and Hunt's (1994) fundamental assumption is

that trust leads to commitment, and in recent studies (i.e. Huntley, 2006; Yeh, 2013) can be seen a tendency towards multilevel conceptualization of relationships quality in such a way that trust, satisfaction, and goal congruity, were seen as antecedents of commitment. However, some empirical evidence suggests that satisfaction with the supplier will turn into commitment only if the purchasing relationship is characterized by trust (Ulaga & Eggert, 2006).

The **relationship satisfaction** is “affective or emotional state toward a relationship, typically evaluated cumulatively over the history of the exchange” (Palmatier, Dant, Grewal & Evans, 2006, p. 138). It has also been said to be a feeling of equity despite of power imbalance between buyer and supplier (Benton & Maloni, 2005, p. 5).

Quantitative surveys comprehend relationship quality as more a general concept, mostly using dimensions of trust, commitment, and satisfaction. Qualitative studies instead seek to explore the variety of relationship quality dimensions in detail. The qualitative studies (i.e. Ashnai et al., 2009; Athanassopoulou, 2006; Ghzaïel & Akrou, 2012, Holmlund, 2008, Myhal, Kang, & Murphy, 2008, Naudé & Buttle, 2000) found more determinants of relationship quality than the most commonly used trust, commitment and satisfaction (Table 1).

Athanassopoulou (2009, p. 604) suggested, as dimensions of relationship quality also in quantitative studies in her conceptual framework, trust, commitment, customer satisfaction, conflict, cooperation, opportunism, power, adaptation, atmosphere, and bonds. In the cross-cultural context, Akrou (2014) found that the dimensions of relationship quality evolve with the different phases of the cross-border exchange: “Exploratory Phase (Economic relationship quality)”, “Expansion Phase (Cognitive relationship quality)” and “Maintenance Phase (Affective relationship quality)”. The influence of cultural sensitivity with affective and emotional factors increases with the relationship phases.

data if the perceived importance of the constructs is scaled (Bachmann, 2011; Canning & Holmes, 2006; Easterby-Smith et al., 1996).

In the Repertory Grid method the researcher utilizes a pre-planned grid consisting of elements (columns in the grid) and bipolar constructs (rows). In the beginning of the interview an interviewee was asked to name examples of well and poorly functioning business relationships. After this the names were written onto cards. In the interviews we utilized a grid (Table 2) consisting of four elements: well-working relationship with Western business partner, well-working relationship with Chinese business partner, poorly working relationship with Western business partner and poorly working relationship with Chinese business partner. The focus of the study was the quality of the relationship, not a particular business partner.

The comparisons used were:

1. Well working relationships – against each poorly working relationship
2. Chinese relationships – against each Western relationship
3. Western relationships – against each Chinese relationship
4. Poorly working relationships – against each well working relationship.

During the interview when the interviewees mentioned their own constructs we wrote them down, and asked the interviewee to confirm them and their opposites later. The new constructs and their opposites were inserted into the rows of the repertory grid (Table 2) using the logic: positive constructs on the left and negative ones to the right. A negative construct (e.g. dishonesty) was written on the right side of the grid and positive on the left side.

Table 2. Repertory Grid; the grid was filled during an interview.

	Well-working relationships		Poorly working relationships		
	Chinese business partner	Western business partner	Chinese business partner	Western business partner	
High quality indicator					Low quality indicator

4. Results

The background information of the interviewees is shown in the Appendix A. During the interviews we elicited 480 constructs of relationships from 23 interviewees. The total number of constructs was from the Chinese Suppliers 192, from the Finnish Suppliers 84, and from the Finnish Buyers 205. The number of constructs elicited from each participant varied from 11 to 49, and the mean was 21 constructs. The constructs were categorized into main themes with qualitative analysis. The categorization included interpretations the meaning of constructs and inductive analysis. The averages of ratings described the perceived relationship quality. The most often mentioned constructs of relationship quality were found using frequency analysis and their rated importance (scale 1–5) were compared. The main themes of the three studied groups and the relative shares of the personal constructs classified to the specific themes (Figure 1) had cross-cultural and cross-role differences.

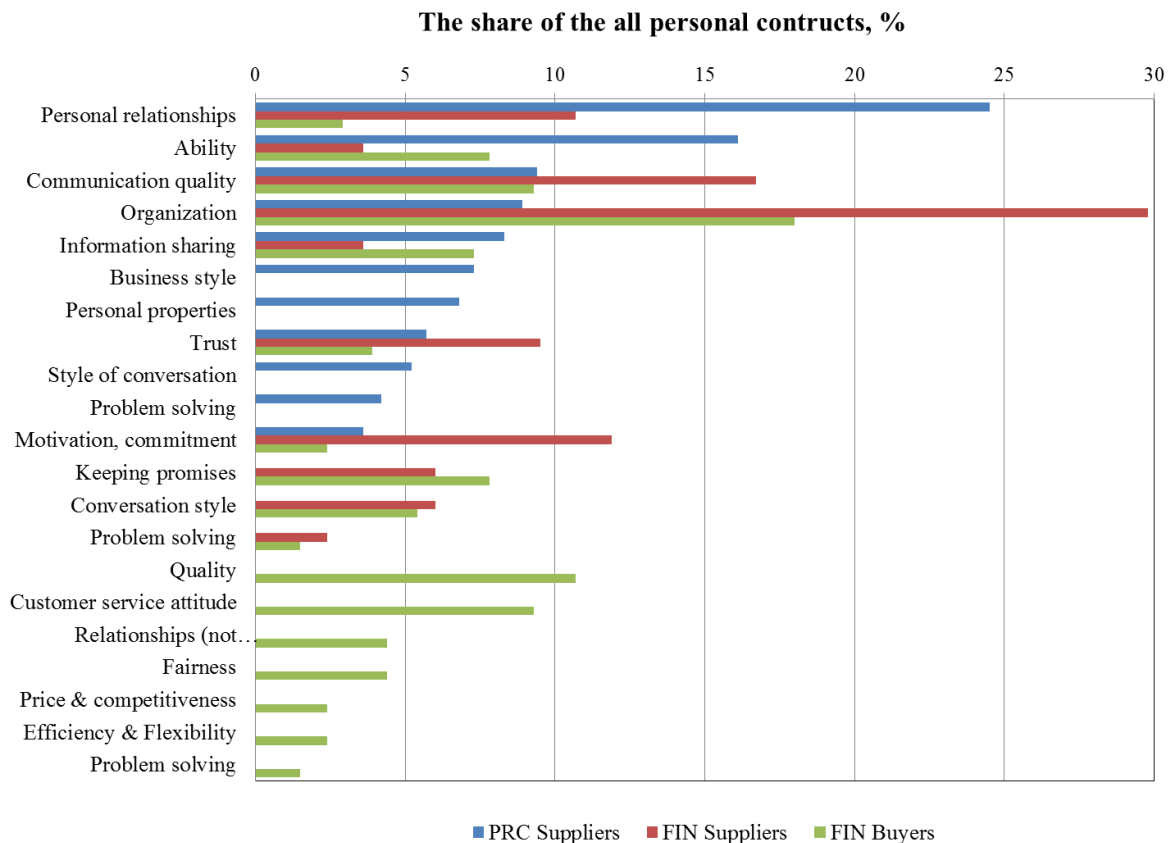


Figure 1. The share of personal constructs classified to the specific themes related to the all constructs (PRC suppliers n=192, FIN suppliers n=84, and FIN buyers n=205).

The typical initial answer for the first question “How a well working relationship with a Western business partner is similar to a well working relationship with a Chinese business partner?” was: “They both communicate well”. This seems to be a distinguishing dimension of a high quality relationship. The generic dimensions of relationship quality (Figure 2 and Table 3) shared by all studied groups were: quality of communication, organization, information sharing, personal relationships, ability, trust, motivation, commitment, style of conversation and problem solving.

The functioning of the organizations were found to have greater importance for the Finns, and for the Chinese personal relationships played the more important role. Unlike the Chinese, Finnish suppliers and buyers share a common relationship quality dimension of keeping of promises. This is consistent with the Western way of thinking that keeping promises is precondition for trust (Branzei, Vertinsky & Camp, 2007; Butler, 1991; Tinsley, 1996). The main differences affecting Sino-Finnish business relationships were the greater importance of interpersonal relationships in China, different conversation styles, and Chinese way to value flexibility more than the following of rigid rules. In China where interpersonal relationships and personal emotions affect work relationships, the quality of communication means adequate informal communication. Finnish buyers seemed to have more requirements for well-working relationships due to their buyer role, and product and operational quality was more significant to them. The unique dimensions of the Chinese were personal properties of key person and general business style. These were often mentioned and associated with Chinese–Chinese interaction.



Figure 2. The generic, culture and role specific dimensions of relationship quality.

Table 3. The importance of the generic dimensions scored by the interviewees.

	Chinese Suppliers		Finnish Suppliers		Finnish Buyers	
	Interviewees mentioned ¹	Mean of importance ²	Interviewees mentioned ¹	Mean of importance ²	Interviewees mentioned ¹	Mean of importance ²
	n/8	1–5	n/4	1–5	n/11	1–5
Communication quality	8	4.2	4	4.4	11	4.2
Organization	6	3.8	4	4.0	8	3.9
Information sharing	5	3.6	1	4.0	7	4.1
Personal relationships	8	3.6	3	3.2	3	2.7
Ability	5	3.4	2	3.7	7	4.3
Trust	7	4.3	4	4.1	5	4.6
Motivation, commitment	4	3.6	3	4.9	5	4.4
Conversation style	5	3.8	2	4.2	7	3.5
Problem solving	4	3.9	1	4.5	3	4.3

¹Personal construct of this class was mentioned by an interviewee at least once.

²The average of all constructs classified in this group.

5. Conclusions

Previous studies have approached buyer–supplier relationship quality mainly from the buyer’s perspective, but this study also includes the supplier’s perceptions. We found many relationship quality dimensions that were apparent only from the buyer's perspective, and were missing from the supplier's side. Therefore it is not indifferent from which viewpoint business relationship quality is assessed. Our study affirms that generic, culture and role dependent dimensions of relationship quality could be simultaneously identified using the Repertory Grid method. The found generic dimensions, common for all studied groups, were similar with results of the previous studies (e.g. Athanassopoulou, 2006; Holmlund, 2008; Lages, Lages & Lages, 2005; Fynes, Voss & de Búrca, 2005; Benton & Maloni, 2005).

Quality of communication is recognized as a key factor of relationship quality (Athanassopoulou, 2006). The two-way communication (Friman, Gärling, Millett, Mattsson & Johnston, 2002) and face-to-face communication (Ketkar, Kock, Parente & Verville, 2012) have been found to have a positive effect on commitment and trust. Communication quality and information sharing are relationship quality dimensions also in the latest metrics e.g.

RELQUAL scale (Lages et al., 2005). Our results similarly indicated information sharing and conversation style as dimensions of relationship quality.

The dimensions of personal relationships and ability can also be found in Holmlund's (2008) social dimension and technical dimension of relationship quality. The traditional trust, commitment and satisfaction were also seen in our results. Naudé and Buttle (2000) mentioned that levels of trust and the mutual integration of needs seemed to be the most common attributes of relationship quality. The latter could be seen in our generic motivation and commitment dimension. The found problem solving dimension is almost the same as Benton's and Maloni's (2005) conflict resolution with the difference that in our study most of the problems mentioned were technical.

As an interesting finding our study indicates that the properties of partner organization seem to reflect on relationship quality. Both the Chinese and the Finns highlighted the importance of management, decision making and low turn-over of competent personnel. In addition, the Finns drew attention to the operations of the partner organization. These were often mentioned in interviews as distinguishing factors of the experiences of well-working and poorly-working business relationships.

The Chinese specific dimensions of relationship quality were personal properties of an individual key person working in the partner organization and their business styles. The latter was associated with the perception how ethical or correct they evaluate actions of the key persons from their own perspective. The operations of a partner organization and keeping of promises seemed to be the most important issues for the Finnish interviewees. The Finnish buyers mentioned as dimensions of the relationship quality many issues, i.e. quality, price and efficiency, indicating that they saw business more as a transaction than a relationship.

As a contribution to the current discussion of relationship quality we found Chinese–Finnish dimensions of relationship quality in an intriguing context of Chinese emerging markets. We identified the generic dimensions of relationship quality, and demonstrated how relationship quality is culture and role dependent in a Sino-Finnish business-to-business relationship context.

We emphasize that the validity of our findings is limited to this context and this material. In addition, there is a risk of bias due to large share of interviewees from one company (see Appendix A). The suppliers in the study were closely tied with the machinery and electronics industries and can be seen as part of these. This could limit the generalization of the results to other industries. As a direction for future relationship quality research we recommend focusing on studies where different role dependent dyadic expectations of buyers and suppliers, as well as cultures, industries and other contexts will be explored simultaneously to identify general and context specific dimensions of relationship quality.

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Appendix A. The background information of the interviewees.

Interviewee	Company	Industry	Nationality	Role	Gender	Position
				B Buyer S Supplier	M Male F Female	O Operational S Strategic
1	A	Machinery	Finnish	B	M	O
2	A	Machinery	Finnish	B	M	O
3	A	Machinery	Finnish	B	M	O
4	A	Machinery	Finnish	B	M	O
5	B	Electronics	Finnish	B	M	O
6	C	Machinery	Finnish	B	F	S
7	D	Machinery	Finnish	B	M	O
8	D	Machinery	Finnish	B	M	O
9	E	Electronics	Chinese	S	M	O
10	E	Electronics	Chinese	S	M	O
11	F	Machinery	Chinese	S	M	S
12	F	Machinery	Chinese	S	M	O
13	G	Machinery	Chinese	S	F	O
14	H	Machinery	Chinese	S	F	O
15	A	Machinery	Other	B	M	O
16	A	Machinery	Finnish	B	M	S
17	I	Electronics	Chinese	S	F	S
18	I	Electronics	Chinese	S	F	O
19	J	Machinery	Finnish	S	M	S
20	J	Machinery	Finnish	S	M	S
21	K	Machinery	Finnish	S	M	O
22	C	Machinery	Finnish	B	M	O
23	L	Electronics	Finnish	S	M	O

E.A. Smirnova,
Doctoral Student, Graduate School of Management, St. Petersburg State University
ekaterina_a.smirnova@yahoo.com

The system of managing the specific risk

Abstract: The aim of this work is the developing of the crisis indicator (for the situation, that is theoretically named financial contagion), which can be used by the company in the process of decision-making.

The problems, that are considered in the work are:

- 1. the bond indexes returns analysis for the companies and treasury during the pre-crisis and crisis periods on Russian market;**
- 2. the determination of the point of the changing the situation on Russian market from the ordinary state to the crisis situation;**
- 3. the analysis of Russian oil & gas company during the crisis period and the comparing of the situation inside the company with the crisis indicator results.**

Keywords: *specific risk, decision-making mechanisms in managing the organization, risk-management, strategic management.*

The specific risk is an unpredictable part of the business risk, it may be postulated that we should search for that influence specific risk variables. Yet most of the companies in Russia don't have any risk-management strategies when dealing with specific risk. The purpose of the study is to revise risk-management strategies, which were developed and applied in western companies and modernize them the way that Russian companies would be able to use them.

The main outcome of this research will be the new methodology of risk managing for Russian companies. But it will also benefit to analysis of specific risk of the company, to generating new systems of the types of the specific risk.

In the work Russian market data is considered during the crisis period and the crisis indicator is approved. On the base of this analysis the proposals are done about the company's specific risk management strategy (the case was considered).

In the work the econometric methods of the time series analysis were used. The results of the investigation may be used by the company during the decision making process and in the academic research in the decision making area of study.

1. The Research Objectives

To construct the specific risk classification.

To develop a methodical instruments for dealing with specific risk.

To adopt existing foreign risk-management strategies for Russian companies.

To build new financial strategies for hedging the risk of the company.

The literature review indicate that, there are much research in Europe and in the US, which investigate the factors that causes the specific risk and approaches for building risk-management strategies in post-crisis circumstances, which can be suitable for domestic companies.

The main question of the work is: if a company can create such risk-management system, that will make it possible to reduce some risks, which are concrete for this company in particular. The main hypothesis is that the company can use derivatives for this purpose.

The aim of this work is to develop a methodical instruments for dealing with specific risk. Most of papers on this topic come from abroad, so it is necessary to apply existing methods to Russian companies specificity, or, may be, to modernize that techniques.

Some foreign researches consider different markets connections and specific risk floating from one market to another one. Others look at specific risk of a particular sphere, for example, banking industry. The third group of papers is devoted to the theoretical problems, such as risk assessment and its indicators.

The research question will be the need for developing the specific risk-management strategy for the Russian company, that means, to find some rules or consistent patterns for its constructing. We will be interested in such rules for the particular industry.

The research will be interesting for scientific and business society, because of its new scientific points and its practical orientation. So, it can be considered to be social acceptable and useful for the society.

The main outcome of this research is supposed to be the new methodology of risk managing for Russian companies. But it will also benefit to analysis of specific risk of the company, to generating new systems of the types of the specific risk.

The research would be able to fill some empty places in risk-management theory and to bring interesting results.

Many papers and monographs devoted to the problem of managing specific risk was found during the stage of the literature review. As D. Kahneman argued, the idea of risk preference originated in classic utility theory, where risk aversion is measured by the curvature of the utility function for wealth (Kahneman, 2009). Standard finance theory and the practices that build on it have adopted this unidimensional conception of risk. Psychology and behavioral economics suggest a more complex view. And he adds, that to understand an individual's complex attitudes toward risk, one must know both the size of the loss that may destabilize them, as well as the amount they are willing to put in play for a chance to achieve large gains.

2. The Specific Risks Classification

Several specific risks classifications were found during the literature review process. For example, the most noticeable from them are the following:

1. On the base of **the object of risk** (Chakravarthy, 1986)
 - commercial risk (the probability of finding the market niche with the appropriate price and the appropriate product);
 - technological risk (the probability to launch the technology on the market);
2. On the base of **the lack of a particular sort of knowledge** that is the reason for emerging of the appropriate risk (Markus, 1987)
 - the lack of fundamental knowledge (the difficulties in the theoretical calculation of the probability of the realization of the unfavourable event);
 - whether the technology will work or not (in other words, the difficulties in the engineering calculations of the probability above mentioned and in the comparison of the results of the theoretical and the engineering probability calculations);
3. On the base of **the method of obtaining the knowledge**, which is necessary for eliminating of the specific risk (Bromiley & Miller, 1990)
 - the probability of the organization resources further development;
 - the probability of losing caused by huge investment expenses on the obtaining new resources be merge.

P. Gagliardini and C. Gouriéroux consider a homogeneous class of assets, whose returns are driven by an unobservable factor representing specific risk (Gagliardini & Gouriéroux, 2011). They derive approximated pricing formulas for the future factor values and their proxies, when the size of the class is large.

Among others, Vasicek (Vasicek, 1987), Gupton, Finger, and Bhatia (Gupton, 2012; Finger, 1994; Bhatia, 1972), Schoenbucher (Schoenbucher, 2001), Hull and White (Hull & White, 2004), and Laurent and Gregory (Laurent & Gregory, 2005) consider a static framework, while Duffie et al. (Duffie et al., 2009) consider a dynamic framework with observable individual specific variables as well as an unobservable common factor, called frailty.

A nonstationary common factor is usually introduced to capture the longevity risk associated with the increase in life expectancy (Lee & Carter, 1992; Dahl & Møller, 2004; Cairns, Blake & Dowd, 2006; Schrager, 2006; Gouriéroux and Monfort, 2008).

3. The Specific Risk Indicators

The specific risk, which can be managed from the side of the company, but, in the same time is connected with the market factors, can be seen in the easiest way during the crisis. Different types of crisis, which occurred so often in the economic history, give the convenient opportunities to analyse the management decisions aimed at the rising the probability of the company's survival in the circumstances of the high specific risk.

Managing decisions in the sphere of the risk-management concern all types of the company's activities, but mostly the investment activity. During the process of the risk management strategy building the company traditionally fulfills two consistent steps. The first step is devoted to the threat evaluation. The treat here may include the dangerous situation, which the company has to go through.

Several methods of assessing the specific risk were chosen during the literature review and they are now under detailed consideration. Among them are the following:

1. **The dynamic programming approach** (this method was developed by C.C. Holt, F. Modigliani, J.F. Muth, H.A. Simon; the specific risk here is assessed with the use of the influence of the parameter's changing on the risk measure; this method has also a limitation in the form of necessity of the huge information analysis);

2. **The method of real options** (was introduced by F. Black and M. Scholes; this method has its strength in the possibility of the desision tree building, that can help to demonstrate a number of strategies and to compare them; but its limitation is that it is applicable only with lognormal distribution of the variables and there is uncertainty in the intermediate situation interpretation);

3. **The method with the use of the distortion operation** (derived by S.S. Wang; it helps to merge four different approaches: those used in insurance, β -coefficient of W. Sharpe, the real options method and the utility theory; it also can be used for liabilities and for assets as well, but among its limitations is the necessity of the huge amount of information analysis for the assessment of the losses distribution);

4. **The method of imitation modelling** (this method will help us, as it was mentioned above, to obtain the data in the case we havn't enough).

5. Conclusion

As a result, the research will help to construct the specific risk classification, to develop a methodical instruments for dealing with specific risk, to adopt existing foreign risk-management strategies for Russian companies, to build new financial strategies for hedging the risk of the company.

During the literature review the current situation in the sphere of research of risk-management techniques was described and particular models for further consideration were selected.

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Sofia Villo
PhD Student
GSOM SPbU
villo.sofia@gmail.com

Propositions for resolution of stakeholder environmental risk concern

This article aims to identify the basic propositions about what to do in order to be able to find a solution for stakeholder environmental risk concern. The article is conceptual in nature and uses Gazprom/Arctic case for illustrative purposes. The author identifies seven theoretical propositions that managers might choose to follow in order to be able to find a resolution for stakeholder risk concern regarding environmental issues. Developed theoretical propositions are discussed from the perspective of CSR theory.

Key words: *CSR, risk concern, propositions, managerial behavior.*

Introduction

Stakeholder risk concern is a situation when stakeholders expect or assume some negative impact that company's actions might have on their welfare, but currently this impact does not show itself. It is a special case of a situations when corporate legitimacy might be called into question.

The goal of the paper is to develop propositions for the resolution of stakeholder risk concern.

The empirical analysis is based on Gazprom/Arctic case.

The paper is structured as follows. The first part contains theoretical background. The second part presents the context of the study, the data and the stages of the research. The third part present core results of the study.

1. Theoretical background

Stakeholder risk concern is a situation when stakeholders expect or assume some negative impact that company's actions might have on their welfare, but currently this impact does not show itself. It is a special case of a situations when corporate legitimacy might be called into question. Legitimate behavior of a company in such situations is primarily linked with the quality of proposed preventive measures. Also the evaluation of legitimate behavior depends on the overall perception of suitability of actions of a company from the perspective of expected risks.

As a special case of a situation when the legitimacy of a corporation is called into question, stakeholder risk concern is studied under the two main perspectives: organization theory and corporate social responsibility. Over the time, the focus in the analysis of stakeholder risk concern has shifted from *extent* of corporate response (Carroll 1979) to *factors* of corporate response (Mitchell, Angle & Wood 1997; Bundy, Shropshire & Buchholtz 2013) and conceptualization of CSR as one of those factors (Basu & Palazzo 2008, Crilly & Sloan 2012). In very recent years, an emerging call to examine corporate response from the perspective of environmental risks has appeared (Heikkurinen & Bonnedahl, 2013, Sigurthorsson 2012). Still the literature experiencing difficulties in answering the question what managers actually can do in order to overcome a situation of stakeholder risk concern.

2. Research context and stages

Context of the study. Gazprom/Arctic case became famous for 2013 Greenpeace action on the platform Prirazlomnaja. However, it is not Gazprom itself that is mainly involved in this project now. In our case, company's side is presented by Gazprom Neft, a unit primarily engaged in oil and gas exploration and production (95,68% owned by Gazprom), and Gazprom Neft Shelf, an operator of Prirazlomnaja (previously 100% owned by Gazprom, currently owned by Gazprom Neft). The development of the field Prirazlomnoe has a long history and so does environmental safety of Prirazlomnaja. During the project implementation, companies cross over state environmental agencies, local communities and public environmental organizations. Concerned environmental NGOs were Russian Bird Conservation Union, WWF Russia, Greenpeace Russia and Bellona-Murmansk.

Stages of the empirical analysis. Empirical analyses has evolved over two main stages. On the first stage, the models of illegitimate behavior of managers were identified. On the second stage the internal nature of this behavior were explored.

Data. The study relied on both secondary and primary data. Secondary (archival) data included press releases, reports, corporate press, etc. Primary data consisted of interviews with both

Results

First of all, the study identifies two models of illegitimate corporate behavior in a situation of stakeholder risk concern. The first model might be called as a lack of conditions for the joint management of environmental risk. This model might be characterized by lacking transparency, limited dialogue and stakeholder involvement, as well as the presentation of biased information. The second model can be named as lacking or incomplete practices of environmental safety. This model might be characterized by a reactive approach, a low level of performance practices of environmental safety even in the reactive approach, the reluctance of managers to ensure equally high standards of environmental safety as well as the priority of decorative responsibility over the development of preventive measures.

Secondly, the study reveals core internal factors that explain how and why this models of illegitimate behavior appears. As the study shows, the core factors are (a) the exclusion from the interpretation of corporate environmental responsibility of such element as joint process of environmental risks; and (b) limited understanding of environmental issues and the necessity of their resolution. Also, several other internal factors were revealed, that either reflect or support the two factors named above.

Based on the overall analysis of the factors that can explain the origins of illegitimate behavior the author develops six propositions below.

Proposition 1. In order to solve stakeholder environmental risk concern managers should interpret environmental responsibility as a process of joint management of environmental risks.

In case of opposite, managers would consider dialogue and transparency as irrelevant practices for managing relations with outsiders. Even worse, managers consider the entire process of managing relations with outsiders as irrelevant.

Proposition 2. In order to solve stakeholder environmental risk concern managers should identify nature as a stakeholder as a stakeholder and be willing to constantly develop their own understanding of environmental issues.

In case of opposite managers might not be ready to implement several practices directed towards the mitigation of environmental risks might not be realized not because a company doesn't have money on them, but because managers do not understand on what a company is going to spend some money. Even worse, managers might form an opposition inside organization against practices of environmental safety.

Proposition 3. In order to solve stakeholder environmental risk concern managers should be less confident in its ability to control both public expectations and environmental risks.

In case of opposite, managers might not be ready to consider a wide range of stakeholders being involved in the process of managing environmental risks. They would guide a company from the perspective of what they think about external expectation rather than based on what those expectations truly are.

Proposition 4. In order to solve stakeholder environmental risk concern managers should not consider environmental risk concern as a challenge that threatens reputation of a firm and/or its strategic purposes.

In case of the opposite, managers are more likely to consider public outrage as a criteria of effectiveness of their efforts in the filed of environmental safety. While this might result in the undeveloped practices of environmental safety.

Proposition 5. In order to solve stakeholder environmental risk concern managers should be able to distinguish their own negative emotions from the process of decision-making.

In case of the opposite, managers might not be able to conduct dialogue with concerned stakeholders. Nor they would be ready to present transparent and unbiased information. Even worse managers might be against to implement several practices in the field of environmental safety in case they experience negative feelings towards the necessary partners. Experiencing negative emotions might be the core challenge in resolution of stakeholder environmental risk concern.

Proposition 6. In order to solve stakeholder environmental risk concern managers should develop internal communication.

In case of opposite, managers are more likely to consider dialogue with outsiders as irrelevant practices. The state of internal communication seems directly influence the state of external communication.

Conclusion

In the overall, it can be concluded that the resolution of a stakeholder risk concern might call for changes in the heart of internal system of management of a company. This is a good results since it suggests that there are factors on which managers could actually influence in ordered to gain a desired outcome. Same time, this result suggests that managers might care more on their own understanding and perception of the environment around them.

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