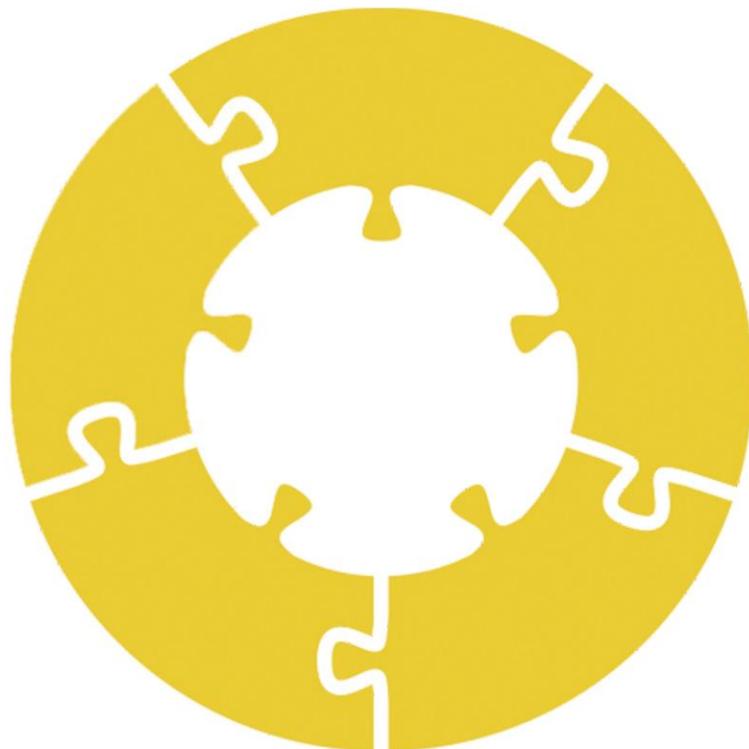


Research Projects



RSSIA 2017

**EU PRACTICES FOR YOUNG RESEARCHERS:
STUDYING ECONOMICS OF
INSTITUTIONAL DEVELOPMENT**



NATIONAL RESEARCH
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**YEGOR
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Russian Summer School for Institutional Analysis 2017

RSSIA 2017

**The EU Practices for Young Researchers: Studying
Economics of Institutional Development**

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Agapova, Anna¹ (with Nikanor Volkov²): Bond ETFs and Price Volatility of Underlying Securities

Abstract: *Investors may prefer ETFs to making direct investments in illiquid securities, e.g. bonds, as ETFs can provide insurance, diversification and simplified way of investing in such assets. However, demand volatility for bond ETFs may distort prices and raise price volatility of underlying securities. Investors face a tradeoff between investing in bond securities through ETFs or choosing bonds not associated with ETFs. We find that the level of ETF ownership in corporate bonds has a negative association with bond return volatilities and bond returns. This can be due to liquidity improvement of the bonds held by ETFs through the price discovery function provided by the ETF market. We document a non-linear V-shape relation between the bond level ETF flows and return volatility of underlying securities, and a positive linear relation between ETF flows and bond returns. This result is consistent with the prediction that demand pressure in the bond ETF market translates into higher return volatility of underlying bonds, and increased (decreased) return level of underlying bonds as positive (negative) shocks to the capital flows to ETFs holding the bonds occur.*

Introduction

ETFs raised numerous questions and concerns among researchers, practitioners and regulators. One of the central questions is whether trading in these funds creates some negative externalities, such as increased price volatility and price inflation/deflation of constituents of ETF portfolios or markets overall. There are a number of recent papers that look at how trading in equity ETFs affects liquidity and volatility of underlying stocks and stock markets in general (e.g., Cheng and Madhavan (2009), Trainor (2010), Madhavan (2012), and Ben-David et al (2015)).

There is currently little research available on bond ETFs in general, and no research on the effect of bond ETFs trading on price volatility and price pressure of underlying bonds. We argue that the bonds included in the indexes that ETFs follow are behaving differently from bonds outside the benchmarks. Purchases of ETF shares by investors increase demand for the underlying securities, thereby pushing the price of such securities up. However, when investors dump the ETFs, the process puts selling pressure on the same bonds, knocking down their prices relative to similar bonds outside the indexes. Thus, we expect an increase in the price volatility of bonds that are constituents of bond ETF portfolios.

Demand volatility for shares of bond ETFs may distort prices and raise price volatility of underlying securities even more than in more liquid stock market.³ A

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³ Ben-David et al (2015) show that noise traders in stock ETFs increase price volatility of the ETFs' holdings.

counterargument that the share of corporate bonds that are held by ETFs is not large enough to affect the price and volatility of underlying securities can also be put forth. Therefore, there is an empirical question as to how, if at all, bond ETFs affect the price volatility of underlying securities. If the predicted effect is present, then investors face a tradeoff of investing through ETFs and benefiting from increased liquidity, diversification and reduced costs of trading as well as intra-day trading flexibility, or investing directly in bonds not associated with ETFs and avoiding non-fundamental volatility imposed by ETFs.

Aim of the Project

Literature shows theoretically and documents empirically (Madhavan and Sobczyk (2014) and Ben-David et al (2015)) that ETFs of all asset classes have higher liquidity than underlying securities of these portfolios. ETFs, similar to conventional open-end mutual funds, provide a convenience of liquidity and diversification as a one-stop shop. What sets ETFs apart, is that they can be traded intraday as well as have an embedded arbitrage mechanism of in-kind transactions that keep ETF prices close to their net asset values throughout the day. However, Ben-David et al (2015) argue that ETFs also attract noise traders that can increase price volatility of underlying securities. They find that ETFs' ownership of stocks increases non-fundamental volatility of those stocks and introduces new noise to the market.

An effect similar to that documented by Ben-David et al (2015) may be present for bonds held by ETFs versus bonds not held by ETFs. However, due to the unique nature of the bond market, such as its low liquidity and low transparency, the effect may be different. It is an empirical question of whether ETF ownership and trading has a positive effect on the underlying bonds (i.e. price discovery function), or a negative effect (i.e. increased noise trading that leads to more return volatility).

Hypotheses and Methodology

We propose that trading in bond ETFs leads to price pressure and an increase in price volatility of underlying securities. We formulate the following hypotheses.

H1: Bonds experience higher (lower) returns and volatility of returns with increasing (decreasing) ETF ownership of the bonds.

It is believed that ETFs have high liquidity, which is beyond the liquidity of underlying securities. The characteristic of a traded portfolio having higher liquidity than liquidity of securities in the portfolio should be more pronounced for bond ETFs than for equity ETFs. As Ben-David, Franzoni and Moussawi (2015) show, stock ETFs increase the non-fundamental volatility of the securities in their baskets. We expect such an effect to also be present in bond ETFs.

As illiquidity of bond securities increases, the price pressure due to ETF trading would increase. The cost of the arbitrage mechanism embedded in the ETF structure would be higher in more illiquid securities. We expect that junk bonds would experience more price pressure and volatility due to ETF ownership than corporate bonds of higher investment grade quality.

H2: The price level and volatility effect of ETF ownership is more pronounced for junk bonds.

Our next hypothesis is that a buying (selling) pressure created by bond ETFs' investors through capital flows to (from) ETFs puts a price pressure on underlying securities in the direction of ETF capital flows. Increased ETF inflows and outflows have positive effect on underlying bonds price volatility. Bonds that are constituents of ETF portfolios experience higher (lower) returns with increasing (decreasing) demand in ETF market, and higher volatility of bond returns with increase in magnitudes of ETF inflows and outflows.

H3: Net capital flows to ETFs positively affect prices, and net magnitude of ETF inflows and outflows positively affect price volatility of underlying securities beyond fundamental factors.

H4: ETF flow pressure is more pronounced for junk bonds.

A purchase of shares in a bond ETF by an investor causes an increase in the demand for indexes-constituent bonds, thus pushing up prices of underlying securities. However, when investors sell the shares of ETFs, the process puts selling pressure on the same bonds, reducing their prices relative to similar bonds outside the indexes.

Alternatively, bond ETFs may provide a price discovery function for underlying securities traded in the more opaque over-the-counter bond market (Tucker and Laipply, 2013). Thus, ETF flows may lead to a permanent shift in underlying securities' prices. Thus, an alternative hypothesis is that ETF ownership of bonds decreases underlying bond volatility and negatively affects returns.

To test hypotheses of the effect of ETF bond ownership/flows on return level and return volatility, we regress our main variables of interest: *Volatility* and *Return* on a set of explanatory variables. The model that is applied for the overall sample of bonds that includes both ETF constituents and non-ETF constituents for ownership test, and the subsample of bonds that are ETF constituents for ETF flow test is of the following form:

$$Volatility_{j,t} (Return_{j,t}) = \alpha + \beta_1 ETF\ Ownership_{j,t} (ETF\ Flow_{j,t}) + \beta_2 Credit\ Rating_{j,t} + \beta_3 Time\ to\ Maturity_{j,t} + \beta_4 Age_{j,t} + \beta_5 \ln\ AmtOut_{j,t-1} + \beta_6 Bond\ Zero_{j,t-1} + \beta_7 \ln\ Trades_{j,t-1} + \beta_8 AIM_{j,t-1} + \beta_9 AIM\ risk_{j,t-1} + \beta_{10} IRC_{j,t-1} + \beta_{11} IRC\ risk_{j,t-1} + \beta_{12} Turnover_{j,t-1} + \beta_{13} \ln\ Avg\ Trade\ Size_{j,t-1} + \beta_{13} MF\ ownership_{j,t} + \beta_{14} Yankee_{j,t} + \beta_{14} Collable_{j,t} + \beta_{14} Volatility_{j,t-1} (Return_{j,t-1}) + e_{j,t},$$

where the main explanatory variable is a continuous variable of ETF ownership of a bond and bond level ETF flows. The other variables control for the overall market conditions, liquidity of the bond and issuing firm characteristics. All regressions reported in the study are run using year, month and issuer fixed effects and robust standard errors.

We perform multivariate regression analysis to identify the effects of ETF ownership of a bond on its return volatility and the level of return. Separately, we examine the effect of a bond junk rating status on its return volatility and the level of return in interaction with ETF ownership of the bond. Finally, we study the effect of the bond-period-level ETF flows on the return and its volatility of bonds included in ETFs.

Results

Results suggest that both a positive and a negative effect may be present. In univariate analysis, we find that ETF constituent bonds experience lower levels of return and return volatility than those that are not included in ETFs. In multivariate analysis, we find that higher ETF ownership of a corporate bond is associated with decreased bond return volatility and returns. In comparison, mutual fund ownership in corporate bonds had no effect on bond return volatility and had negative association with the bond return. Controlling for the credit quality of bonds reveals that ETF ownership of junk bonds has no different effect on bonds' return volatility than ETF ownership in any corporate bond but has positive relation with bond return. The result still shows negative relation of ETF ownership with return volatility and return. This result is consistent with prediction that the liquid ETF market provides a function of price discovery and increased liquidity to the more opaque over-the-counter bond market of illiquid junk bonds. However, more active participation of ETFs in corporate bond market may create a positive pressure on bond returns.

Examination of the effect of ETF flows on the return volatility and the level of return of underlying bonds reveals a positive relation between the magnitude of ETF flows and the volatility of bond returns, as well as a positive relation between ETF flows and the level of returns. This result is consistent with the prediction that demand pressure in the bond ETF market translates into higher return volatility of underlying bonds. This finding is consistent with the prediction that positive (negative) shocks to the capital flows to bond ETFs increase (decrease) return level of underlying securities.

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***Alhanaqtah, Veronika*¹: Configuring Eastern Asian Countries in Terms of Democracy: a Critical Political Economy Approach**

Abstract: *The main objective of the research is to configure the countries of Western Asia from the standpoint of governance with a particular focus on democracy indicator. We are interested in the government indicators because since the times of Washington consensus the foreign aid paradigm has changed: a priority is given to funding development programs in countries with good governance. In order to measure the progress there is the need to quantify differences in governments among nations and to measure its quality. Governance indicators and the Democracy Index as well, are also supposed to help business leaders in strategic decisions. Comparative analysis technique and a concept of correlation are used as a methodology of the research while configuring the countries of Western Asia in terms of democracy. It is verified whether the more democratic countries in the region are the more trustful and prosperous societies. It is debated whether there is the need for democracy so as to reach good governance and economic growth.*

Introduction

The research dwells on the results of the team serial project, an objective of which is to configure the region of Western Asia in different political economy categories such as population, capital income, human development, economic globalization, trade, foreign direct investment, trust, ethnicity, language, religion and other categories.

Aim of the Project

At this stage the **aim** of the research is to analyze the diversity of Western Asian countries in terms of governance. For this purpose we will use governance indicators. In particular, we will focus on indices of democracy and will try to verify a statistical relationship between the democracy and economic growth.

First, we will discuss why the issue of measuring governance remains sensitive and will point shortcomings in the data collection and measurement. Second, we will focus on governance indicators. The objective of the current research is to focus on the democracy indicator as a constituent of a body of governance indicators. We will critically review different indices of democracy. Third, we will configure the countries of Western Asia in terms of democracy. Through a comparative analysis technique we will analyze the diversity within a target region and will show where it fits in the world spectrum. Fourth, we will

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debate whether democracy helps economic growth. Fifth, we will make an investigation for the Western Asian countries, whether there are linkages between democracy and some socio-economic categories: generalized trust, happiness, life satisfaction and capital income. Finally, we will discuss the results.

Units of analysis. We investigate 17 countries of Western Asia: Armenia, Azerbaijan, Bahrain, Georgia, Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Palestinian Territories, Qatar, Saudi Arabia, Syrian Arab Republic, Turkey, United Arab Emirates and Yemen. The region significantly overlaps with the Middle East.

Variable for analysis. We use the composite Democracy Index, compiled by the Economist Intelligence Unit (2016). It consists of 5 elements, each counting 20 %: civil liberties, election processes and pluralism, political participation, political culture, functioning of government. Results are expressed on scale from 1 to 10. We are interested in the government indicators because since the times of Washington consensus (1989) the foreign aid paradigm has changed. Nowadays the largest foreign aid providers - the International Monetary Fund, the World Bank and donor-countries - give a priority to funding development programs in countries with good governance. Thus, in order to measure the progress there is the need to quantify differences in governments among nations and to measure the quality of governance. Governance indicators and the Democracy Index as well, are supposed to help business leaders prepare for opportunity, empowering them to act with confidence when making strategic decisions.

Hypotheses and Methodology

First, we use a comparative analysis technique as a methodology of the research. We begin with ranking the data of all the world economies in ascending order. This way we may see how countries are located in the world on a chosen criterion - democracy. Then we place our target region - Western Asia - along the world spectrum. Then we describe whether the countries of a target region are at the top, middle, bottom or scattered randomly; whether they are similar or clustered, or diverge radically. Second, we rank countries of a target region in categories of democracy, trust, happiness, life satisfaction and capital income per capita. Then we compute a linear correlation coefficient between the democracy rank and a rank of corresponding variable. We want to verify a ***hypothesis***: whether the more democratic countries are, correspondingly, the more trustful societies, the societies where people are happy and satisfied with their lives, the societies with the higher level of per capita income.

Results

- Critical review of the methodology of the governance indicators. First, the government indicators are composite indices. Each component embodies various dimensions, the selection and allocation of which among the components has been accomplished without any formalized theoretical or empirical underpinning.

Second, there is also an element of subjectivity in coded rank numbers. Third, there is a problem of weighting of components of each index. Fourth, centering the indicators on a different global average every year makes the comparison over time very difficult. Fifth, indicators are biased towards business and market oriented policies, i.e. the market capitalism is considered as being the best route for development.

There are several questions of a particular interest.

- First, does democracy help economic growth? The linkages between the democracy and growth are revealed via political and economic rights, decision-making and generalized trust in a society.

- Second, do we need democracy for growth? The economic history of some countries shows that democracy is not necessarily a precondition for the protection of economic rights. The conservative regimes and dictatorships also successfully could support economic rights and free markets.

- Third, was the linkage between democracy and growth statistically verified? The answer is that the empirical link between democracy and growth is contradictory. The strongest link was established between democracy and levels of income (GDP). However, that might mean that richer countries can afford democracy. There is little evidence that regime change produces a positive growth effect. The explanation is that in any complex process, like economic growth, the contribution to the whole of any single component is likely to be small and, therefore, very difficult to capture statistically.

- To analyze the diversity of the Western Asian countries we used the Democracy Index, compiled by the Economist Intelligence Unit. In the *world context* the countries of Western Asia gravitate to the bottom of the world spectrum. In the *regional context* the countries of Western Asia are clustered. The largest cluster is represented by the countries with authoritarian regimes. The smaller cluster is represented by the countries with hybrid regimes. The vast majority of the Arabic Middle East countries belong in the cluster with the authoritarian regimes. The most relatively democratic Arabic country of Western Asia is Jordan, while Syria, Saudi Arabia and Yemen are the least democratic. The most relatively democratic country in the region is Israel.

- We estimated the strength and the direction of a linear relationship between the democracy rank and a rank of a corresponding variable - GDP per capita PPP, Trust Index, Happiness Index and the level of satisfaction of one's life. We wanted to find out whether the more democratic countries are, correspondingly, the more trustful societies, the societies where people are happier and are satisfied with their lives, the societies with the higher level of the per capita income. We observed the absence of a linear relationship between the democracy rank and ranks for personal life satisfaction and happiness. It means that not a political regime alone, including democratic, makes people happy and satisfied with their lives. The relationship between democracy and GDP PPP per capita is weak and negative.

- The relationship between the democracy rank and the rank for the level of trust in a society is moderate and, what is important, is negative. It turns out that in Western Asia the more relatively democratic the society the lower the level of generalized trust (trust in most people), while trust is central to the formation of a society. In Muslim states, which represent the majority of the Western Asian countries, religiosity is highly supported on the state level and embedded into the daily life. It influences formal and informal norms of people's interactions, as well as the level of trust. Thus, there is an obvious cultural factor - religion - that has complicated the possibility of democracy (irrespectively, whether the phenomena of democracy is needed or not).

- Since the relationship between the democracy and the level of generalized trust is negative, while the relationship between the religion and trust is positive, we find the high level of religious homogeneity of the Western Asian countries as a positive factor for trust creation. Moreover, we find that the factor of religion is more important than the factor of democracy for formation of trustful societies, societies with higher moral standards.

- The governance indicators are still popular, despite their drawbacks, for the following reasons: users of indicators do not understand the limitations; complex composite indicators meet an important demand for summary measurements of the quality of governance; users follow other users and users perceive that there is no alternative.

- We understand that every governance indicator that ranks countries will be biased because it is based on preferences and norms which are not necessarily shared entire the world.

- The Democracy Index, as well as the whole conception of democracy (in the Western sense), are highly dubious and unreliable for evaluating good governance, for distribution foreign aid, for making strategic business decisions or any social, economic and political recommendations for countries. In addition to its methodological weaknesses, it is highly biased and, seems, is used as a tool for political and economical manipulations in favour of global actors.

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Alipova, Olga²: Research Productivity of Mobile Academics in Russia: Do Mobility Reasons Matter?

Abstract: *The research lies at the intersection of two spheres: sociology of professions and educational studies. The project deals with the problem of interinstitutional mobility of academics. Numerous previous studies show that there is no commonly accepted opinion whether mobility is good or bad for academics and their productivity (one of the main indicators of academics' success), although mobility is generally perceived as a positive phenomenon. The general purpose of this paper is to evaluate the level of academic mobility with specific emphasis on different mobility reasons and its influence on publishing productivity of researchers in different types of academic organizations in Russia: higher education institutions (HEI) and Russian academy of sciences (RAS) before the implementation of reforms in academic sector. Results of the preliminary data analysis on "Careers of doctoral holders" survey data show that the overall level of academic mobility in Russia is very low and in RAS it is even lower than in HEIs. Mobile academics seem to be less productive, although mobility reasons do not have significant effect on productivity. Results of this research show that although negative attitudes towards immobility in academia prevail in most countries, in the Russian academic system it is widespread but does not have detrimental effects, at least on productivity of researchers*

Introduction

Organizations, where faculty members work, may influence their research productivity, opinions about academic norms, perception of professional practices, professional interests and main research approaches. The change of workplace may lead to the change of these opinions, practices, and scientific knowledge. Thus, interinstitutional mobility is generally regarded as a positive phenomenon, as it allows academics to enhance their social capital and widen their research outlook through getting additional experience (Horta & Yonezawa, 2013). Mobility helps to prevent knowledge stagnation within organizations, as academics with such external to the employing institution experience, bring fresh ideas and stimulate their circulation (Pelz & Andrews, 1966). At the same time, immobile academics usually tend to reproduce ideas of their supervisors and older colleagues, and this may have negative influence on the scientific development of their department, institution, region and the whole country, if the national level of academic mobility is quite low. Nevertheless, there are disputes on whether mobility and productivity of individual academics are positively (Cruz-Castro & Sanz-Menéndez, 2010 (Spain); Smyth & Mishra, 2014 (Australia)) or negatively (Dutton, 1980 (USA); Horta, 2013 (Portugal)) correlated. We suppose, that such difference in results may be related

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either to the peculiarities of academic systems in different countries or to different mobility reasons. In other words, voluntary and compelled mobility may have different consequences.

In this context Russia seems to be an interesting example for research, as historically the level of mobility are very low. Nevertheless, results of previous studies show, that academics themselves do not see any problem in immobility and consider it to be a “norm” in their professional society (Sivak & Yudkevich, 2015). This situation is also aggravated by the absence of real academic labour market and open competition in post-Soviet Russia. In reality, the main role in the selection and hiring process play social ties (Yudkevich, 2014). Contracts are extended practically automatically without real competition. This also leads to the spread of inbreeding phenomenon in Russia (hiring own graduates by universities) - the most extreme form of faculty immobility. But recently (approximately since 2012) the situation in academic sector has started to change slowly due to the reforms, aimed at rising competitiveness of Russian universities. Nevertheless, the situation with mobility before these reforms stayed unstudied, so in this paper we aim to look at this period before the reforms.

One more peculiarity of Russian academic system, important for mobility studies, is that alongside with universities it includes Russian Academy of Sciences (RAS), which has quite different employment norms and is a rather conservative structure, thus the level of mobility and its link with productivity may be different for universities and for RAS.

Aim of the Project

- 1) estimate mobility level and multiple mobility level in different types of academic organizations in Russia (higher education institutions or Russian Academy of Science);
- 2) compare publishing productivity of mobile and immobile researchers, working in different types of academic organizations;
- 3) reveal factors of academic mobility in Russia;
- 4) compare publishing productivity of mobile researchers with different mobility reasons;
- 5) find out if type of previous place of work (academic / non-academic) affects publishing productivity of mobile researchers.

Hypotheses and Methodology

- 1) Overall level of academic mobility in Russia is low, and Russian Academy of Science it is lower than in higher education institutions, due to its archaic structure, inherited from the Soviet past;
- 2) Overall publishing productivity of mobile researchers in Russia is lower than for immobile researchers, and this result does not differ for HEI and RAS;

3) Two different factors of mobility will be revealed: 1) voluntary mobility, connected with respondents' dissatisfaction with the previous place of work and 2) forced mobility, when respondent is dismissed from the previous place of work;

4) Publishing productivity of researchers with voluntary mobility reasons is higher than that of researchers, forced to be mobile;

5) Publishing productivity of researchers, changing place of work within academia is higher than that of researchers with cross-sectional mobility.

We use Russian survey data of large international project "Careers of Doctoral Holders" for 2010. We include in analysis only "academic" researchers, affiliated either with HEIs or with RAS. Sample size is 2408 researchers. The fact of changing the place of work during 10 years period before the survey is regarded as mobility indicator. We use various measures of publishing productivity of academics, such as number of articles, books or overall number of publications, differentiating between Russian and foreign publications.

We use exploratory factor analysis to reveal factors of mobility and Negative Binomial regressions to estimate the relationship between mobility and productivity of researchers and the effect of different mobility reasons because dependent variables (publication activity) are not normally distributed. As far as Negative binomial regression uses the logarithmic function, in tables with the results of regression analysis we present $\text{Exp}(B)$ estimates. To compare the link between mobility and productivity for the researchers working in higher education institutions and in Russian Academy of Science, we include in each regression model not only main effects for the independent and control variables, but also interaction effect for the mobility variable and employment organization variable.

Results

Results of this study show that the level of mobility is very low - only 16,8% of the respondents in our sample changed their place of work at least once during the last 10 years and most of them changed their place of work only one time. The share of mobile researchers among university faculty (18%) is significantly higher than among RAS researchers (10.9%), but in both groups around a half of mobile researchers had their previous work also in academic sector.

Results of factor analysis on reasons of mobility are presented in Table 1. The best factor solution includes four factors and explains 53% of total variance.

Results of the regression analysis, modeling relationship between mobility status of respondents and their productivity show, that the link between mobility and all measures of research productivity is negative, but statistically significant differences are observed only for three indicators: number of articles in Russian peer-reviewed journals, number of articles in foreign peer-reviewed journals and overall number of foreign publications, including conference proceedings (tab.2). Mobile researchers seem to be less productive, compared to their immobile colleagues. Generally, this result is consistent with that, received in our previous

research (Gorelova, 2016). Mobile researchers, working in HEIs, publish more Russian articles and all types of foreign publications, although, their productivity of Russian monographs and monograph chapters is, on the contrary, lower. For economy reasons we do not present coefficients for control variables.

Table 1. Factor loadings for extracted factors

| | Dissatisfaction with employment conditions | Dissatisfaction with labour contents | External independent reasons | End of labor contract / retirement |
|---|--|--------------------------------------|------------------------------|------------------------------------|
| Low wages | 0.701 | 0.203 | 0.118 | -0.01 |
| Low availability of equipment and literature | 0.656 | -0.067 | 0.002 | -0.117 |
| Bad working conditions and labor organization | 0.627 | -0.081 | -0.171 | 0.087 |
| Limited possibilities for promotion | 0.482 | 0.25 | 0.269 | 0.142 |
| Absence of possibilities to do research | -0.043 | 0.732 | 0.059 | -0.038 |
| Dissatisfaction with labor contents | 0.092 | 0.688 | -0.051 | 0.038 |
| Family or other personal reasons | -0.158 | -0.074 | -0.857 | 0.147 |
| Staff reduction | -0.242 | -0.211 | 0.496 | 0.346 |
| Retirement | -0.176 | -0.265 | 0.147 | -0.804 |
| End of labor contract | -0.109 | -0.352 | 0.122 | 0.522 |

Table 2. Correlation between mobility and productivity

| | Number of articles in Russian peer-reviewed journals | Number of articles in international peer-reviewed journals | Number of monographs / chapters published in Russia | Number of monographs / chapters published abroad | Overall number of Russian publications | Overall number of foreign publications |
|--------------------------------------|--|--|---|--|--|--|
| mobility during last 10 years = yes | 0.641*** | 0.629* | 1.513 | 0.342 | 0.819 | 0.486*** |
| currentemployment=HEI * mobility=yes | 1.325*** | 1.558 | 0.597* | 3.847 | 1.196 | 2.41*** |
| N | 2336 | | | | | |

* - $p < .05$, ** - $p < .01$, *** - $p < .001$.

For most publication types reasons for mobility are insignificant, thus our hypotheses are not confirmed (Tab.3). The fact that previous respondent's place of work was also in academic sector is statistically significantly positively correlated with the number of articles in international peer-reviewed journals and overall number of foreign publications for the last three years. Nevertheless, for HEI workers this effect, on the contrary, is negative.

Table 3. Correlation between productivity and different reasons of mobility.

| | Number of articles in Russian peer-reviewed journals | Number of articles in international peer-reviewed journals | Number of monographs /chapters published in Russia | Overall number of Russian publications | Overall number of foreign publications |
|---|--|--|--|--|--|
| Dissatisfaction with employment conditions | 1.071 | 0.722 | 0.665* | 1.128 | 1.284 |
| Dissatisfaction with labour contents | 1.397 | 1.067 | 1.21 | 1.205 | 1.775* |
| External independent reasons | 1.109 | 2.742** | 0.911 | 0.988 | 1.163 |
| End of labor contract / retirement | 2.261* | 1.447 | 1.562 | 1.646 | 1.454 |
| currentemployment=HEI*Factor1 | 0.998 | 1.235 | 1.59* | 0.913 | 0.695 |
| currentemployment=HEI*Factor2 | 0.673 | 0.72 | 0.709 | 0.84 | 0.454** |
| currentemployment=HEI*Factor3 | 0.84 | 0.211*** | 1.115 | 0.976 | 0.833 |
| currentemployment=HEI*Factor4 | 0.358** | 0.869 | 0.638 | 0.536** | 0.678 |
| currentemployment=HEI*academic mobility=yes | 0.646 | 0.145** | 1.432 | 0.922 | 0.254** |
| N | 412 | | | | |

* - $p < .05$, ** - $p < .01$, *** - $p < .001$.

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Ashyrov, Gaygysyz¹: Impacts of Corruption on Firms' Business Activities and Foreign Direct Investments: A Comparative Analysis Based on BEEPS Data

***Abstract:** In recent decades, there is a significant increase in the interdisciplinary literature on corruption. Since countries aim to sustain their development process and goals, foreign direct investments functions crucial role. However, in purpose of being an attractive host country, countries are required by inward investments to provide a transparent atmosphere, a strong legal system, and the encouraging regulations. On the other hand, unwillingly making unofficial payment for sake of doing business activity, may discourage firms from enhancing economic performance. For further investments of the start-ups and current firms, these corruption practices create uncertain business environment. The purpose of this research proposal is to investigate the effect of corruption on firms' business activity areas and economic performances in transition countries. In addition, after examination of the relationship between characteristics of the industry and perceived corruption, it is aimed to investigate impacts of corruption on foreign direct investments. This research proposal is based on statistical and empirical data from the Business Environment and Enterprise Performance Survey which is a jointly conducted by European Bank for Reconstruction and Development and the World Bank Group.*

Introduction

In recent decades, there is a significant increase in the interdisciplinary literature on corruption. Significant findings by either renowned anti-corruption research institution contribute to reducing corruption. International collaboration to implement anti-corruption regulations counter to bribery by international firms overseas has been supported by international organizations as a means of fighting global corruption. For instance, the OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions, which was signed in December 1997 and implemented in February 1999, criminalize bribery of foreign bureaucrats and public officials by companies from 34 OECD member and 7 non-member countries. This international anti-corruption legislation emphasizes on the "supply side" of the bribe payments and it has been accepted widely as an effective measure for reducing bribery by international companies abroad. (Wu, 2006). When international firms intend to make investment or endeavour to preserve their economic performances in sustainable conditions, they suffer from bribery transactions. On the other hand, private sector, in particularly, firms also suffers from corruption. Indeed, unwillingly making unofficial payment for sake of doing

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business activity, may discourage firms from enhancing economic performance. For further investments of the start-ups and current firms, these corruption practices create uncertain business environment.

Definition of corruption is a subjective and thus, a precise explanation to corruption may differ from country to country. Even though bringing a certain and common definition is difficult, there is a compromise that corruption is usually defined as a consequence of the abuse of public offices for private benefit (Aidit, 2003; Jain, 2001). This private gain can be accumulated by either a public official, bureaucrats, community or parties (Bardhan, 1997; Treisman, 2007).

The theoretical literature offers two contradicting views regarding the impacts of the corruption on investment efficiency and performances of firms. As found in Hanousek and Kochanova (2016) one group of researchers debates that corruption has a "grease the wheels" effect that facilitates to circumvent unfavourable administrative restrictions, unproductive and time drain delivery of public services, and inflexible regulations (Huntington, 1968; Lui, 1985; Lein, 1986), specifically if countries have weak and inefficient institutions (Acemoglu and Verdier, 2000; Meon and Weill, 2010; De Vaal and Ebben, 2011). Another group of researchers discusses corruption as a diminishing factor of economic performance and deterring factor for foreign direct investments, since corruption causes unexpected increase of transaction cost, uncertainty for potential investments, emerging rent seeking counterparties, misallocated production supplies, ineffective investment decisions and plantations (Murphy and Vishny, 1991; Shleifer and Vishny, 1993; Rose-Ackerman, 1997; Kaufmann and Wei, 2000).

Evidences from previous empirical studies at the firm-level are also uncertain: some findings suggest that bribery has a detrimental impact (Fisman and Svensson, 2007; De Rosa et al., 2015), whereas others find a positive effect (Vial and Hanoteau, 2010). However, due to the illegitimate and secretive nature of the corruption itself, precise observation is quite challenging. Therefore, more scientific contribution to the corruption literature would empower researchers to analyse impacts of corruption on the firms' economic performance.

Javorcik and Wei (2009) examined the combined effect of corruption on the entry mode and size of inward foreign direct investment by employing a unique firm-level data set. They argue that the possibility of investment occurring is negatively related to the extent of corruption in a host country and then, level of the corruption in host country affects to firms' investment decisions. However, corruption not only decreases inward foreign direct investment, but also changes the ownership structure in the direction of joint ventures.

Habib and Zurawicki (2001) empirically investigated the effect of corruption on foreign and local direct investments in 111 countries. They claim that there is a negative relationship between corruption and foreign direct investments. Cuervo-Cazurra (2008) distinguishes types of corruption and examine the impact of corruption on foreign direct investment in transition countries. He pointed out that

in spite of high level of corruption in transition countries, high level of foreign direct investment is recorded.

Although the literature has contributed significant understanding on the impacts of corruption on the firm performances, it has some gaps. One of the gap is that while performing corruption perceptions and firm level analysis, researchers assume a certain degree of homogeneity within firm from the same country, firm-specific features are ignored, for example, their business activity areas which have not yet been distinctly analysed. The further and equally important gap is that literature has not elaborately investigated how characteristics of the industry will affect the impact of corruption on foreign direct investments.

The purpose of this research proposal is to investigate the effect of corruption on firms' business activity areas and economic performances in transition countries. In addition, after thoroughly examination of the relationship between characteristics of the industry and perceived corruption, it is aimed to investigate impacts of corruption on foreign direct investments.

The main contribution of this research proposal to the literature is that by using firm level data, relationship of the corruption perceptions and firms' performances is examined by taking into account specific features in firms' diversified business activity areas. Moreover, foreign direct investments will be examined by including the relationship between characteristics of the industry and perceived corruption. Remarkable note is that all these analyses will be based on the cross-country comparative analysis.

Aim of the Project

The main aim is that the examination of existing foreign and local firms' corruption perceptions and economic performances and structure problems and issues which related to poor governance, corruption. Therefore, establishing link between changes in directions of foreign investments and countries' investment and business environment. In order to achieve that three research question can be asked:

1. How do corruption perceptions influence on firms' business activities and economic performances in transition countries?
2. How are foreign direct investments affected by corruption perceptions of the firms in the host transition countries?
3. How characteristics of the industry will affect the impact of corruption on the foreign direct investments?

In this vein, in order to come up with strong findings thorough analysis of foreign direct investment indicators must be performed. Countries general economic data and foreign direct investment data will be extracted from World Bank's World Development Indicators.

Hypotheses and Methodology

Firms' characteristics and economy related detailed information and data will be derived from the Business Environment and Enterprise Performance Survey (BEEPS) is jointly conducted by European Bank for Reconstruction and Development (EBRD) and the World Bank Group (the World Bank). The study of the problem of foreign direct investments and firms' economic performance based on information compiled and processed in the BEEPS and World Development Indicators database promotes a broad range of a concrete research opportunities.

The empirical estimated functional form is given by Equation (1):

$$\log(\text{corruption}) = \alpha + \beta_1 FSC + \beta_2 BGR + \beta_3 Interact + \varepsilon_i \quad (1)$$

Where, corruption denotes corruption related question variable from survey, *FSC* represents firm-specific characteristics, *BGR* denotes business government relations, interactions variable and ε_i stand for error term. On the other hand, following Equation (2) formulates effect of corruption on foreign direct investments at the country level data:

$$FDI = \beta_0 + \beta_1 corruption + \beta_2 CSC + \beta_3 CI + \beta_3 cindust + \beta_3 interact + \varepsilon_i \quad (2)$$

Where, *FDI* represents amount of foreign direct investment, corruption variable is brought from previous Equation(1), *CSC* denotes country-specific characteristics, *CI* represents country corruption indicator, *cindust* denotes characteristics of the industry and ε_i stand for error term. Interaction variables are also added to the model. By testing models' robustness those interpretations can be placed in a strong basis.

First hypothesis is that corruption perceptions have a negative impact on firms' business performances and economic activities in transitions countries. Second hypothesis is that foreign direct investments are negatively influenced by corruption perceptions of the firms in the host transition countries.

Expected Results

Since the essential purpose of the paper is to examine two interconnected issue that firms' current and past corruption perceptions, economic performance and its impacts on foreign direct investments, the accomplishment of this essential purpose will be done in several stages, each stage will contribute with detailed outcomes for the further their developments as a basis for the exploring of the key results.

According to the equations and stages which were mentioned in the methodology part, the expected results will show that whether corruption perception of the firms in the transition countries business environment affected by the firm-specific conditions, business-government relations or other relevant variables. On the other hand, expected results will show foreign direct investments

will be affected and fluctuated by corruption perception of the firms in the transition countries business environment, country-specific characteristics and other relevant variables which were included in the equations.

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Atmaca, Sümeyra¹ (with Koen Schoors² and Elena Podkolzina³): **Public Procurement and Corrupt Reserve Prices**

Abstract: *This study develops a methodology to identify corrupt couples of public servants and firms in public procurement. In some countries procurers must set a reserve price and make it public. The procurer can manipulate the reserve price in order to conclude the contract with the preferred supplier at a certain contract price. We estimate the reserve price exploiting within procurer variation and then we analyze the residuals for each pair of procurer and seller. In case of competition the identity of the seller should not affect the reserve price because it is determined before the actual implementation of the auction. The methodology to detect corrupt couples is applied on Russian public procurement of gasoline in 2011–2014. Furthermore we find that corruption has a significant impact on the contract price but electronic auctions with sufficient competition can offset this effect and lower procurement costs.*

Introduction

Are reserve prices in public procurement manipulated to influence the contract price and the allocation of public contracts? The reserve price is the highest price the public official is willing to pay for the purchase of goods, services or works. The procurer has discretion over setting the reserve price and may choose a price much higher than the competitive price. This will enable the procurer to divert public funds and possibly share with the supplier. On the other hand the procurer may have incentives to set the reserve price far below the competitive price to limit competition. Firms will be discouraged to participate in the auction and as a consequence the procurer will be able to allocate the contract to the preferred supplier. A potential instrument to mitigate the adverse effects of corruption is electronic auction. Electronic auctions come along with transparency that can monitor agents' behavior. It makes it more difficult to capture public funds and manipulate the allocation of public contracts. In addition, the information availability lowers entry costs and consequently competition increases. Competition hinders corrupt contracting, which can lead to price reductions.

Our study contributes to literature on the detection of corruption in public procurement (Fazekas et al., 2016; Cai et al., 2013; Bandiera et al., 2009). For example tunneling during elections (Mironov and Zhuravskaya, 2016) and physical public infrastructure relative to its costs (Golden and Picci, 2005) are used to construct an objective measure of corruption. Further it has been shown that corrupt contracting leads to inflated prices (Compte et al., 2005) and the

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implementation of less competitive auction procedures (Auriol, 2016). Literature on electronic auctions suggests that prices in electronic auctions are either lower or not significantly different from prices in sealed bid auctions (Lewis-Faupel et al., 2016; Athey et al., 2011).

Aim of the Project

Aim of the paper is twofold:

1. Methodology to detect corrupt couples of public officials and firms in public procurement. The proposed methodology makes only use of procurement data and therefore it can easily be applied on other procurement data.
2. Role of electronic auctions in the transmission of corrupt reserve prices to contract prices.

Hypotheses and Methodology

We apply our methodology to detect corruption on Russian public procurement of gasoline in 2011 – 2014. The sample is restricted to electronic and sealed bid auctions with the lowest price as the award criteria. The sample consists of 67,114 auctions of 21 Russian regions. We estimate the reserve price per liter of gasoline r_{ijt} of a contract allocated by public body i to firm j at time t :

$$r_{ijt} = \mathbf{X}_{ijt}\boldsymbol{\beta} + \Sigma\theta_s \text{region}_{ijt} + \Sigma\gamma_s \text{year}_{ijt} + \alpha_i + \varepsilon_{ijt} \quad (1)$$

where \mathbf{X}_{ijt} denotes contract and procurer observed characteristics, α_i procurer fixed effects to account for unobserved procurer characteristics, $\Sigma\text{region}_{ijt}$ region and Σyear_{ijt} year effects. Since we control for procurer characteristics and procurer fixed effects ε_{ijt} should be on average 0 for each procurer and for each pair of procurer and seller because the identity of the seller should not matter for setting the reserve price. Hence ε_{ijt} is in case of competition randomly distributed and on average not significantly different from 0 at procurer seller level. If the reserve price is determined corruptly, corruption becomes an omitted variable and consequently ε_{ijt} is not white noise and picks up the effect of corruption such that we could detect corrupt relations between procurers and sellers. Any systemic deviation of ε_{ijt} on procurer seller level will be an indication of corrupt contracting. Positive (negative) systemic deviation simply means that the reserve price is systemically set higher (lower). Procedure:

1. Estimate reserve price per liter (model 1)
2. Test and group pairs of procurers and sellers
 - $E[\varepsilon_{ijt}|\text{procurer}=i, \text{seller}=j] = 0$
 - $E[\varepsilon_{ijt}|\text{procurer}=i, \text{seller}=j] > 0$
 - $E[\varepsilon_{ijt}|\text{procurer}=i, \text{seller}=j] < 0$

Furthermore we study how corrupt reserve prices are transmitted to contract prices per liter p_{ijt} . The public authority can channel the contract to the preferred supplier through several means such as limiting competition and ultimately enabling the preferred firm to be the sole bidder. Moreover we expect corrupt couples to opt for sealed bid auctions as electronic auctions are more transparent. The contract price is regressed on the predicted reserve price per liter of gasoline \hat{r}_{ijt} , pu_{ij} and pl_{ij} are indicator variables for respectively corruptly overpricing and underpricing the contract, e_{ij} equals 1 if the auction procedure is electronic auction and 0 if sealed bid auction and $nbid_{ijt}$ is the number of bidders:

$$\begin{aligned}
 p_{ijt} = & \alpha_0 \hat{r}_{ijt} + \alpha_1 pu_{ij} + \alpha_2 pl_{ij} + \alpha_3 e_{ij} + \alpha_4 nbid_{ijt} + \alpha_5 e_{ij} * nbid_{ijt} \\
 & + \alpha_6 pu_{ij} * e_{ij} + \alpha_7 pl_{ij} * e_{ij} + \alpha_8 pu_{ij} * nbid_{ijt} + \alpha_9 pl_{ij} * nbid_{ijt} \\
 & + \alpha_{10} pu_{ij} * e_{ij} * nbid_{ijt} + \alpha_{11} pl_{ij} * e_{ij} * nbid_{ijt} + \sum \theta_s region_{ijt} + \sum \gamma_s year_{ijt} + \varepsilon_{ijt} \quad (2)
 \end{aligned}$$

Results

Our methodology reports the number of corrupt couples at national and regional level. Comparing the number of corrupt procurers and sellers with the number of corrupt relations we can deduct that on average procurers and sellers have more than one corrupt relation. Corruption varies across regions but the correlation between our regional corruption indicators is positive implying that different forms of corruption occur together. To speak of corrupt deals we have to confirm that the winning bid belongs to the corrupt bidder. We estimate the probability of winning the auction given a corrupt relation. The results show indeed that suppliers are more likely to win if they have a corrupt relation with the procurer. Furthermore our indicators are highly correlated with existing regional corruption indices. Finally our results show that corruption has a significant impact on the contract price but electronic auctions with sufficient competition can offset the effect of corruption and lower procurement costs. Yet we find evidence of manipulation of the reserve price to avoid electronic auctions and use sealed bid auctions instead, especially by couples that inflate reserve prices.

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Chebotareva, Mariia¹: Functional Overlapping Competing Jurisdictions (FOCJ) as a Possible Tool for Inter-municipal Cooperation in the Russian School Education Sector

Abstract: *For Russia entrepreneurship and entrepreneurial behaviour of public managers is highly important, since there is a transformation in legal, economic, institutional and political environment. In this research, Functional Overlapping Competing Jurisdictions (FOCJ) theory is recommended as an instrument for improving current situation. For this purpose, relations between municipal entrepreneurship, FOCJ theory, and institutional conditions in Russia are highlighted. To investigate whether FOCJ could be implemented in Russia, different forms of public and private enterprises have been considered and concluded that only company forms under private law can be used. In Russia, FOCJ types Type I and Type IV FOCJ are not applicable for the Russian school sector. FOCJ types II and III are identified as the most appropriate forms to be implemented. Moreover, for each type of FOCJ a particular set of legal forms of companies has been found. Theoretical models of establishment, procurement and competition are formulated with grant payment from the Russian regions. Advantages and disadvantages of FOCJ implementation in Russia are emphasized. The need to introduce new forms of public enterprises exists.*

Introduction

Current research is looking for the suitable means of inter-municipal cooperation in Russia, and with this aim, the concept of Functional Overlapping and Competing Jurisdictions (FOCJ) is implemented to the Russian school sector. The choice of the topic can be explained by the problems existing nowadays in the Russian society. Since there are still depopulation (147.7 mln in 1990 and 142.7 mln in 2009)² processes and intensive migration from rural areas to industrial cities (0.519 mln in 2010 and 0.968 mln in 2015) in Russia, which result in non-optimal public service provision in rural areas. Organizing of municipal cooperation could be a solution, especially in particular spheres like schools or hospitals.

Modern realities and intensifying crisis in the global and Russian economy demonstrate a serious need in transformation of existing Russian public institutions juridically as well as economically and politically. Following the example of many European countries, the Russian economy is recommended to apply public entrepreneurship for modernizing the provision of public services. Especially important in the case of Russia to instil entrepreneurial behavior into public managers. As a result, this makes the process of public goods provision more flexible, risk taking and strategical.

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² Statistics source: Russian Federation Federal State Statistics Service.

FOCJ (Functional Overlapping Competing Jurisdictions) are considered in this work as one of the opportunities for applying public entrepreneurship under the Russian circumstances. They are *functional* because they perform different functions, i.e. schools, water provision, etc. *Overlapping* means that their territories don't coincide with the municipal borders and more than one jurisdiction with the same functions can act in the same region. They *compete* for clients, members, who can be citizens, municipalities and other subjects of public and private law. The *jurisdictions* show a degree of autonomy and authority, and have a democratic structure (Frey, 1999, 2000, 2005; Frey & Eichenberger, 1995, 1996, 2002, 2006; Friedrich & Eckardt, 2014).

First time, this approach has been introduced by Swiss scientists Frey and Eichenberger. They characterized FOCJ, imposing their main features, and focused only on type I FOCJ. Later, Friedrich, Reiljan, (2011) and Friedrich, Eckardt (2014) developed the FOCJ concept, including three more types of FOCJ: FOCJ type II, type III and type IV.

In general, four types of FOCJ can be distinguished:

- FOCJ type I with citizens as members, e.g. municipalities without territories. Citizens living in various municipalities establish FOCJ to provide services.
- FOCJ type II with governments as members e.g. municipalities, counties, states, nation states, European Union, etc.
- FOCJ type III comprising municipalities, other governments, other subjects of public law and of private law (firms, etc.).
- FOCJ type IV with members who are natural persons, and/or private and public legal persons, e.g. citizens, associations, chambers, churches, municipalities, private and public firms (Friedrich, Eckardt 2014).

There is no much literature devoted to FOCJ. FOCJ theory is related to club theory (Buchanan 1965), since the optimal size of both - clubs and FOCJ - is defined according to a comparison of marginal utility, which members get from the consumption of public good, and marginal costs that they have to pay. If one additional member increases marginal costs, then the FOCJ size is not optimal anymore. Competition among FOCJ is rooted in Tiebout's "Voting with feet" concept, when citizens choose jurisdiction to live and respectively more appropriate for them combination of taxes and quality of services.

Examples of FOCJ-like cooperation exist, for example, in Switzerland and the USA with citizens as members (FOCJ type I). In the USA it's Special purpose districts. In Germany - Zweckverband which is analogical to type II FOCJ with municipalities as members. Moreover, this type can be applicable for Russia as well.

Aim of the Project

The author tries to answer the following main **research question** (aim): whether FOCJ theory is applicable as a tool for:

- school service provision in the Russian municipalities;

- inter-municipal cooperation in Russia with respect to schools.

The following **research tasks** must be fulfilled:

- to define the main characteristics of a FOCJ, types of FOCJs, which are suitable for Russia;
- to identify in which legal forms FOCJs may be established in Russia;
- to investigate which forms of inter-municipal cooperation exist in Russia;
- to formulate the microeconomic models of FOCJ establishment, operation and competition for members;
- to formulate the law for FOCJ with respect to the Russian legal conditions and school sector peculiarities.

Methodology

At the current stage of my research, I am implementing the following methods:

- Method of microeconomic theory modelling (i.e., models of FOCJ establishment, current operation and competition between several FOCJs under the condition of regional grant);
- Qualitative approach (i.e., interview with school managers and municipal authorities in the education sector);
- Document analysis (Russian laws, legal acts, etc.)

Results

The practice of intermunicipal cooperation is relatively new for Russia, but can be found. Intermunicipal cooperation exists in Russia mainly in forms of unions and associations. There are also different criteria for municipal union (Бутова, Пухова, Щукин, 2013):

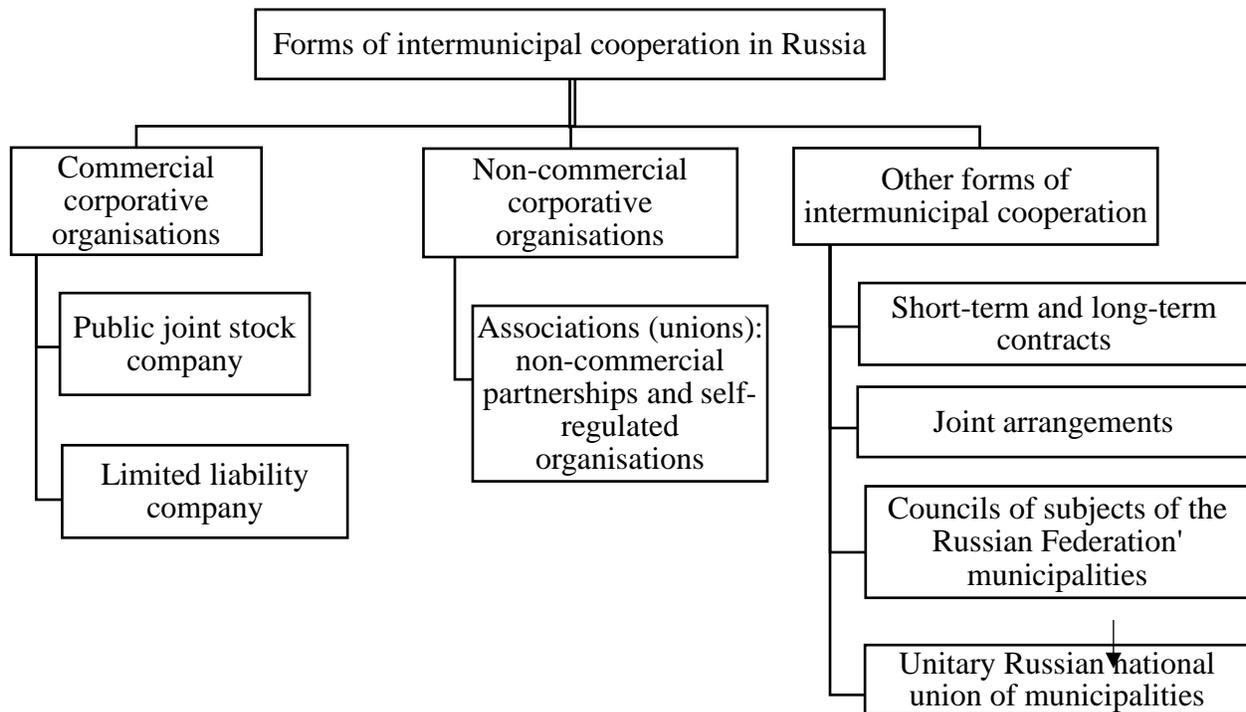
- territorial (e.i., "Association of Siberian and Far Eastern cities of Russia");
- functional (e.i., "Union of the Russian science cities' development");
- type of the city (e.i., "Association of small and medium-sized cities of Russia").

Moreover, these organisations are legal entities, they have their governing bodies, statute and membership. Members pay annual membership fees and have a right to use the organisation' services, which is fixed in the statute. Members are required to participate in the formation of the Organization's assets.

Intermunicipal cooperation in the Russian Federation can also be in form of short-term and long-term contracts, joint arrangements and council of municipal formations.

In general, all possible forms of municipal cooperation are described in Figure 1:

Figure 1. Forms of inter-municipal cooperation in Russia



Source: Compiled by the author based on Russian Federation Federal Act № 131 “On General Principles of the Organization of Local Self-Government in the Russian Federation”

To be suitable for FOCJ establishment legal forms of companies in Russia should match FOCJ criteria, the list of which has been elaborated by the author on the basis of related FOCJ articles:

- functions (sectors) where a legal form could be used;
- possibility to overlap with other companies of the same legal form;
- who can be members of the legal form;
- competition for members;
- existence of membership;
- decision-making bodies and their functions;
- existence of published statute;
- democratic procedures, fixed in statute;
- the right to fix fees;
- freely entry and quit of members;
- members' impact on the board of directors;
- membership connection with having services.

The analysis of existing legal company forms of the Russian Federation has shown that the main difficulty is to find the legal company form in the Russian legal

structure that would match all the FOCJ conditions simultaneously. At the same time, the main obstacle concerns the lack of company forms, which can be used for establishing FOCJ type II. Municipalities in Russia are not free enough to join for cooperation under one of the already existing legal company forms. This is also a perspective direction for further development of the Russian legal system, which now has gaps in the sense of regulating intermunicipal cooperation.

All considered legal forms are grouped into the Table 1 according to the type of FOCJ:

Table 1. Possible types of FOCJ in Russia with respect to the legal forms of companies

| FOCJ type I | FOCJ type II | FOCJ type III | FOCJ type IV |
|------------------------------|-------------------------------------|-------------------------------------|----------------------------------|
| Public joint stock company | Public joint stock company | General partnership | Limited (commandite) partnership |
| Limited liability company | Limited liability company | Limited (commandite) partnership | Public joint stock company |
| Production cooperative | Associations (unions) | Public joint stock company | Limited liability company |
| Consumer cooperative | Non-commercial partnership | Limited liability company | |
| Public organizations | Self-regulated organizations | Production cooperative | |
| Associations (unions) | | Consumer cooperative | |
| Non-commercial partnership | | Associations (unions) | |
| Self-regulated organizations | | Non-commercial partnership | |
| | | Self-regulated organizations | |

Source: Compiled by the author based on Civil Code of the Russian Federation and the Federal Act № 273 "On education in the Russian Federation", Article 22, subsection 1.

Since education organizations can be established in one of the non-commercial forms in Russia (Federal Act "On Education in the Russian Federation", Article 22) only company forms marked in bold are applicable for establishing FOCJ type II and III in the Russian school sector. FOCJ type I forms cannot be used, because type I FOCJ is assumed to involve unrestricted movement of citizens between municipalities, which is not a case in the Russian school sector. FOCJ type IV is not applicable for school sector as well, since it does not include any non-commercial forms of the companies.

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Detkova, Polina¹ (with Elena Podkolzina² and Andrey Tkachenko³): Corruption, Centralization and Competition: Evidence from Russian Public Procurement

***Abstract:** This paper estimates the impact of regional corruption on the incentives of regional public procurers of different types to maintain honest competition in bidding process. We consider two types of procurers: Customers – who procure for themselves and Centralized Agencies, who have special competency to procure for customers of their region. We assume that high corruptive environment reduces auction competition and increases final procurement price, while centralization of procurement through Agencies should reduce such negative effect of corruptive pressure. To test these hypotheses, we use dataset of open auctions conducted by Russian regional level organizations of Public Administration activity in 2011. As measures of low competition and unaggressive bidding we use auction inconsistency and low price reduction indicators in repeated procurements. The analysis shows that regional corruption positively impacts on auction inconsistency for Agencies. For Customers, the positive association is observed for small contracts only, while for large contracts there is strongly negative impact. Regarding low price reduction, regional corruption has positive impact on this variable for Agencies and high positive impact for Customers, especially in large contracts. Therefore, procurement centralization may reduce direct corruption of customers, but in high corruptive environment centralization cannot solve the problem of low competition.*

Introduction

Great share of public expenditures are going through procurement process where trillions of dollars (USD) disappeared due to corruption activities [1]. There is a huge literature dealing with corruption and inefficiency in public procurement [2]–[4]. This paper shows how corruption environment influences public procurement outcomes.

We used basic idea that corruption could be treated like socially embedded norm from Fisman and Miguel [5]. We suppose that regional corruption influences procurers' decisions when they govern procurement process. Nevertheless, this effect might be different for centralized and decentralized procurements. Idea to compare procurement outcomes of different types of procurers comes from

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Bandiera et al. [2]: they used centralized agency as a tool to eliminate corruption on the customers level. We expected to find similar evidence that centralized agencies should obtain better outcomes in public procurement than customers.

Using large dataset of electronic auctions conducted by Russian regional level organizations of Public Administration activity in 2011 we show that in regions with higher corruption levels centralized agencies will have inconsistent auctions more often for all sums of contracts. For regular customers, it is true only for small contracts while for large contract there is an opposite effect. If we look at price reduction for large contracts we see positive correlation between low decrease and corruption level in the regions for Customers. So, customers arrange competitive auctions with small price reductions. We argue that procurement centralization may reduce direct corruption of customers, but in high corruptive environment centralization itself cannot solve the problem of low competition.

Aim of the Project

The main objective of the paper is to examine impact of corruption on the incentives of public procurers of different types to maintain honest competition in electronic auctions'. We argue that centralized agencies are more qualified and higher monitored than regular customers, but influence of centralization and corruption on the probability of bad outcomes (low competitiveness of an auction and decrease in prices) requires empirical investigation.

Hypotheses and Methodology

Several papers argued that there is an interconnection between corruption and competition [6]–[9]. Market structure allows firms to extract different levels of rents, where rents are higher there are more incentives for firms and bureaucrats to be engaged in corruption deal.

As for suppliers, low expectations to win in high corruptive environment with positive entry costs connected with procurement process [10], [11] decrease incentives for new uncorrupted firms to enter the market which make appeared corruption (favoritism) stable.

This leads to the following hypothesis:

H1: Higher level of corruption is connected with low level of competition in procurement tenders.

Different organizational structures, different payment schemes, and different monitoring pressure and so on influence incentives of officials and results of their work [12]. We argue that the main difference between regular procurers (Customer) and centralized agencies (Agency) from organizational perspective is specialization. Agencies as one of the main functions have duties to organize

procurement process, while Customers do not. We suppose that Agencies have competitive advantage compare to Customers in organizing procurements because it is their main function, officials are more qualified in this question and face higher control from upper-level bureaucrats. Also centralization is viewed as a way to achieve economy of scale and easier monitoring. Especially these gains should increase in electronic procurement of standardized goods [13]. This leads to the second hypothesis:

H2: Centralization is one of the tools to fight corruption and as consequences to increase competition and decrease prices in procurement tenders.

The primary source of information on public contracts is available on the public procurement official website: www.zakupki.gov.ru. The official regional information is taken from federal statistic website www.gks.ru, while regional corruption index for 2010 is taken from the research report of Foundation of Public Opinion (FPO), which was subsidised by Ministry of Economic Development [14].

We consider procurement of all public organizations with regional subordination level, which has activity in the sphere of Public Administration. The dataset includes 40794 contracts in 68 Russian regions concluded by 1345 regional customers⁴ of Public Administration activity and 66 Agencies in 2011.

We consider the following possible corruption indicators⁵ as dependent variables:

Inconsistent auctions (only one bidder, therefore, no price reduction and contract is concluded at the reserve price level)

Low price reduction during bidding process for consistent auctions (less than 2.5%⁶ of reserve price).

We consider the first variable is indirect indicator of procurer incompetence or\and his dishonest behavior. It may also show shortage of non-incumbent firms' incentives to participate in auctions. We consider the second variable as indicator of fake competition, and as a result, of collusive (may be collusive and corruptive) behavior of agents.

Because corrupt agreements are illegal, agents participating in a corrupt marketplace require additional guarantees of compliance with their obligations. According to [15], one of the mechanisms of such guarantees is the reputation and reliability of participants of a corruptive market. A participant's reputation is based on whether the participant has previously been involved in corrupt agreements. Therefore, we expect corruptive behavior occurs mostly in repeated contracts and

⁴ Among all 1345 customers only 435 procured at least once during 2011.

⁵ <http://guide.iacrc.org/>

⁶ We also vary this threshold as 1.5% and 3%.

run regressions on them separately (contracts between procurer-supplier pairs that have interacted three or more times during 2011 are considered repeated). Repetition may also be a consequence of deliberate procurement manipulation.

As incompetence and dishonesty level may significantly vary across contracts value, we also divide all contracts into three categories:

small contracts (reserve price up to RUR 500,000) – procurer had an option to exploit electronic auction or less transparent and less cost procedures (as request for quotations or negotiations)

medium contracts (reserve price up to RUR 1,900,000⁷)

contracts (reserve price above RUR 1,900,000)

We conduct econometric analysis based on both linear probability models and probit models for binary dependent variables. The first set of regressions uses dummy variable for inconsistency of auction as the dependent variable, the second set considers low price reduction dummy as dependent variable. Both sets are based on two samples: primary sample of all contracts concluded through auctions and reduced sample of repeated contracts. For each sample of the first and second set we run regressions by each level of contract size separately. As we want to estimate the effects for Customers and Agencies separately, models will take the following form:

$$P(y_t=1) = F(\beta_1(A \times Cor) + \beta_2((1 - A) \times Cor) + \delta A + \gamma X_t),$$

where t stands for the sequential number of the contract, A is dummy variable for Agency, Cor is corruption index of the region of procurer and X is set of controls:

contract controls (log initial price, duration, product controls, etc.);

bidding controls (number of applications, dummy for unpermitted applications presence);

customer controls (number and size of public administration contracts);

region controls (log GRP per cap, log public spending per cap, log regional budget per cap);

product group control and month of contract signature date.

To address the problem of heteroscedasticity of disturbances, the White correction for covariance matrix of estimates is used to obtain more robust results (but still consistent).

We also do robustness checks: redefine corruption index basing on the survey Georating conducted by FPO in 2011 [16], exclude most frequent product contracts (medical drugs sector), add contracts of Moscow and Saint-Petersburg to the dataset, vary low price reduction threshold and redefine repetition over all types of procurement (not only electronic auctions).

⁷ The threshold was chosen as the median reserve prices of contracts that higher than RUR 500,000.

Results

The analysis has indicated that regional corruption index is positively associated with auction inconsistency for Agencies' procurement for all contract sizes. For Customers, positive association is observed for small contracts only, while for large contracts there is strongly negative association. Regarding low price reduction as dependent variable, we show that corruption index has small positive impact on this variable for Agencies in case of small and medium sized contracts, while there is high positive impact for Customers, especially in case of large contracts. The results also reveal that there is special medical drug public procurement market, where all these effects are dominated. In other markets these effects are less visible.

Therefore, we partially support the statement that procurement centralization may reduce direct corruption of customers, but in high corruptive environment centralization itself cannot solve the problem of low incentive from suppliers' perspective. We think that decrease in number of Agencies may solve the problem as it will lead to higher monitoring and enforcement.

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Esaulov, Daniil¹ (with Andrey Tkachenko²): Political Cycles and Public Contract Allocation: the Case of Russia

Abstract: *This paper analyzes the relation between political cycles and favouritism in public procurement in case of low political competition. We consider the connection between governor's turnover and redistribution of contracts among suppliers. Particularly, we are interested in the exact time a governor spent in office by the time the contract in his region was signed. In order to verify this connection we match a database of Russian governors to a database of public procurements corresponding to their time of governing. Our primary database contains data on procurements in road and repair construction in Russian regions during 2011-2014. We run a set of regression models on contract level. The main obtained result is that during first years of governing an increase in governor's tenure is associated with better outcomes with regard to competition: such as more bidders per auction, less probability that the winner is local. But after several years of governing the situation begins to worsen: the amount of bidders decreases, the probability that the same firm wins the auction increases. Thus, we conclude that there is a significant effect of governor's tenure on the allocation of contracts among suppliers.*

Introduction

Public Procurement (PP) is one of the main contemporary mechanisms of states-businesses relation. On the one hand PP can be used as an indirect mechanism to achieve important government objects such as stimulating small- and medium-sized business development [6] and introducing innovation [2], [12], [13]. On the other hand, PP can also be a source of corruption or rent-seeking [3], [7], [9]. Moreover, there are quite consistent relation between favoritism in allocation of public contracts and politically connected firms [1], [5], [8] both for developing and developed countries. For Russian reality in the end of 2010s' Yakovlev and Demidova ([14]) showed that state-owned firms are more likely to receive public contracts.

Despite quite much literature on political connection of firms and favouritism in public procurement allocation, there are few papers on political cycles and favouritism in public contracts allocation. Recent paper by Mironov and Zhuravskaya ([10]) showed association between political cycles and illicit financial transaction to politicians from procurement winning firms. Coviello and

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Gagliarducci ([4]) demonstrate how turnover in major office impact on further bidding process and contracts' distribution between suppliers.

In this paper we are also focused on political cycles and their relation to public procurement allocation between suppliers. We analyze if there is a connection between the governor's turnover and redistribution of contracts among suppliers in Russian regions. Thus, in contrast to Coviello and Gagliarducci we consider the case of low political competition. Moreover, we try to capture the non-linear effect of politicians' tenure: situation when the dynamics of bidding processes and contracts' distribution changes according to a non-linear pattern.

Hypotheses and Methodology

One of the main goals of this paper is to show how the politicians' exact time in office is connected to favoritism. The hypothesis we test can be formulated as follows:

- 1) Limiting competition follows non-linear patterns over governors' terms.
- 2) This pattern is U-shaped corresponding to decreasing competition limiting in the first years and governing and "deterioration" of the situation after some period.

In order to test this hypothesis we analyse public data on public procurements. The analysis of political cycles' effects on the redistribution of contracts between suppliers is based on data obtained from different sources. This paper focuses on the public procurements of road repair and construction in Russia during 2011-2014. The primary source of information on these public contracts is available on the public procurement system official website: www.zakupki.gov.ru. Basic information on public customers and suppliers – participants of public procurement procedures – is taken both from this site and www.clearspending.ru. Federal statistic website www.gks.ru together with www.clearspending.ru provides the official regional information.

The database as initially obtained consisted of more than 157 thousand contracts in road and repair construction during 2011-2014. These contracts were signed through different procurement procedures: both competitive (electronic open auctions, request for quotations and open tender) and uncompetitive (single-source contracting procedure). From the sample we exclude unrealistically small contracts (less than 10 thousand roubles). Thus, after cleaning data and excluding some observations with missing important information the database is reduced to 139838 contracts.

Primary database for analysis contains the following data on procurements:

- notification and bidding information including procurement procedure and competitiveness during the bidding process (the number of bidders applied, admitted and present in biddings);
- contract information including sums and terms of delivery;
- unique identification codes of customers and suppliers;

- information on total number and sum of contracts signed by each customer and supplier during 2011-2014.

By customer and supplier ID we identify their regions and add the following regional information:

- logarithm of regional public spending per cap;
- logarithm of GRP per cap;
- regional road accident rate;
- regional share of roads of regional significance with good quality;

Finally, we use a data set on Russian governors containing the exact start and end of their terms. During 2011 – 2014 this sample is limited to dates of board of 125 different governors in 83 Russian regions. We combine this information with the data set on contracts above by matching each procurement with the corresponding governor's term. Thus, we compute the governor's tenure in the office by the date of the each contract signing.

For each region we connect governor's tenure with several outcomes of the procurement process:

- final number of bidder participates in auction;
- indicator that the auction was inconsistent (no bidders or only 1 bidder);
- indicator that the same firm was the winner of repeated auctions;
- indicator that the winner is from the same region as the customer;
- rank of the winner supplier among winners the year before the contract sign date in the same region.

We consider abovementioned outcomes as dependent variables.

First two variables characterise competition in the auction. Note that we define these bidder characteristics on the basis of competitive procurement procedures. Third indicator – repeated contract – shows whether the procurer and the winner of the contract have been interacted before. In this paper we mark the contract as repeated if it is the third time or more when the supplier wins the auction of the particular procurer during 2011-2014. First two contracts of such supplier/procurer pair are not marked as repeated. Moreover, if two or more contracts between supplier and procurer were signed on the same day, then such contracts count as one.

The latter two measures define the nature of procurement procedures winners. Rank of suppliers is defined a number corresponding to share of all supplier's win contracts among all road and repair contracts in the region during current year. Lower rank stands for smaller share. Rank equals zero if supplier didn't win any contracts this year.

It's worth noticing that share of contracts signed with suppliers from the same region as customer constitute on average 90% in quantity and 66% in contract sum. The average number of road repair suppliers is 228 per region and in average 91% of suppliers have at least one contract in their regions. Moreover, road repair and construction contracts form significant share of all the public procurement for considered suppliers: on average 27% by number of contracts and 59% by their volume.

In order to verify the effect of governor's change on the suppliers' structure we run a set of panel regression models on a contract level. As the main independent variable, we consider governor's exact time (in years) in office at the date of the contract signing. The set of controls include different contract characteristics as well as supplier characteristics. We use population-average models with cluster-robust standard errors as well as random effect models. In order to control for public procurement environment characteristics we also add some factors on regional level from Rosstat: share of roads with good quality, GRP per capita, share of PP regional spending in overall Russian spending.

The models we exploit are as following:

$$y_{it} = c + \beta_1 T_{it} + \beta_2 T_{it}^2 + \delta_1 X_t + \delta_2 Z_i + \varepsilon_{it},$$

where y_{it} is the outcome of the auction with the sequential number t held during the term of i -th governor. T_{it} is the governor's tenure in the office (exact time in office by the date of contract signing), X_t is a vector of auction/contract/suppliers/customers characteristics, Z_i is a vector of governor's and region's characteristics.

The main focus here is on the estimation of β coefficients. In order to show the presence of the effect of governor's tenure on the auction outcome we need to verify if these coefficients are significant.

Results

In the paper we show the following results.

- 1) For the considered dependent variables coefficients β_1 and β_2 significantly differ from zero. It supports our idea that there is a non-linear pattern in competition with regard to governors' tenure.
- 2) Moreover, coefficient $\beta_2 > 0$ and $\beta_1 < 0$ for the models with bidder amount and rank of the winner supplier as an outcome. Further, $\beta_2 < 0$ and $\beta_1 > 0$ for the rest of outcomes. This result supports the idea that the first few years in the office are associated with the better outcomes: such as less probability that the winner is local or that the same firm wins the auction. However, in time the situation changes to the completely opposite.

Thus, we confirmed our hypothesis that tenure in office affects the functioning of public procurement. Pattern is non-linear (U-shaped or inverse U-shaped depending on the sign of β_2) corresponding to regional competition improvement during first years of governing and worsening situation after several years. It is worth noting that according to our results governor's second term turns out to be the most efficient with regard to the procurement competition in the region. In our future research, we are planning to investigate how favoritism affects the dynamic of contract execution efficiency. This can be done, for example, by studying overpayments and delays of contract deliveries.

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Fatikhova, Adelia F.¹: The «Company Towns» Phenomenon: New Applications

Abstract: *The company towns are widespread all over the Russia. The 2008 financial crisis caused too much external shocks for the entire society, plus, it endangered the potential performance of Russian industry. The Russian Authorities have never focused on the company towns' issue until the 2009, when the first measures were implemented by creating the list of Russian company towns. Yet, till the end of 2016 all of the measures were focused in financial backing. Indeed, it is helpful for some company towns, yet, generally, this is more of the discrete policy, while in order to provide sound economic growth we have to come up with a systemic policy. This research suggests using alternative ways of studying the company towns' issues, which consider the institutional aspects of the company towns' complex system.*

Introduction

During the 2007-2009 financial crises, Russian company towns (or “monotowns” – the so called single-industry communities) became the potential source of social tension and oppression. Some of the company towns, which basically were build around certain enterprises to provide the employment needed, became useless due to the variety of reasons: poor performance of the enterprises, lack of competition and poor infrastructural conditions. Whereas the fear of the consequences of the company towns' crisis was exaggerated for the rest of the world, for Russia, the problem still has its reasons for the further concern.

Since the end of 2014, the Russian Government compiles a list of the most vulnerable company towns. By the end of 2016, the list was comprised of 319 company towns (out of almost 1100 towns across the country). There are three key categories in this list, depending on the level of socio-economic vulnerability: the most vulnerable company towns (1st category), company towns with the risk of deterioration (2nd category), and last category consists of company towns with stable economies. In the mean time, there are certain swings back and forth in the company towns between those categories, which means, that the real number of the endangered company towns is larger than it may seem to be.

It is worth noting that the Government has recently developed some types of initiatives towards the company towns: the first one is based on the **financial backing** for the town-forming enterprises, which are crucial for the national economy and national security. Another way is related to the **federal agencies' initiatives**: specific labor programs for the company towns' citizens (from the Ministry of Labor and Social Protection), subsidies for the industrial enterprises (the

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Ministry of Industry and Trade), etc. Finally, due to the Russian Government Decree (No. 473 FZ²), some of the company towns are worth being named as “**advanced development territories**” – if one town gets this “status”, it also gets certain taxation privileges, special legal regimes for business and other activities (rent exemptions, tax privileges, and special regimes of public and municipal control) and withdrawal of land for advanced territories' buildings and infrastructure.

However, even though the Russian Government has some certain measures towards the company towns, overall, its policy is quite discrete: it is designed to solve the most crucial aspects, yet it lacks the crisis-preventive measures.

Aim of Project

To propose an approach to studying the issues of company towns' risk management in terms of new institutional economic theory.

Hypotheses and Methodology

Hypothesis A. The risk-managing mechanism should be developed considering the structure of the relationships between the main stakeholders.

Methodology

We consider an institutional agreement model between three types of stakeholders: the **town-forming enterprise** (henceforth, the business), **the population**, and **the authorities** (the town's administration). Since the decisions reached by the owners of the town-forming enterprise often take precedence over the position of the company town's administration, it is logically sound to make the point of reference as the choice of business' alternatives — either to support production (i.e. it is profitable) or to cease it (if it is unprofitable or there is an increasing risk of an hostile takeover).

Business decides whether it is reasonable to maintain the operations. If the decision is positive, two alternatives are possible depending on whether additional adjustment are necessary (the 1st case) or not (the 2nd case). If business stops maintaining operation and additional adjustments are necessary then we have three scenarios:

- i. The liquidation of the company town and resettlement;
- ii. Maintain the asset specificity;
- iii. Transforming specific asset into general asset.

Hypothesis B. Some of the company towns pretend poor performance by false data in order to keep getting the financial backing and corresponding privileges instead. In

² FZ – Federal Law

that case we come with the distortion of facts: those company towns that are actually safe get the financial assistance, whereas the deprived company towns lack the adequate support.

Methodology

Contractual risks, in fact, play the crucial role in this case, because, not only they refer to the contract members' well-being, but also to the soundness of the system policy as well. In the meantime, if we consider the issue of contractual risks in company towns, we have to pay close attention to the opportunistic behavior (in the principal-agent model) and to the information asymmetry. This issue arises from two different aspects: firstly, if we speak about institutional agreement inside the company town, the risk of opportunism remains for ***the business*** and for ***the authorities***. Yet, if we consider that there is also institutional agreement on the country-level, this problem remains for the Business, and for the three types of authorities: on the Federal, Regional and the Local level. And this is the second aspect. If we recall the current state policy regarding company towns, there is a new trend in according privileges for the advanced development territories (hereafter ADT). Yet, it is not quite clear, what are the criteria for the ADT status? The problem of opportunism arises with the information asymmetry problem: what if those privileges create wrong incentives, and regions which do need the ADT status do not get them, because some regions hide certain information on their actual performance, and, therefore, they get the status? Therefore, it is important to understand the possible mechanisms of deterring the opportunistic behavior in such cases and apply the game theory approach for the further analysis.

Expected Results

- 1) In some cases financial backing causes wrong incentives for the company towns' authorities, therefore, there has to be a certain scheme defining whether it is necessary to sponsor the company towns or apply something else;
- 2) Understanding the peculiarities of the relationships between the stakeholders allows us to develop scenarios that fit larger groups of company towns considering the socio-economic measures, institutional measures and political aspects.

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Grasmik, Konstantin¹: Is Social Capital a Driving Force of Regional Innovation System Performance? Evidence from Russia

Abstract: Numerous studies confirm that the breadth and density of social contacts of entrepreneurs, managers, investors, and researchers have positive effects on the probability of occurrence of new projects, the quality of management and the dynamics of firm growth. Utilizing data from 2500 Russian spin-off companies and official statistics of regional development, I investigate the impact of social capital on regional innovation performance. I find that a higher level of social capital leads to an increase in the number of companies engaged in innovative projects. However, it does not affect the scale of innovation performance.

Introduction

Intuitively, it can be argued that social capital possessed by the company cannot adversely affect its activities because it expands its resource capabilities (Pihkala et al. 2007). An entrepreneur determines the volume of resources to invest in creating and maintaining the necessary relationships. To have an opportunity is better than not having one, so the comparison of the two firms, which differ in social capital, *ceteris paribus*, is more likely to be in favor of one that is integrated into social network. However, geographical, organizational, cognitive, social proximity of cooperating agents often stimulates knowledge sharing, but rarely innovation performance (Broekel and Boschma, 2012; Cassi and Plunket, 2015). Excessive organizational, cognitive, territorial proximity of alliance participants can lead even to a decrease in the level of innovation performance (Portes, 1998; Nooteboom et al., 2007). Too strong focus on local partners can bring about to scarcity of fresh ideas, e.g. lock-in effect (Asheim and Isaksen, 2002).

Aim of the Project

Concerning the regional experience (for example, of Silicon Valley), the abundant social capital plays a decisive role in the formation and development of the region with high-tech-oriented economy. It is a nontraded competitive advantage (Adams, 2005; Bresnahan et al., 2001; Fleming and Frenken, 2007; Lécuyer, 2006). Social capital is the building material for the institutions of agents' cooperation. The scientific problem is to measure the impact of social capital on the dynamics of innovation processes in the region as a whole. The use of sociological methods cannot cover a large number of regions, especially in big countries. The correct comparison of two or more regions requires their homogeneity on social

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and economic characteristics, the necessary sample size in each region, compliance with uniform methodology of data collection, etc. (Chaminade and Plechero, 2013).

So that the research question is as follows. Is the integration into personal networks a significant factor of the innovation activity on the regional level? Or resource endowment for R&D, the size of the local market, patent activity determine the intensity of the commercialization of knowledge?

Hypotheses and Methodology

Inter-firm linkages can be formal or informal. Informal contacts could be made between, say, relatives, former colleagues, etc. They could be difficult in detectability, for example because of trade secrets, so we will focus on the analysis of relations with the formal features. First, it may be ties between subsidiaries and affiliated entities. Say, firm co-founder of small innovative enterprises may belong to larger structure, which in turn is affiliated with the research institute, financial companies, etc., i.e. integrated into the innovation network. However, property in Russia is often personified. In other words, the connection between the formally independent firms is made possible through the same individual co-founders. Accordingly, the algorithm of the study is as follows:

- 1) As an information base for the analysis of the small innovative companies we used information-analytical database FIRA-PRO. We collected the following information for spin-offs from 61 regions: industry affiliation of external companies, their turnover (if present), the presence of the leaders (founders) of small enterprises of the real work experience in business until 2009, the existence of small business owners from other companies. In addition, we check to see if the university owners are affiliated with companies. In total we have studied almost 2000 small innovative enterprises established until May 2014.
- 2) Next for each small innovative enterprise and its affiliated structures it was carried out search for information on the Internet in order to get a better idea about the scope and scale of the activities of third-party companies.
- 3) Since the quantification of the intensity of contacts is characterized by methodological difficulties (the number of contacts is not always translate into quality), we used the scores, based on available information.
0 points - no ties
1 point - communication is, however, or financial information is not provided, or the total annual turnover of the companies less than 10 million rubles.
2 points - the total annual turnover of more than 10 million rubles, but the founders associated with the university, play a subordinate role in this large company (or just their founders are affiliated with other projects)
3 points - if the founders of small innovative enterprises at the same time play a dominant role in the management of companies with a total turnover of more than 10 million rubles.

Based on the collected data we calculate two indicators:

SC - index, calculated as the sum of multiplications (point×number of spin-offs with this estimation). The index allows giving more weight to the spin-offs with higher social capital.

As in the larger regions the number of spin-offs tends to be higher, we adjust SC on the number of teachers in universities (thousand persons). This eliminates a possible multicollinearity between the indicators of the size of the region and social capital. So the second social capital indicator is as follows:

SC_UT – SC divided on the number of teachers in universities (thousand persons) of the region.

Significant number of spin-offs with one point assessment can be focused on providing only consulting services, carrying out occasional orders. This is confirmed by the revenue instability or lack of financial data at all. Their co-founders usually do not have relationships with other entrepreneurs through joint companies. Accordingly, the company can only be a tool for secondary employment of university researchers (Ramaciotti and Rizzo, 2015). So we also modify two indicators of social capital by excluding the spin-offs with a score of one point:

- SC23.
- SC_UT23.

4) A regression model was constructed to identify the key factors affecting the level of innovative activity in the region, including the intensity of personal contacts.

Dependent variables are: the share of industrial enterprises engaged in technological, organizational and marketing innovation (IA); the share of innovative products in total industry products (IP_TP); the ratio of innovation costs to the volume of total product (IC_TP).

To control the impact of social capital variables on innovation performance in the region, we use a number of indicators that can be divided into the following groups: knowledge sector development, the level of efficiency of local institutions and macroeconomic indicators. To measure the influence of scientific component we employ such predictors as number of patent applications per 10,000 of inhabitants (Coefficient of Inventive Activity - CIA) and the ratio of R&D expenditures to GRP (RD_GRP).

As innovation performance could depend on the scale of the economy we use natural logarithm of GRP (Ln_GRP) and number of employees (Ln_EMP) to measure the size of the regional economy. But the size of the economy does not illustrate perfectly the level of the demand. So we use indicators of social inequality: Gini coefficient (GINI) and the share of population, living under level of poverty (POP_POV).

Also on innovation performance the level of effectiveness of local institutions has significant impact. To measure the effectiveness of regional governance, we use the results of the rating, introduced in the study "Index of quality conditions for small and medium-sized businesses in 2011-2012: regional disparities" (Ind_QC).

and the rating of regional investment climate, compiled by “Expert-RA”, one of the oldest and respectful Russian agency (Inv_Cl).

Hypothesis of the research:

H1. A higher level of social capital in the region leads to an increase in the share of companies engaged in innovative projects.

H2. The value of social capital in the region does not affect the scale of innovation performance.

Results

Analysis of the data suggests that the local level of social capital has a positive effect on the prevalence of innovation activities in the region. This may be due to the following reasons. Firstly, the results of research projects carried out in universities can be more effectively adapted to the market demand. Secondly, information about innovation projects can be distributed using the contacts in the business environment. Thirdly, the university laboratory can function as quasi-firm, whose head is also the entrepreneur.

Local social capital neither affects the scale of innovation performance in the region nor is it a significant factor of the efficiency growth of the region's economy. The explanation of this effect might be as follows. Large-scale innovative projects are implemented by large companies. Their cooperative relationships embrace more than one region, and in some cases more than one country. Financial resources allocated from the state budget could also have significant impact on the innovation expenditures. Finally, local social capital can lead to the increase in the volume of expenses on innovation and innovative products but only under favorable conditions for the development of SME.

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Hwang, Jeeyoung¹: Analysis of Asymmetric Information in the Credit Rating Agencies Market and its Regulation in Russia

Abstract: *There is some information asymmetry between financial market participants. Credit rating agencies (CRAs) are meant to correct it. However, they have inherent problems in their own structure and operations, such as conflict of interests, lack of transparency and accountability of credit rating services, etc. Russia has just recently introduced its own regulation of CRAs and hence local and foreign CRAs in Russia should prepare for documents to comply with regulatory and legal requirements of the Central Bank. So, it is an opportune time to analyze the new regulation and to give policy implications to improve legal regulation of credit rating agencies. In this regard, Russian regulators should understand all possible problems arising in the supervision process, in particular, agency problems due to asymmetric information. Policy recommendations are proposed through a simple game theoretical approach.*

Introduction

Many financial products have attributes of ‘credence goods’, whose quality is difficult for consumers to evaluate even after consumption because there are problems of asymmetric information among market participants. So, credit rating agencies (CRAs) have emerged as information intermediaries, providing credit rating services. They play a critical role in financial markets by helping to reduce costs of search and information and by give more certainty to market participants. However, the problem is that credit rating services themselves are regarded as credence goods and contribute to asymmetric information in financial markets. Moreover, they have inherent problems in their own structure and operations, such as conflict of interest, lack of transparency and accountability of credit rating services, etc. In other words, there are many causes of market failures.

During the financial crisis of 2008-09, the CRAs experienced criticism by market participants, as well as by regulators. To cope with those problems that are attributed to the credit rating industry, regulators have redesigned relevant regulations for CRA. Russia also has just recently introduced its own regulation of CRAs and hence local and foreign CRAs in Russia should prepare for documents to comply with regulatory and legal requirements of the Central Bank in 2017. Therefore, it is of vital importance to examine new regulations from an economic and institutional point of view.

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Aim of the Project

The aim of this paper is to present appropriate regulatory measures that can mitigate possible agency problems between CRA and the inspector. It shows that the regulator has influence on their behaviors by changing policies. Thus, based on these proposed results, it is intended to offer policy recommendations for regulation of CRAs in Russia.

Hypotheses and Methodology

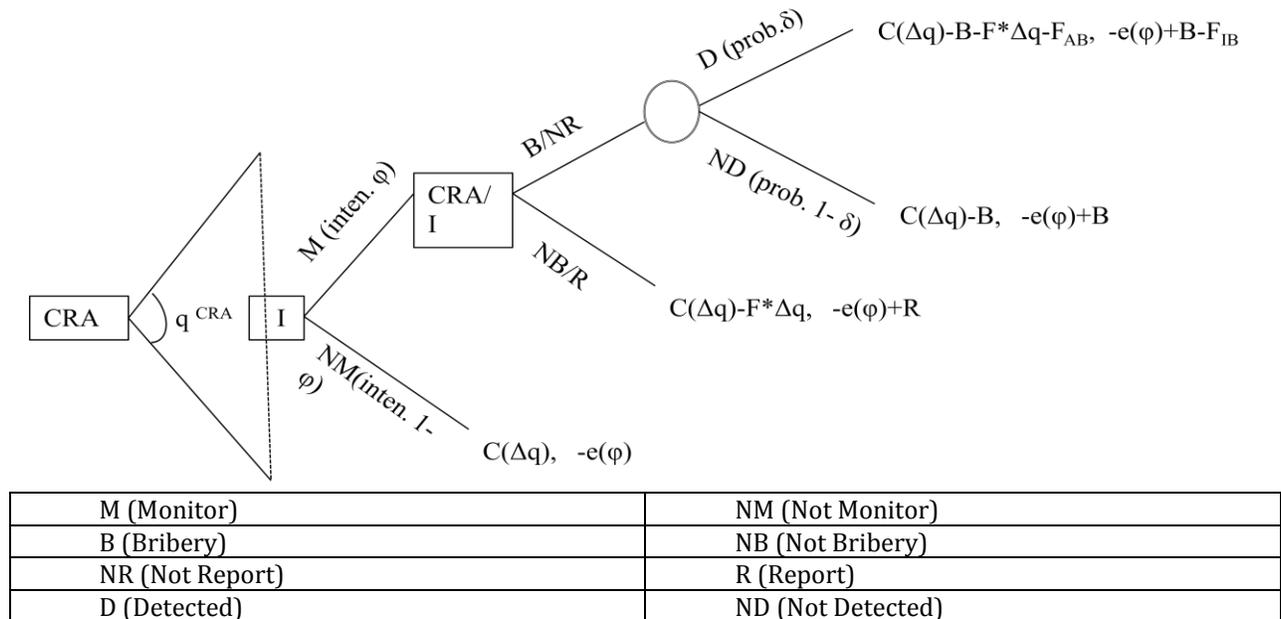
Firstly, the paper proposes an approach to the problems of agent's relationship to third parties, in which corruption may occur (J.Lambsdorff, 2007). Based on the simple game-theoretical models (D.Mookherjee and I.P.L.Png, 1995), we show how changes in the regulator's policy can have effect on monitoring intensity of inspectors and quality of credit rating. From this principal-agent approach, regulation becomes the actual subject of analysis.

Principal – Regulator, who is responsible for regulating activities of CRA

Agent – Inspector, who monitors activities of CRA.

Client (Regulated object) – CRA

Figure 1: Game tree – the case of corruption



We assume following factors. Regulator sets minimum standards of quality. A regulator employs an inspector to monitor compliance of standards by CRA but monitoring intensity is not shortly detected by the regulator. While bribery occurs between inspector and CRA, the regulator also cannot directly prevent occurrence of corruption. If the bribery is detected with the probability δ , inspector and CRA receive a punishment δF_{IB} , δF_{AB} , respectively. Also, if non-compliance of standards

by CRA is detected by inspector and reported to the regulator, CRA can receive a primary punishment F.

Secondly, Federal law of 13 July 2015 №222-FZ on the Activities of Credit Rating Agencies in the Russian Federation is analyzed from the prospective of supervision (focused on Article 15 of FZ), considering the results of first model.

Results

In the first model, we present that increase in the primary penalty for credit rating agencies enables to improve the quality of credit ratings and to raise the intensity of monitoring, and to lead to smaller bribes being paid. However, through the analysis of new regulation, adopted in Russia, we know that the regulation adequately fulfills its own objectives but still have some deficiencies, in particular, in supervision over activities of CRAs. So the Russian regulators need to take into account effective systems of legal accountability in credit rating agencies to protect the rights of market participants. Therefore, we can draw a conclusion that regulation authority should consider administrative monetary penalty systems. Also, it is needed to organize Association of CRAs, as being a third party, to exercise monitoring over the credit rating performance. Activities of CRAs in Russia need to be regularly monitored by Central Bank and self-regulated organization, i.e. Association of CRAs in Russia.

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Lisik, Maciej J.¹: Positional Externality with Multiple Brands: Why Market Structure, Societal Values and Good Regulation Matter?

***Abstract:** I analyse a model of society in which status, which is derived from perceived income, matters. Firm(s) offer one or more ex-ante identical brands of a positional good. The game proceeds in 3 stages: first, firm(s) choose the number of brands to produce and their prices; second, agents decide which brand – if any – to purchase; third, society forms perceptions about agents’ wealth based on their choices of brands and payoffs are realised. I find that in the baseline case of a single monopolist, if there are any fixed costs of introducing a new brand, the number of brands will be finite and perceptions of wealth will be coarse. If the desire for status is strong enough, there exist equilibria in which consumers are better off with the presence of a larger number of positional brands. I then proceed to analysing how pricing strategies, profits, consumer surplus and overall welfare change as the market becomes more competitive (e.g. duopoly) and as income inequality or the desire for status increase. I conclude by discussing whether the government or the market regulator can implement any welfare-enhancing measures, such as luxury taxes or anti-trust laws.*

Introduction

It is a widely-observed phenomenon that social status matters to people no less than their physical consumption, and the analysis in this project is based on this very premise. Perhaps the most important determinant of a person’s status is his income. However, the income often cannot be directly observed. What this leads to is a need for a mechanism that will relax the constraints stemming from imperfect information and facilitate mutual recognition of people located on the same rung of the social ladder. In most contemporary societies, positional goods, defined as ‘those things whose value depends relatively strongly on how they compare with things owned by others’ (Hirsch 1976), serve as a means to this end. Examples of such goods span from luxuries, such as a Rolex watch or a luxurious yacht, to charitable giving and education. The incorporation of positional concerns into contemporary microeconomics is due to Frank (1985, 2000), who puts the status rivalry into a prisoner’s dilemma framework. His view that positional concerns constitute an externality which leads to over-consumption of the observable good has provided a cornerstone for all subsequent research.

According to the Maslow’s hierarchy of needs, once our fundamental needs (physiology, safety and love) are satisfied, we begin to pay attention to the respect of other members of society. Over past decades, we have observed a trend of

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smoothly increasing average incomes in most developed and developing countries. However, aggregate happiness has not followed a similar pattern at all. Easterlin (1974), for example, finds that time-series data shows the lack of correlation between rising per capita incomes and the aggregate levels of happiness. The most convincing explanation of this apparent paradox seems to be that there exists some limit to how much agents might spend on their fundamental needs. But while the remainder of their incomes grows, there is no improvement in overall welfare as what matters most for esteem is the relative standing in society, which constitutes a zero-sum game. Clearly, then, a social planner should treat positional externalities with a degree of suspicion if not hostility.

While the topic of positional goods is not a novelty in microeconomics, most of the models assume that agents compete in the quantities of the positional good consumed (Hopkins and Kornienko 2004, Ireland 1994). However, this is often unrealistic as there is often only a small maximum number of units that an agent can buy and display. Good example here is a Swiss gold watch: people rarely wear more than one on an occasion. Therefore, my model assumes that people buy only one unit of the positional brand of their choice (or nothing at all). This makes conveying messages about agents' own incomes more difficult and inferences become coarser in a manner similar to Crawford and Sobel (1982).

To extract the essence of the model, I rather extremely assume that the brands are *ex ante* identical in terms of quality. However, this is not true anymore *ex post*: different brands will be chosen by different agents, so they will convey different messages about the material situation of their buyers. This is an important difference versus vertical differentiation literature (compare, for example, with Shaked and Sutton 1984).

Aim of the Project

The main aim of my project is to examine the outcome of the game where producers choose the number of brands and their prices, while consumers respond by buying one of the brands (or nothing at all), which will convey the right message about their wealth. My study attempts to explain why we might observe demand for the *ex-ante* identical higher-priced good. Moreover, it considers the evolution of prices and demands under various market structures as society exogenously evolves (for example, when income inequality increases or the market becomes more competitive).

Equally importantly, the goal of this project is to evaluate the welfare consequences of the positional game. The benchmark comparison can always be made against an idealised world with no positional externalities and may prove useful in guiding policy decisions, which may include 'luxury taxes', outright bans/restrictions on certain products and market structure regulation. Choosing the right approach appears particularly important in developing societies where

positional effects are usually stronger and, due to lower overall level of wealth, can have proportionally more harmful consequences.

More specifically, I would like to examine the changes in consumer surplus and/or total welfare in presence of positional effects as: 1) government intervenes by introducing taxes or other policy measures; 2) market structure changes from monopoly to oligopoly to perfect competition; 3) society experiences exogenous changes to the distribution of income and the strength of the status externality.

The results of the project contribute to the broader literature of positional goods and welfare, and can also be used as a basis for empirical research.

Hypotheses and Methodology

I present a theoretical model which is a significant extension of Lambertini and Orsini's (2002) idea, along the lines suggested by Bagwell and Bernheim (1996). The game in my model proceeds in 3 stages: first, firm(s) choose the number of brands to produce and their prices; second, agents decide which brand – if any – to purchase; third, society forms perceptions about agents' wealth based on their choice of brands and payoffs are realised.

I postulate four main hypotheses:

- In case of monopoly, the profit gains from each extra brand display diminishing returns, so in presence of even small fixed costs of brand introduction the number of brands will be finite and the revelation of incomes will be imperfect.
- Provided that positional effects are strong enough, consumer surplus can increase as the government allows a positional brands monopolist to operate. In other words, the gain from being identified as high type outweighs the extra monetary loss.
- Policy measures should be implemented carefully as there exist equilibria in which the presence of a larger number of positional goods increases consumer surplus and overall welfare.
- It is not always beneficial to reduce market power in the market for positional goods as this may increase the overall consumption even further above the socially optimal level.

Preliminary Results

I have found that the first two hypotheses indeed seem to be true. The other two hypotheses remain to be validated. The model also seems parsimonious to several changes in the assumptions:

- Using income distributions other than the uniform (e.g. the triangular) does not materially impact the results.
- Changes to the functional form of the utility function, e.g. using the Cobb-Douglas type rather than the quasi-linear, does not change the results qualitatively.

- Incorporation of several various forms of costs into the model also does not affect the conclusions.

The results of the simplest case of single-brand monopolist almost fully coincide with Lambertini and Orsini's (2002) specification that involves product quality choice. Moreover, I would like to draw comparisons with the forthcoming paper by Mandler (2016). He finds that in a similar setting to mine a monopoly will deliver signals about perceived wealth efficiently. However, if competitors sell counterfeit copies of luxury goods at low prices, consumers will have to buy larger quantities or higher qualities to transmit the same signals, which is wasteful and inefficient.

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***Litvinova, Lada*^{1,2}: Experts in Academia: are Inbreds More Productive than Their Colleagues?**

Abstract: The body of literature dealt with relationship between academic inbreeding and academic productivity introduce contradictory results. This could be explained with the difference in conditions of academic labour market, perception of inbreeding, mean productivity of the sample. The project focuses on mathematics in Russian academic system. The aim of the research is to estimate the relationship between inbreeding and productivity of highly productive Russian mathematicians. Bibliometric approach and 'Corpus of Experts' database are used. Main hypotheses are 1) academic inbreeding spread widely among the highly productive Russian researchers in mathematics and 2) academic inbreeding correlates positively with academic productivity for highly productive academics. Presumably inbreds tend to use local networks to get professional success instead of being productive. The results we expect will shed light on level of inbreeding among highly productive researchers, who are recognized as experts by national research society.

Introduction

Academic inbreeding is a practice in academia when university's alumnus starts the career in this university. The body of literature deals with relationship between academic inbreeding and other academics' practices, among them academic productivity. Alongside, results obtained by researchers are not congruous. There are evidences of both positive correlations (Klemenčič & Zgaga, 2015 (Slovenia); McGee, 1960 (USA); Wyer & Conrad, 1984 (USA)) and negative correlations (Dutton, 1980 (USA); Eells & Cleveland, 1935 (USA); Hargens & Farr, 1973 (USA); Horta et al., 2010 (Mexico); Horta, 2013 (Portugal)). Some studies reveal no differences in inbreds' productivity and non-inbreds' productivity (Cruz-Castro & Sanz-Menéndez, 2010 (Spain); Pan, 1993 (USA); Roleda, Bombongan, Tan, Roleda, & Culaba, 2014 (Philippines); Sato, 1992 (USA); Smyth & Mishra, 2014 (Australia); Sologub & Coupé, 2015 (Ukraine)).

The contradiction between research findings can be explained by variation in conditions in which academics work. Prevalence of inbreeding are connected with openness of the academic labour market, level of importance of social networks in the recruitment process and career promotion, as well as attitude to inbreeding as longstanding standard within the academic system (Yudkevich, M., Altbach, P., & Rumbley, L. E., 2015). As academic labour market and perception of inbreeding are

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² The project I introduced is a part of research, which I conduct with my colleagues Olga Alipova, Andrey Lovakov, Maria Yudkevich

unique for each academic system, so we concentrate on the only system and limit our analysis with Russian academics.

The second point to concern is research field. It seems sensible to assume that relationship between inbreeding and productivity may also depend on mean level of productivity of examined sample. In regard with the idea that patterns of productivity differ across fields we made a decision to focus on mathematics, and the reasons for it I will explain further.

Noteworthy, according to previous studies in Russia we can not say anything about significant difference between inbreeds' and non-inbreeds' productivity (taking into account quality of publications). However inbreeds and non-inbreeds are differed in the *probability* of the having the publications and in publication strategies (Sivak, Y., & Yudkevich, M., 2009; Gorelova & Lovakov, 2016; Sivak & Yudkevich, 2015). As far as mentioned researches were focused on university professors, the results can be explained with suggestion that professors tends to teach but not to research (Kozmina, 2014). That is why we want to focus only on highly productive academics, who are interested in publication activity. We use data from the project 'Corpus of Experts' for that. It will be expounded in next part of the proposal.

Aim of the Project

The aim of the project is to estimate the relationship between inbreeding and productivity of highly productive Russian mathematicians.

The **subject** of the project is highly productive Russian mathematicians and the **object** is the relationship between inbreeding and productivity of highly productive Russian mathematicians.

Research tasks:

1. To assess the prevalence of inbreeding among the highly productive Russian researchers in mathematics;
2. To compare publication activity of inbreeds and non-inbreeds among highly productive Russian researchers in mathematics.

Hypotheses and Methodology

As for scholars who hired by the university they graduate from they incline to use local networks for professional communication as well as for getting career benefits (Sivak, Y., & Yudkevich, M., 2009). Therefore publication activity becomes not so important factor to successful career as local networks. At the same time, graduates of prestigious universities are attractive for their alma maters as employees, because university administrators believe that no one could be better than their own alumnus (Sivak, Y., & Yudkevich, M., 2009). Thus prestigious universities are associated with most productive scholars on the one hand and with high inbreeding on the other one. Thereby, it seems reasonable to make hypotheses that

- 1) academic inbreeding spread widely among the highly productive Russian researchers in mathematics;
- 2) academic inbreeding correlates positively with academic productivity for highly productive academics.

Publication patterns are different in various scientific fields. This fact makes us assume that analysis of productivity and practices connected with it should be performed for each field separately. To start with, we decided to focus on performance of mathematics. As far as evaluation of *individual* contribution is important when we consider *individual* productivity and it is difficult to evaluate individual contribution in co-authorship publications, we seek to minimize the probability of co-authorship. Meanwhile publication tradition in mathematics inclines to avoidance of multi-co-authorship (the mathematics has minimum number of co-authors and maximum number of publications written by a single author among all STEM disciplines), it seems reasonable to focus on this very one (Batista, Campitelli, Kinouchi, & Martinez, 2006; Glanzel, 2002; Porter & Rafols, 2009).

When information about publication activity is gathered through surveys, studies certainly face with certain drawbacks. In particular, mistakes are inevitable, and the intention to catch publication during the whole career is fruitless. In this case bibliometric approach is a good tool. Bibliometrics is a method to assess the performance of scientific research based on the qualitative and quantitative analyses of publications. Bibliometrics allows to evaluate publication patterns of all macro and micro communication along with their authorship by mathematical and statistical calculation (Sengupta, I N, 1985 cited by Bilas, S., & Basak, M., 2013). As a rule, such bibliographic databases like Scopus or Web of Science are used. The idea is to bring large number of publications from high quality journals together and index them. In this project we use more specific database 'Corpus of Expert'. It is 'constantly updated lists of experts in natural Sciences, selected on the basis of the recommendations of scholars with high citation indices in the international scientific journals'³. Data contents the information about authors from WoS, but also authors, recommended by them as experts. We get authors' names, total number of publications, citation indexes, h-index and date of last update. After excluding foreigners and duplicates the sample consists of 956 Russian researchers recognized as experts in mathematics. We also gathered the information about academics' age, alma maters and institutions where academics obtained their PhD, Habilitation and places of work from their CVs and other open sources. Thus, we can catch cases of inbreeding. The data we gathered is unique because it combines career information with precise publication activity information got from

³ <http://expertcorps.ru>

bibliometric database and this allows to assess the productivity during the whole career.

Expected Results

The results we expect will reflect relationship between academic inbreeding and academic productivity. First of all, it is suspected to find a difference in productivity of inbreds and non-inbreds. At the same time we understand that the difference we are going to establish could not be explained entirely with the influence of inbreeding. Taking this argument into account, we gathered extra-information about scholars and we will use it in analysis as control variables. Statistical methods, such as descriptive statistics, correlation analysis and regression analysis will be used in the research.

The research will shed the light on level of inbreeding among highly productive researchers, who are recognized as experts by national research society. It will allow to compare the results with previous studies, investigated university professors. This is important because it may change social attitude towards inbreeding. The advantage of the research is focusing on eminent academics as well as using unique data combining career information with bibliometric information of publications.

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Mitrokhina, Evgeniya ¹: Executive Constraints and Economic Growth in Autocracies

Abstract: *Variation in institutions among autocracies matter a lot for economic performance. As policy outcomes are shaped by institutions the reason for divergent economic performance in non-democratic regimes is in institutional organisation that determines success or failure. It is possible that the institutions are signals to what degree of power an autocrat can possibly be constrained, meaning that they reflect balance of power between ruling elites and the leader. In the work I address the question of how the degree of power that a dictator has impact economic performance, assuming that the leader matters for decision making and policy outcomes along with institutional organization. In the work I use observable indicators that demonstrate personalist tendencies within a regime. I distinguish power concentration, executive constraints, and leader-elite interactions.*

Introduction

Scholars have long observed the coincidence of democracy and wealth. Papers investigating the relationship empirically do not show coherent results that may be due to the fact that autocracies differ a lot even among each other. There are very rich countries such as Asian Tigers and very poorly performing African countries (such as Zaire, Angola, Uruguay and others). Authoritarian countries have different political organisations that have consequences for economic growth.

The main reason for a dictator to establish institutions is survival and simultaneously maximisation of rents (Magaloni 2008; Gandhi and Przeworski 2006). Institutions in autocracies are essential because they shape relationships between the dictator and other political actors. Institutional organisation affects policy outcomes as well: dictators constrained by institutions allocate more resources to public goods (Gandhi, 2003), are less likely to start wars compared to regimes where there is no institutional bounds (Geddes et al., 2014), and promote economic growth (Gandhi, 2008; Wright, 2008).

The organisation of power and its distribution affects the selection of policy. Political institutions also determine who makes a decision and what constraints are placed on the actors. Institutions reflect how political power is distributed between actors whether one person is able to make decisions that affect policy outcomes including economic ones. Policies and economic institutions are determined partly by the person who runs government, the structure of the regime and political power relations (e.g. Acemoglu and Robinson, 2012). Without institutional constraints leaders face greater uncertainty regarding their political future. It is important to

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understand how strong the dictator is and how much power he has (because even existing institutions cannot guarantee a good policy implementation if the dictator has no fear to be removed from power).

Thus, it is important to understand how the degree of power that a leader has is connected with his ability to influence policy. At the same time, existing works concentrate on institutional features as indicators to determine the degree of executive power constraints. It is possible that the institutions are signals to what degree of power an autocrat can possibly be constrained, meaning that they reflect balance of power between ruling elites and the leader. However, institutions designate only approximate boundaries and can be broken if a leader is strong enough.

Aim of the Project

As a result a regime indicates dictatorship of authoritarian institutions (party, military or monarchy) and a leader's strength. Scholars notice that personalism is trait that characterizes all authoritarian regimes (Hadenius and Teorell, 2007), however, the degree of power that a leader varies among autocracies and may have different effect on policy outcomes. In the work I address the question of how the degree of power that a dictator has impact on economic performance, assuming that the leader matters for decision making and policy outcomes along with institutional organization.

Hypotheses and methodology

Research show that personalist regimes differ from other autocracies, rely more on revenue from natural resources and attract less investment (Wright, 2008), the longevity of the regime type is shorter (Geddes, 2004) and the way of the leader exist tend to be more violent, they are more likely to be exiled or killed compared to other autocratic leaders (Escribà-Folch, 2013). Theoretical models suggest that a leader and regime are interchangeable (e.g. Acemoglu et al., 2004; Besley & Kudamatsu, 2007; Boix & Svobik, 2013) and personalism is a key feature of an authoritarian regime.

Geddes, Wright, and Frantz's (GWF) designate personalism as a distinct political regime in their authoritarian regimes classification². Despite all the advantages of the typology categorical indicators do not reflect the degree of leaders' personal power that may vary across regimes. As Hadenius and Teorell (2007) notice in their work personalism may present in each regime to some degree that is why it is possible to consider personalism as a continuous measure. Svobik (2009) in the context of contested and established dictatorship proposes an idea that, if a dictator (in a contested regime) is successful in grabbing power, the longer his tenure is more power he accumulates. If the dictator is quite strong then ruling

² There are also monarchy, military, and single party regime types.

coalition is not able to threaten him and there is positive probability that he is opportunistic.

Longevity of a leader staying reflects the personalistic tendencies within a regime, but it is not the only characteristic that describes the leader behaviour. The other important thing is the constraints on the decision-making power of chief executives: whether a dictator can take personal control over decision making, policy choice or interactions with the ruling elite. Thus, check and balances established on executive also serve as one of the observable indicators of personalism. The same logic is applied here: if the power concentration in the hands of dictator is high, the he is less threatened by others and less responsive to their demands.

Not only institutions but the leader is important for the policy making in autocracies. At the same time, it is difficult to distinguish between weight of institutions and the leader. That is why in the work I use observable indicators that demonstrate personalist tendencies within a regime. I distinguish power concentration, executive constraints, and leader-elite interactions.

To estimate power concentration I rely on Magaloni, Chu, and Min's (2013) measure of personalism. They construct it for each regime exploiting number of years that a unique executive is in power in relation to the duration of the regime taking into account year that previous executives have been in power (Herfendahl index).

Polity IV xconst variable indicates the "extent of institutionalised constraints on the decision-making power of chief executives, whether individuals or collectives". The variable captures check and balances on executive power. Fewer institutional constraints on executive suggest more personalist the regime.

My main hypothesis is that personalism has negative impact on economic growth. As I use observable indicators of personalism I suggest that distinguish more power concentration, less executive constraints have negative impact on economic growth along with the regime type.

To understand how personalism impacts economic growth I estimate FE and GMM models that allow a researcher to account for unobservable country characteristics and also include lag of GDP (the variable I use as an indicator for economic performance) in the model, because there is need to account for the fact that previous values of GDP affect current ones.

Results

The results show that personalism has significant negative impact on economic growth (table 1). Svobik (2009) in the context of contested and established dictatorship proposes an idea that, if a dictator (in a contested regime) is successful in grabbing power, the longer his tenure is more power he accumulates. If the dictator is quite strong then ruling coalition is not able to threaten him and there is positive probability that he is opportunistic.

Table 1. The effect of personalism on economic growth GWF regimes classification

| VARIABLES | (1) GWF_personalism | (2) High personalism GWF | (3) All regimes GWF |
|---------------------|------------------------|-----------------------------|------------------------|
| GWF personalism | -0.0596*** (0.0167) | | -0.0694** (0.0282) |
| Single Party | | | 0.0843 (0.0621) |
| Monarchy | | | 0.387** (0.152) |
| Military | | | 0.109** (0.0463) |
| Medium personalism | | -0.0461 (0.0674) | |
| High personalism | | -0.122*** (0.0323) | |
| Constant | 1.161*** (0.305) | 1.154*** (0.319) | 1.669*** (0.454) |
| Observations | 4,694 | 4,694 | 4,173 |
| Number of countries | 132 | 132 | 120 |

Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

Table 2. The effect of personalism on economic growth Magaloni et al. classification

| VARIABLES | (1) Executive constraints | (2) Personalisation | (3) Leader- elite interaction | (4) Leader-elite interaction (real purges) | (5) All indicators |
|-----------------------------|---------------------------------|------------------------|--|---|--------------------------|
| Military | -0.189* (0.108) | -0.158 (0.103) | -0.117** (0.0546) | -0.293** (0.131) | -0.224* (0.119) |
| Single party | -0.0905 (0.131) | -0.0667 (0.115) | -0.0270 (0.0744) | -0.223* (0.129) | -0.152 (0.125) |
| Multiparty | -0.208 (0.131) | -0.180 (0.110) | -0.138** (0.0677) | -0.317** (0.127) | -0.243 (0.148) |
| Executive constraints | -0.00370 (0.0308) | | | | -0.0264 (0.0530) |
| Personalism index | | -0.145** (0.0646) | | | -0.215** (0.0890) |
| Lader-elite interaction | | | -0.0351 (0.0325) | | |
| Purges of military officers | | | | -0.0869** (0.0358) | -0.0870** (0.0406) |
| Constant | 1.691*** (0.447) | 1.544*** (0.409) | 1.400*** (0.427) | 2.743*** (0.835) | 2.431** (1.025) |
| Observations | 2,369 | 2,363 | 2,272 | 789 | 788 |
| Number of countries | 90 | 90 | 89 | 51 | 51 |

Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

Considering only autocratic regimes the results are still the same, personalism has negative impact on economic growth. However, in the model only power concentration meaning the longevity of a leader being in power, is significant.

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Murzakova, Anna¹: Revealing High School Graduates' Expectations in Frames of Educational Project "Bachelor 2.0"

***Abstract:** In the proposal, there is an analysis of students' expectation about education in frames of educational project "Bachelor 2.0". Existent exploration doesn't provide an answer to a question: which factors do impact student's decision making model to a greater extent in terms of asymmetry of information. The descriptive research covers few dimensions: economics of education, management of institutions and institutional reforms. We assume there is an opportunity to influence decision-making process which comes from identification of proper students' needs and trying to satisfy them. Present hypothesis aims at revealing factors significantly affecting students' decision, such as affection of parents, international and national ratings systems, image of the university and carrier plan. There is a potential to find intersection between such expectation and goals that university pursuits through survey of stakeholders for better satisfying needs of existing consumers and creating a more sustainable community. The expected creation of general decision making model of Far Eastern Federal University's students can be further used by the university for identifying potential target audience and searching for ways to attract it.*

Introduction

The reason for a student going into the process of education could be described by model of Shultz in which a failure to invest in human capital is considered as a result in lower earnings and in a limitation of growth rate in general in a country. However, education is a more complicated good and people's mental models are not limited to a simple desire to earn more money.

In terms of institutional analyses education can be defined as credence good. It is a good which quality can be assessed only after obtaining it. Typical characteristic of such good can be: not apparent qualities that can never be known or fully appreciated; marketing of such good can play with emotions and hide some imperfection, and thus create the asymmetry of information; and information is often mandated by government (Lubienski, C). Besides a buyer has to look for some third-party judgements or the seller's credentials when choosing between different goods (Andersen, E. S., Philipsen K. 1998). Nowadays international and national rating agencies are supposed to reduce the asymmetry of information that exist in the market and introduce to students a gradation system in which they can see a position of a university and its comparison to the other universities. Students tend to adhere to such information for making preferences since the education market is very competitive and saturated which results in creating more sophisticated customers' needs.

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Understanding customers' needs, as well as proper identification of stakeholders (a student, a parent, a professor, a director of university, a government and etc.) and their different expectations, interests, motivations and levels of impact, can help universities in building a more coherent external policy in attracting more potential students, building better relationship with stakeholders, in better satisfying needs of existing customers and in creating a more sustainable community. The solution to this can be becoming a learning organization, the one in which people at all levels are, collectively, continually enhance their capacity to create things they really want to create. (John, O'Neil, 1995) However, not every university with a main goal to educate can learn themselves. Institutions can concentrate on achieving some performance indicators for enhancing competitive advantages in terms of commercializing technologies, performing at internationally competitive level, cooperating with companies, providing interdisciplinary norms for conducting scientific research, attracting foreign professors and students, teaching on international language, decreasing the dependence from governmental regulation, but without taking into account the existing needs of customers university cannot perform successfully (Wissema J, 2016). Institutions can make actions preventing consumers from making rational decisions based on complete information by introducing some attractive idea or image of a university, instead of understanding the needs and offering some solution.

We should consider theories of mental models for better understanding the needs. Denzau and North has described mental model as the way people interpret the environment in terms of internal perception and how they structure the environment with existence of institutions which are external mechanisms. Arising opportunities and preferences shape an individual choice, along with values and culture that exist in a society. Contemporary, scholars introduce general theories of mental model in terms of pedagogics. Such as Edwards, L. using the models for generating solutions; Libarkin, J., Beilfuss, M., Kurdziel, J. researching about proper mental models in geology field; Stamovlasis, D., Tsaparlis, G. exploring working memory and mental capacity in science education problem solving. However, there is no research about the process of decision-making and factors that impact it.

Aim of the Project

Therefore, the ultimate goal of the project is to explore how student mental model functions and how rational it is, find to which extent it is bound and what externalities may impact it. There is an opportunity to conduct research on the basis of existing educational project "Bachelor 2.0" in Far Eastern Federal University, which goal is to create new educational model of a high-quality, to make it competitive with foreign education and to adopt university's practices to current trends in the labor market.

Hypotheses and Methodology

We will conduct exploratory and descriptive research for working with expectations. It should be done through stakeholders surveys. It will involve communication with students, university top management, and program project management.

Identification of common trends in students' expectation is necessary, as long as revealing: how asymmetric or symmetric was information in the period of their application according to them; what has influenced their decisions to apply for FEFU; the significance of these factors; to which extent parents have affected students decisions; how well students were informed about new program changes; how much students are willing to pay for good education; how can they define good education; do they have long-term carrier plan; can they evaluate FEFU's education quality and etc.

It is necessary to find out the goals that top management desires to attain and which part of these goals include matching students' expectations. In communication with program project management, we can see how well the initial ideas of top management were integrated in a project and how they are delivered to students.

Expected Results

In our research, it is expected to build the students' mental model of making decision that existed while applying for FEFU. We expect to do these based on some appearing common patterns. As well, we expect to find a point of intersection of students and university's top management needs and based on that provide further suggestions on studying high-school graduates needs and recommendation on possible new ways of satisfying them.

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Priymak, Margarita¹: The Role of Social Networks and Health Behavior in Student Academic Performance

Abstract: *The academic performance is in the complicated interconnection with the indicators of human and social capital. We plan to observe the nature of the link in this project. The relevant literature demonstrates that health is a significant part of human capital that can impact on academic performance in the different directions: the regular trainings may help people to be ill less and to spend more time on studying, but also the attention to health can divert people from the academic process. Thus, it is really important to understand the character of the relation between academic performance and health to provide accurate policy in this area. Due to the interpersonal nature of a people activity it is necessary to include the social networks in the investigation as the significant predictor. Moreover, the crucial effect on academic performance may be provided by the time budgeting, so we plan to include this factor in the future analysis. We expect that we will find the positive link between academic performance and that time budgeting function and social networks are the significant predictors in terms of the examination of the success in studying.*

Introduction

Health is an important part of the human capital (Becker, 2007), thus it may have significant impact on many spheres of life, especially on success in studying. Because of this idea, the link between the academic performance of the students and their health is the discussed topic in the modern institutional analysis. Speaking about this area we can find controversial points of view. On the one hand, there is exactly nature hypothesis that people who try to pay attention to their level of health fall ill in the less cases, thus they have more opportunities to demonstrate better academic results in comparison with ones for whom their own health is not an important issue. On the other hand, we can suppose that the students who like, for example, go to the gym frequently cannot spend enough time on studying so the academic performance of these students can be worse than it could be. This idea can be transformed in the investigation of time budgeting function and, therefore, open new areas to examine the relationship between the health level and academic performance. But in the general way the obvious controversy that the relationship between health level and academic performance exists requires the attentive investigation of this topic.

Speaking on this topic we should remember that people are interconnected, and their health and academic performance are closely related to the characteristics of their friends, relatives and so on. People who spend a lot of time together are inclined to adopt the behavior model of the partner. This idea can be confirmed by

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Fowler, Christakis (2008) in the context of health or Calvó-Armengol, Patacchini, Zenou (2009) in terms of academic performance. Therefore, we can suggest that health and academic performance are connected through social networks that must be included in the analysis of the observed relationship.

At the end of the introduction it is important to understand how the level of health should be described. The literature about that can be characterized as heterogeneous and the most significant reason for this conclusion is that the level of health can be defined by the different measurements. For instance, Bergen, Martin, Roeger, Allison (2005) have exploited the frequency of the alcohol, cigarette and drug consumptions. Khan, Jamil, Khan, Kareem (2012) have tried to construct the relevant model in terms of sport participation. Furthermore, health can be interpreted as the daily regime or the frequency of the having breakfast as it has been made in the article by Trockel, Barnes, Egget (2000). Such number of the different viewpoints to the question of health confirms the hypothesis about the potential depth of this theme and stimulates the increase in interest to investigate it.

Aim of the Project

The goal of this project is to estimate the relationship between the academic performance and the level of health taking into consideration the social networks of students. It is really important to understand how the interaction between people can influence their success in studying and health because this knowledge may help to provide more effective policy in sense of the construction of social capital.

Hypotheses and Methodology

The main hypothesis of the project is that the link between health level and academic performance is significant and positive for the group of people that we have chosen. The investigation will be based on the data of the students from NRU HSE (1st grade, the campus from Nizhny Novgorod).² This type of the respondents is the most important for the investigation because in this period of life people demonstrate the “mirror effect” more often than in the others that can be explained with psychology.

To achieve the goal of the project we plan to test the hypothesis by empiric methods and construct the econometric model that will demonstrate the influence of health, social networks and other possible predicators in the level of academic success. Furthermore, we plan to include the index of time budgeting in terms of health (sport participation, sleeping) and academic performance (time for studying) as exogenous variables that may impact on the link between the observed characteristics.

² The data has been collected.

Results

We expect to find a positive relation between academic performance and the level of health. We intuitively suppose that if people try to have higher health level in comparison with the average case, their mental opportunity can be higher too and this effect positively depends on academic performance. Moreover, we expect that we will see the significant effect in terms of the time budgeting function. We suggest that the need to find time for sport can stimulate people to manage their time more attentively and effectively. Finally, we suppose that social networks are the significant predictors in terms of this analysis.

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Rahmanov, Ramiz¹: Institutions, Vertical Integration and Labor Productivity

***Abstract:** This paper examines the impact of the institutional development on the extent of vertical integration of firms and the effect of vertical integration on labor productivity using cross-section data on over 10,000 firms from 28 post-transition countries of Eastern Europe and Central Asia and Turkey taken from three rounds of the BEEPS. Building on the logic of the vertical integration literature, I hypothesize that ceteris paribus, in countries with underdeveloped court systems, firms tend to be more vertically integrated than firms in countries with developed court systems. As the development of the court system is a broad concept, in the paper, I analyze three dimensions of the development: fairness of courts, enforcement of court decisions, and quickness of courts. The preliminary empirical results provide significant evidence that only improvement in the quickness of courts significantly reduces the extent of vertical integration. Along with the quickness of courts, industry-specific and country-specific factors are also found to have a significant effect on the depth of vertical integration. Further, the preliminary analysis of the relationship between the extent of vertical integration and labor productivity shows that ceteris paribus, an increase in the extent of vertical integration has a significantly negative effect on productivity.*

Introduction

In theory, the effects of scale should encourage firms to carry out a transaction in the market rather than produce it internally because economic specialization allows firms to produce large quantities at low prices (Nooteboom, 1993). However, in real life, despite the economic rationale of outsourcing, firms still prefer to organize some transactions in-house. This phenomenon implies that the costs of the use of the price mechanism – transaction costs can be high enough to prevent firms from purchasing intermediate goods from specialized producers. To understand why transactions can be so high to impede the rational choice, it is necessary to explore the nature of the transaction costs.

Transaction costs consist of ex ante and ex post costs (Kreps, 1990). The former includes costs related to the identification of contingencies which a firm may face during the execution of the contract and costs associated with specification of all foreseen contingencies which may jeopardize contract materialization. The later includes monitoring costs incurred while controlling the fulfillment of the obligations by the other party and legal costs borne when appealing to the court for contract enforcement. The occurrence of ex ante and ex post transaction costs can be explained by factors which are attributable to human characteristics of the parties executing the transaction and technical specifics of the transaction

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(Williamson, 1975). Individuals are boundedly rational and therefore it is very costly or impossible for them to draft a contract which takes into consideration all possible contingencies. Further, people can be opportunistic, so they can break any of their commitments or engage in misrepresentation under any suitable circumstances. The risk of opportunistic behavior by either buyers or suppliers raises uncertainty about the successful completion of the transaction. For this reason, under high uncertainty and high asset specificity, firms will prefer to organize transactions in-house rather than contract them to external agents.

Legal institutions which determine the codes of conduct in society and observe the compliance of the behavior of agents with these codes affect the level of transaction costs and therefore influence the willingness of firms to engage into the market transactions. Thus in environments with well-developed court systems, the risk of the non-execution of transactions is usually low because parties understand that courts will penalize for opportunistic behavior. Furthermore, despite contracts *ex ante* do not specify all possible circumstances, in countries with good courts, firms will still prefer to outsource goods and services because they believe that the courts will fairly settle any contingencies which can occur during the transaction execution. On these grounds, we expect that *ceteris paribus*, firms in countries with sound courts will tend to outsource services and inputs rather than resort to vertical integration.

While the theory provides a clear hypothesis on the impact of institutional development on the extent of vertical integration, it does not do it for the effect of vertical integration on labor productivity. On the one hand, vertical integration helps to reduce transaction costs and thereby has a positive effect on productivity or it can lead to efficiency gains through optimization of production or management costs of interrelated business processes. For example, a good example of optimization of production costs can be the steel industry where integration of production stages allows saving on energy costs (Williamson, 1971) and a good example of optimization of managerial and organizational costs can be the electricity sector where integration of production and distribution stages help better coordinate very specific and interdependent investments (Fetz and Filippini, 2010). On the other hand, vertical integration can have a negative effect on productivity, as firms will need to shift part of the resources which otherwise could be directed to the development of the core businesses on the development of non-core businesses (Broender et al., 2009). Thus, whether there is a positive or negative relationship between the extent of vertical integration and productivity is an empirical question.

The existing empirical literature on vertical integration, which is rather scarce due to the lack of micro-level data, provides the mixed evidence on the impact of institutional development on the extent of vertical integration and the effect of vertical integration on labor productivity. For example, Khanna and Palepu (2000), Du et al. (2012) and Fan et al. (2014) provide evidence that weaker legal institutions

tend to instigate firms to increase the extent of vertical integration, while Acemoglu et al. (2008) find that contracting institutions as such have no effect on the degree of vertical integration but they are inclined to affect vertical integration in capital-intensive industries. Li et al. (2016) find that vertical integration produces a negative effect on labor productivity, while Hortacsu and Syverson (2007) and Forbes and Lederman (2010) suggest the opposite.

Aim of the Project

This project pursues two goals. First, it aims to investigate the impact of the development of the court system on the vertical integration in firms in the post-transition countries. Second, it aims to examine the impact of vertical integration on labor productivity in firms in the post-transition countries.

This paper will contribute to the existing literature in two ways. First, it will be the first study, to my best knowledge, at least in English, which assesses the impact of institutions on vertical integration and the effect of vertical integration on labor productivity in post-transition countries. Second, this paper will contribute to the scarce micro-level studies on the determinants and outcomes of vertical integration.

Hypotheses and Methodology

To examine the impact of the development of the court system on the extent of vertical integration (vi_i), I estimate the following model using the OLS estimator:

$$vi_i = \alpha_0 + institutions_i + firm_i + industry_i + country_i + period_i + \varepsilon_i, \quad (1)$$

where $institutions_i$ are the set of variables describing various characteristics of the court system – fairness, enforcement, and quickness, $firm_i$ is the set of variables which account for firm-specific factors, $industry_i$ is the set of industry binary variables, $country_i$ is the set of country binary variables and $period_i$ is the set of period binary variables and ε_i is the error term.

As a measure of vertical integration, I use a ratio of intermediate goods used in production to total sales. An increase of the ratio implies a decline in the extent of vertical integration. As measures of fairness, enforcement capacity, and quickness of the court systems, I use perceptions of firms on the corresponding qualities of the court system.

Hypothesis 1. The improvement in the fairness, enforcement, and quickness of the court system has a negative effect on the extent of vertical integration in firms, ceteris paribus.

To study the effect of the extent of vertical integration (vi_i) on labor productivity ($productivity_i$), I estimate the following model using the OLS estimator:

$$productivity_i = \alpha_0 + vi_i + firm_i + industry_i + country_i + period_i + \varepsilon_i, \quad (2)$$

Table 1. Preliminary results

| Independent variable | (1) | (2) | (3) | (4) |
|--|----------------------|----------------------|----------------------|----------------------|
| | Dependent variable | | | |
| | Vertical integration | Vertical integration | Vertical integration | Labor productivity |
| Fairness | 0.00 (0.79) | | | |
| Enforcement | | 0.00 (0.73) | | |
| Quickness | | | -0.005** (-2.22) | |
| Vertical integration | | | | 0.45*** (6.57) |
| Log(employment) | 0.01*** (3.56) | 0.00*** (3.3) | 0.01*** (3.43) | -0.11*** (-8.57) |
| Subsidy | 0.00 (-0.48) | 0.00 (-0.26) | 0.00 (-0.33) | |
| Log(age) | -0.01*** (-3.24) | -0.01*** (-3.16) | -0.01*** (-3.22) | -0.07*** (-4.74) |
| Imports | 0.00*** (5.66) | 0.00*** (5.58) | 0.00*** (5.18) | 0.00*** (8.03) |
| Legal status | -0.01*** (-3.04) | -0.01*** (-3.19) | -0.01*** (-3.04) | -0.05* (-1.89) |
| Exports | -0.00** (-2.48) | -0.00*** (-2.85) | -0.00** (-2.57) | 0.00*** (3.70) |
| Capacity | -0.00** (-2.23) | | | |
| Log(Replacement cost of capital) | | | | 0.17*** (18.01) |
| Share of employees with university diplomas | | | | 0.00*** (8.92) |
| Constant | 0.45*** (25.78) | 0.43*** (25.48) | 0.44*** (26.35) | -3.36*** (-35.91) |
| Country dummies | Yes | Yes | Yes | Yes |
| Industry dummies | Yes | Yes | Yes | Yes |
| Period dummies | Yes | Yes | Yes | Yes |
| R² | 0.19 | 0.19 | 0.19 | 0.51 |
| N | 10665 | 10765 | 10917 | 8039 |

Note: robust t-statistics in (); * p<0.10, ** p<0.05, *** p<0.01

In this regression, as a measure of labor productivity, I use a ratio of sales to the number of employees.

Hypothesis 2. The effect of an increase in the extent of vertical integration in firms on labor productivity is ambiguous, *ceteris paribus*.

The robustness check exercises and heterogeneity analysis will be also conducted.

For the analysis, I use rounds III, IV, and V of the BEEPS conducted jointly by the EBRD and World Bank correspondingly in 2005, 2008-2009, and 2012-2014 in 28 post-transition countries and Turkey. The total sample includes about 33,000 observations; however, as not all firms report all necessary for the analysis information, the effective sample is reduced to about 11,000. Although the survey was conducted in several rounds, the number of firms which participate in all rounds is small; therefore, the cross-section structure is preferred.

Preliminary Results

Table 1 reports preliminary regression results on the effects of different characteristics of the court system on the extent of vertical integration and the impact of vertical integration on labor productivity. Columns 1-3 show that the characteristic of the court system which significantly affects the extent of vertical integration is the quickness of courts. The improvement of this characteristic reduces the extent of vertical integration. Column 4 shows that a decline in the extent of vertical integration has a significantly positive effect on labor productivity.

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Rudakov, Victor¹ (with Ilya Prakhov²): The Determinants of Faculty Salaries in Russian Universities in the Case of Incentive Contracts

Abstract: *The institutional transformation of Russian higher education affects contractual relationship between the faculty and universities (administration). This process is heterogeneous, especially, in terms of reward structure, and the speed of transformation may depend on the status of universities (National Research Universities, 5-100 Universities, Federal Universities, universities with no status). The study is devoted to analysis of determinants of faculty salaries and differences in faculty reward structure by the type of the university. Using the data of the Monitoring of Education Markets and Organizations (2016), we estimated Mincer wage equation model where the dependent variable is the logarithm of faculty salary, and a set of independent variables is represented by the type of university, human capital and socio-demographic characteristics of faculty, job characteristics, indicators of research activity, teaching and administrative duties. The results of the study indicate that research activity positively affects academic salary. The role of teaching is positive only for the universities without special status. The role of administrative duties is of importance for academic salary for all types of universities. We also found significant gender wage gap in universities with no status, while in universities with special status gender differences in pay are very moderate.*

Introduction

Over the last few years Russian academic sector is undergoing an institutional transformation aimed at modernizing the existing higher education system and creating conditions for the enhancement of the competitiveness of the Russian academic sector both at the national level and in the international perspective. These reforms affected universities: government provides several groups of universities (National Research Universities, Federal Universities, Universities-participants of 5-100 project³) with additional funding in order to stimulate research activities and maximize the competitive position of selected universities in the global research and education markets.

This institutional transformation of Russian higher education system affects universities both on the macro-level, and on the micro-level. In the second case it

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³ Russian Academic Excellence project which aims at maximization of the competitive position of a group of leading Russian universities in the global research and education market.

affects contractual relationship between the faculty and universities (administration). In particular, Russian universities are gradually introducing incentive contracts, where faculty monetary remuneration (wages) is dependent on the observed indicators of their academic performance (productivity). Incentive contracts are aimed at increasing the motivation of university professors by making their salary dependent on a set of specific performance-related indicators. In other words, this should create powerful incentives concerned with the increase in individual productivity, which should result in the university indicators of productivity as well as contribute to the improvement of the national higher education system as a whole.

The results of studies, conducted on the American academic labor market show that publications in academic journals are the main determinants of the professor's salary (Katz, 1973; Fairweather, 1993; Gomez-Mejia, Balkin, 1992). As for teaching, the results are quite ambiguous: from insignificant (Tuckman, Hagemann, 1976) to significant effects only for the most successful researchers (Gomez-Mejia, Balkin, 1992). According to the pioneer study in the Russian labor market, in the framework of CAP project⁴ the most important predictor of faculty salaries is involvement in administrative duties, while the role of teaching and research activities is moderately positive or ambiguous (Prakhov,2016).

Aim of the Project

The main goal of research is to reveal main determinants of faculty salaries and to define the differences in faculty reward structure by the type of the university. We estimate the inputs of the various determinants of academic work, reflecting research, teaching and administrative duties, to the academic salary. First, we define the indicators of productivity of professors, reflecting their research, teaching and administrative work. Second, we evaluate academic productivity in different universities. Next, we examine empirical (regression) models of the determinants of faculty pay depending on the type of the university, their current job and socio-demographic characteristics.

Our study is based on the data of faculty survey carried out in the framework of the Monitoring of Education Markets and Organization project, which was held in 2016. The sample consists of 1600 faculty members. We divided the sample by the status of university: universities with no status, National Research Universities, «5-100» universities and Federal Universities. The sample represents the structure of Russian universities of different types, and in each participating university the respondents are chosen randomly.

⁴ The Changing Academic Profession' project

Hypotheses and Methodology

The theoretical approach is based on the grounds of the agency theory and human capital theory. From the agency theory perspective, incentive contract is one of the mechanisms to avoid ex-post opportunistic behavior of an economic agent, i.e. after a contract is signed. Human capital theory postulates that salaries depend on the amount of accumulated human capital (education, knowledge, skills, tenure) and socio-demographic characteristics. Faculty salaries are also determined by job characteristics.

We suggest that determinants of faculty salary vary by university status: for National research universities and 5-100 Universities research activity may positively affect salaries because of incentive contracts which are aimed at stimulation of publication activity. On the contrary, research activities should be insignificant for universities with no status, in which contracts are constructed to stimulate teaching activities. Administrative duties are likely to positively affect salaries for the whole sample as administrative position imply selection by professional qualification and managerial skills, an access to decision making process, professional connections and financial resources allocation. We suggest that the process of transformation of the contractual relationships between the faculty and universities, especially, in terms of reward structure is heterogeneous and the speed of transformation depends on the status of universities

We estimate linear regression models based on Mincer wage equation, where the dependent variable is the natural logarithm of faculty salary, and a set of independent variables is represented by the type of university, human capital and socio-demographic characteristics of faculty, indicators of research activity (e.g., a number of publications in the national and international journals, books and so on), teaching (such as teacher's awards, time devoted for teaching), administrative duties and job characteristics (position). The empirical model estimated by OLS regression is presented below:

$$\ln(W_i) = \beta_0 + \beta_1 \cdot Status_i + \beta_2 \cdot SocDem_i + \beta_3 \cdot HC_i + \beta_4 \cdot Research_i + \beta_5 \cdot Teach_i + \beta_6 \cdot Admin_i + \beta_7 \cdot Job_i + \varepsilon$$

Where the variables have the following meanings:

$\ln(W_i)$ - logarithm of faculty salary

$Status_i$ – university status (university with no status, National Research University, 5-100 project universities)

$SocDem_i$ – socio-demographic characteristics (gender, age)

HC_i – human capital characteristics (language and computer skills, tenure)

$Research_i$ – index of research activity

$Teach_i$ – index of teaching activity

$Admin_i$ - index of administrative duties

Job_i - job characteristics (position, region, etc)

Additionally we estimate separate regressions for the different types of universities, because there is a group of higher education institutions with a special status, for which the government provides additional funding in order to stimulate research activities. Hence, it is important to compare the research productivity and its inputs to the salary between different universities. We also estimated separate regressions for gender groups in order to evaluate gender wage gap in academia and its determinants.

Results

The results of the study indicate that only 47% of university faculty work on the basis of incentive contracts and incentive contracts are more common for universities with no status than for universities with special status. On average, the share of variable part of faculty salary is less than 30% of basic salary. However, the share of variable part, dependent on incentive contract in the reward structure is higher in the universities with status compared to universities with no status, respectively, 44% and 24%. We also found that faculty salaries in universities with special status are 12% higher than in universities without special status. Special wage premium for publication activities is more common for National Research Universities and 5-100 universities.

In general, research activity (especially number of papers in international journals indexed in WoS and Scopus) positively affects academic salary, however the subsample of the universities with special status is more homogenous, and only the index of research work, which represents the combination of various research activities is significant. The role of teaching is positive for the universities without special status, but not for the universities involved in the government incentive programs.

The role of administrative duties is of importance for academic salary for all types of universities. Seniority has a positive impact on a professor's salary for the entire sample and for the universities without special status. In the universities with a special status academic salary is determined by research activity, and administrative duties, while teaching is not significant. We discovered a significant gender wage gap: male faculty earns 26% more than their female colleagues and these differences are a result of glass ceiling, when male faculty are more likely to be provided to senior positions and to get administrative duties. Salary in universities with special status reflects more gender equality (male wage premium is only about 6%).

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Rudenko, Dmitry¹: Does Financial Development Influence Income Inequality: the Case of Russian Regions

Abstract: *The paper explores the relationship among economic growth, income inequality and financial development at regional level in Russia for the period 2000-2015. Using domestic credit to RGP as a measure of financial development, the results reject financial Kuznets curve hypothesis. Controlling for region and time fixed effects, possible endogeneity problems, RGP per capita in constant prices and other variables, a significant positive non-linear link was established between financial development and income inequality in Russia.*

Introduction

The relationship between economic growth and inequality has been intensively analyzed over the last decades. However, empirical results remain controversial. Although a majority of papers are linking economic growth and financial development, there is no guarantee that benefits of economic growth are broadly shared by all population including the poor. The research tries to clarify the connection between growth, inequality and financial development. Although there is a scarcity of financial development indicators at regional level in Russia we focus on panel study across 83 Russian regions (excluding Crimea and Sevastopol'). There is the need for regional level analysis (Savoia et. al, 2010).

Aim of the Project

The **aim of the project** is to explore the relationship among economic growth, income inequality and financial development at regional level in Russia.

Reaching this aim presupposes answering several **research questions**:

How did the inequality influenced by financial development dynamics vary and develop over the last decade in the Russian regions?

Whether or not Russian regions had reached a turning point between financial development with rising inequality and financial development with stable or declining inequality in line with financial Kuznets curve hypothesis?

What were the other factors for change in inequality within and between Russian regions during the period from 2000 to 2015?

Hypotheses and Methodology

Theoretical perspectives on financial development and income inequality are well discussed in the literature [Clarke et al. (2006), Beck et al. (2007), Nikoloski (2013)]. Three possible hypothesis are defined: (1) the inequality-narrowing hypothesis of financial development. Galor and Zeira (1993), Banerjee and Newman

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(1993); (2) the inequality-widening hypothesis of financial development. Claessens (2006) and Perotti (1996); (3) the inverted U-shaped hypothesis of financial development. Greenwood and Jovanovich (1990), Galor and Moav (2004). I test a version of the model proposed by Clarke et al. (2006) asserting that financial development affects the level of inequality directly:

$$\ln Gini_{i,t} = \alpha + \beta_1 \ln Gini_{i,t-1} + \beta_2 \ln FD_{i,t} + \beta_3 \ln FD_{i,t}^2 + \delta X'_{i,t} + \gamma_t + \mu_i + \varepsilon_{i,t}$$

where $Gini_{i,t}$ is the Gini index in region i at year t , α is a constant, FD is a financial development indicator, δ is $K \times 1$ and $X'_{i,t}$ is the i th observation of each K control variable, γ_t is the time effect, μ_i represents the unobserved region-specific effects that are fixed over time and $\varepsilon_{i,t}$ is the error term.

In line with the recent literature on the relationship between finance and economic growth and taking into account the peculiarities of the Russian regional statistics we employ the following dependent variables as proxies for financial development:

banks and bank's branches per 100,000 inhabitants. Source: the Central Bank of Russia.

domestic credit to private sector measured as total loans debt (both personal and corporate) to GRP. Source: the Central Bank of Russia.

banking cards statistics (number of cards per capita and transactions amount as the share of RGP). Source: the Central Bank of Russia.

In addition to financial development indicators I include several variables to control for other well-known factors that may influence income inequality. Log of GRP per capita is used as a welfare measure. However, GRP is redistributed by federal authorities in Russia and nominal money income per capita taking into account the difference of prices in Russia is also used. I include its square estimates to capture Kuznets curve effects. I also control for education (human capital), globalization, demographic indicators, institutions and time.

I employ Rosstat data for the period of 2000-2015. The basic sample consists of 83 Russian regions with observations covering the years 2000-2015. I do not observe the period before 1999 as the role of banks in financing the private sector had been minimal [Berglof and Lehmann (2009), Фунчагова и Соланко (2010)]. Banks have dominated other sources of debt finance to corporations and households since 2000. Although the data set contain over 1200 observations, we use three-year averages estimation that decreases the number of observations to the maximum of 406.

Based on panel data, Gini index indicators are regressed against financial development indicators and controls using Fixed Effects estimates as well as 2-step Generalized Method of Moments models taking all variables to be endogenous.

Results

Figure 1. Gini index, 2015

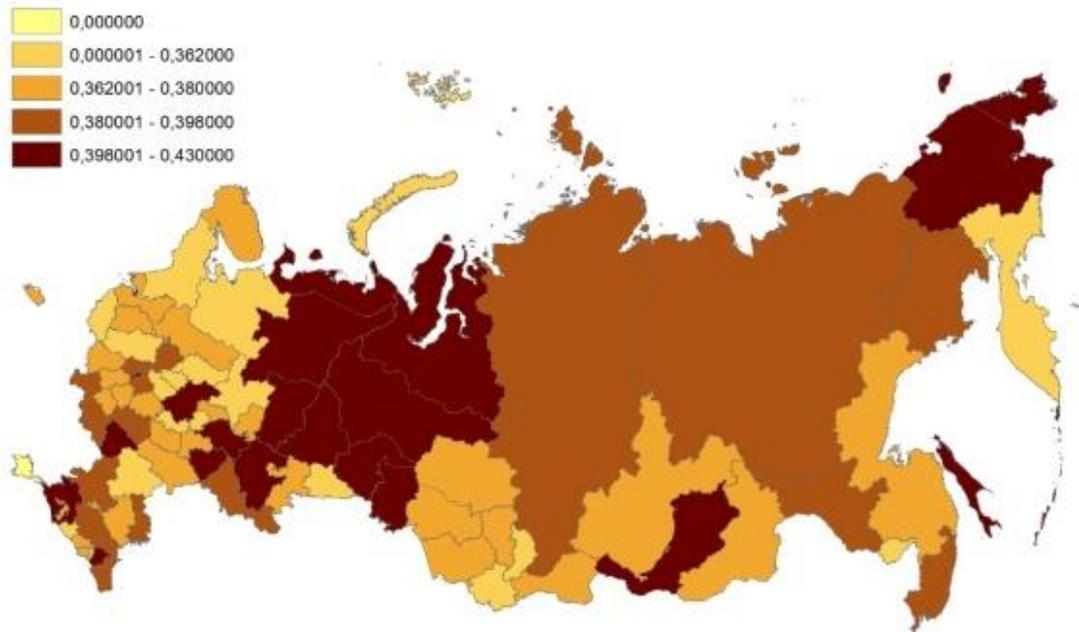


Figure 2. Incomes and incomes inequality, 2000-2015

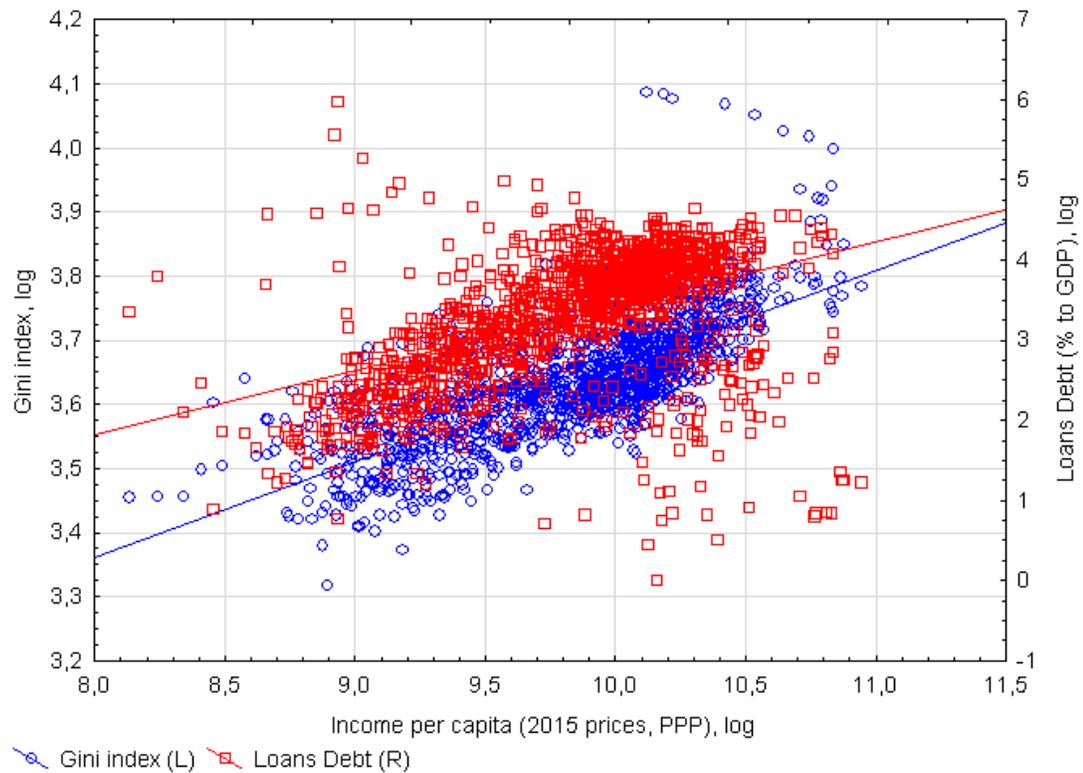


Figure 1 shows Gini index map across Russian regions in 2015. It appears that the East and South continued to have lower inequality rates than the West and North. The geography of inequality is opposite to the geography of incomes corrected to the purchasing power, as rich regions tend to have higher rates of income inequality (Figure 2).

There is the scarcity of financial development indicators at regional level in Russia. However, it is well-known that the financial development in Russia is highly uneven across its vast territory, and Russian regions exhibit significant differences in investment attractiveness, business climate, and regional finance market access, depth and efficiency (see. Fig. 3 and 4).

Figure 3. Bank loans (% to RGP), 2015



Preliminary results show positive effects of financial development on income inequality in Russia. Meanwhile I obtained controversial results as cross-section data has proved the financial Kuznets curve hypothesis. Panel data in contrast has not provided evidence of an inverted U-curve relationship between financial development and inequality. There are rooms to try different regression specifications and models.

Figure 4. Index of banking development, 2015



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Satyvaldieva, Baktygul¹: Current Regional Economic Trends in Kyrgyzstan

***Abstract:** This research investigates factors that drive economic growth and change in a particular region in emerging economy and then formulates strategies that aid the process and distribute the benefits more widely. Increasingly, the focus is on innovation as the primary driver of economic development in the long run, and especially its spatial characteristics and the role of local institutions in supporting it. Many cities and states have formulated extensive technology-based economic development strategies, usually in concert with more traditional economic development approaches. The focus on innovation has led to a greater emphasis on how the sustained health of the local economy depends on other local concerns, such as education, environmental quality, cultural amenities and quality of life, and urban design.*

Introduction

The Central Asian region has a great potential for development, especially in view of the fact that it is located between the growing economies of East Asia and Europe. Central Asia can acquire the status of the space-based transit of ideas, technology, goods and capital.

This research project is important because very little research has dealt so far with spatial determinants of regional economic growth in Kyrgyzstan regions. Moreover, existing empirical works (Anneli Kaasa, Kathryn Anderson and Richard Pomfret, <http://europeandcis.undp.org>) cover a short time period. But there is evidence of disparity development of regions of Kyrgyzstan. And this regional disparity is largely determined by the availability of natural resources, climatic conditions, geographic location and other factors. Reference [1] shows the subject of interest, in the area of regional disparities, are complicated social objects. The heterogeneity of economic space is natural process on the basis of modern theories cumulative growth and new economic geography.

Disparities issues are complicated and to manage them requires applying multidimensional and multidisciplinary approach, integrating view and plural investigating methodology. My previous research experience demonstrated that disparities could be the result of the impact of economic development of neighboring countries and regions.

The working **hypothesis** of the study is based on the assumption that the role of institutional factors in the development of regional economies can positively influence the economic growth in the region and reduce regional differentiation

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Aim of the Project

Aim of the project is to understand what the trends of regional development in the Kyrgyz Republic and researching the impact of globalization on regional development of Kyrgyzstan.

1. Analyze of the development of regional economic disparities among regions in Kyrgyzstan (since Kyrgyzstan have independent and start realized economic reforms in 1991). How have regional disparities risen and analyzed their impacts on economic, social and other aspects of the Kyrgyzstan? Identify which institutional factors play significant role in the regional disparities?
2. Identification and assessment of regional disparities in Kyrgyzstan by using several, main indicators. Identify which regional disparities assessment methods applicable in regional management practice in Kyrgyzstan? Our hypothesis that more adequate indicators - the coefficient of variation and the Gini index, which is more sensitive to changes in the middle of the series. There are also different aspects of the measurement of inequality: β -convergence, which shows whether the poorer catch up with the rest of the regions, and whether the differences are reduced, and σ -convergence, which measures the spread of regional indicators.
3. To define the effects of globalization factors on the economic inequality of regions in Kyrgyzstan. In what way do different types of territories develop under the influence of global and regional tendencies (rural area, large cities)?
4. Identify is the spatial externalities work? If they are rather positive or negative. Explore theoretical overview on studies of agglomeration processes, as well as regional specialization and geographic concentration of the economic activity.
5. Determinants of inter-regional divergence in Kyrgyzstan include the following: population density, the size and accessibility of markets, and economic structure; i.e. all these determinants have a market basis and they are key ones in agglomeration economy.
6. Analyzing does migration (migration from the country, especially in Russia and Kazakhstan increasing in the past time) affects growth of the Kyrgyzstan regions? Migration occurs along the spatial and sectorial dimensions. This is conducive to the equalization of wages across space. It can be formulated as the convergence of labor productivity. So, migration is endogenous, and it also needs to be instrumented.

Hypotheses and Methodology:

1. To do in depth library research on theoretical aspects problem: the key concepts, proposed a theoretical overview on studies of agglomeration processes, as well as regional specialization and geographic concentration of the economic activity (collect secondary data concerned Kyrgyzstan. To do econometric analysis of agglomeration effects in cities of Kyrgyzstan based

on panel data models, it will be most significant part of my research in fact that very few tools we implement in my home country.

It would better to understand using of tools from geographical information science (ArcGIS) to adequately use the huge data spatial data bases increasingly available at the University.

2. To explore in the university department innovation methodology and econometric models to measure impact of the different factors on economic growth of the regions.
3. To observe teaching methodology at the department in order to implement then in the teaching and developed effective curriculum on Regional economics course for local universities.
4. Communicative approach (conducting questionnaire, interviews, presentation of Regional disparities in Kyrgyzstan) with experts and professors.

Results

Differentiation factor analysis identified areas stable but fragile widening gap between the studied regions. Perhaps the degree of asymmetry in the country is not so significant, but taking into account the scale of the economy, in our view are obvious problems in the management of regional development and implementation of regional policy in general. Here important consideration of factors, economic, innovation and human nature.

So countries like Kyrgyzstan and other small economies need to strengthen factory second nature. Natural resources the country has, but need to improve institutional factor and human capital. Especially, this approach becomes of great interest for current regional differentiation in Kyrgyzstan. Theoretical position from the point of view of state regulation of regional disparities is solved by the state influence on sectorial and spatial proportions of the economy, ensuring their progressiveness in terms of sustainable development. The choice of management tools must be determined; it seems to us on the basis of a dynamic regional policy, which should be reflected in the long-term development plans for the regions.

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Sergienko, Denis¹ (with Ilya Prakhov²): Matching and Mismatching Mechanisms in the Admission to the Universities in Russia

Abstract: *The aim of this study is the analysis of the matching mechanism, produced by existing system of enrollment by means of the United State Exam (USE) and estimation of factors which can drive admission outcomes from the desirable equilibrium. The methodology of this research is based on the two-sided matching model of relationships between universities and applicants and also on the educational production function. The results include the estimation of the importance of various characteristics (family factors, school variables and so on) in the genesis of two types of mismatching. Based on these empirical estimations, the level of accessibility of higher education within one important regional higher education market is described and possible policy implications concerning the inequalities during the admission process are provided. The results are useful not only for policy makers, but also for households.*

Introduction

This study focuses on the investigation of matching mechanisms in the admission to the universities in Russia. Studying the factors which determine the accuracy of matching between student abilities (expressed in the final results of the Unified State Examination, the USE) and the quality of the university (the level of its selectivity) tends to be among the most crucial and interesting questions concerning the admission to higher education, and the accessibility of higher education as a whole. The situation of perfect matching between students' abilities and level of the university (when individual USE results equal the level of university selectivity) is the most desirable situation in the enrollment process, because in this case a student was admitted based on his achievement to the university with the corresponding quality of higher education. However, two undesirable situations can occur when brighter enrollees choose the university of a lower quality (undermatch) or vice-versa, when enrollee's abilities do not correspond to high quality standards of education in the university (overmatch). In terms of the Russian system of higher education this topic is especially relevant, because of the institutional transformation of the admission system and introduction of the obligatory USE in 2009. Due to unification of evaluation criteria and standardized form of the USE it became possible to assess the contribution of different factors to the output of educational process, to compare the quality of admission in the

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Russian universities of different levels of selectivity, and to study the factors which may prevent an applicant from applying to the universities which provide educational programs of higher quality.

Aim of the Project

In this way, the aim of this study is the analysis of the matching mechanism, produced by existing system of enrollment by means of the USE and estimation of factors which can drive admission outcomes from the desirable equilibrium.

Hypotheses and Methodology

Special attention will be paid to the factors which determine mismatch situations. For example, why an enrollee with high USE results chooses the university which does not correspond to his own abilities? Is there any difference between enrollees from different income groups and with various social backgrounds? Which applicants are in the risky situations despite the unification of the admission procedure? Moreover, it is worth to answer the following question: how common are overmatch situations nowadays under the conditions of the standardized admission mechanism? Is USE able to achieve the set goals of equality or not?

The methodology of this research is based on two-sided matching model of relationships between universities and applicants. This model firstly appears in paper called «College Admissions and the Stability of Marriage» (Gale and Shapley, 1962). This deferred acceptance mechanism that was described by Gale and Shapley in their paper is actual until nowadays because it explains well the mechanisms of enrollment. Enrollment by itself is crucial question, because it is vital for students' future success.

The problem of university enrollment takes an important place in the study of the economics of education. The main research question in these papers is the phenomena of undermatch and overmatch situations. It seems to be stimulating to investigate why some students with high achievements fail to enroll at highly-selective universities – situation of undermatch; and the opposite case when some low-achieving students do enroll at top universities and give rise to a situation called overmatch (Black and Smith, 2004; Light and Strayer, 2000; Dillon and Smith, 2017).

These two situations are united by one term “mismatch”. Bowen and Bok for the first time brought attention to the significance of mismatch in their book (Bowen and Bok, 1998). And mismatch is often considered as a sign of misallocation in the assignment of individuals to education outcomes and as a signal of inefficiency and inequity of educational system, but the second statement gives a rise to debate (Cooper and Liu, 2016).

Researchers examine different factors to find some of them that determine mismatch. One of the most widespread question is the role of income (Griffith and

Rothstein 2009; Smith, Pender, and Howell 2013; Lincove and Cortes, 2016). For example, Hoxby and Avery examine college application behavior and find that the tendency of high-performing low-income students to undermatch begins with college application and persists to enrollment while there is no such type of tendency by high-income students (Hoxby and Avery, 2013).

Another one central object to investigate in this field of science is a role of information in process of admission to the university (Hoxby and Avery, 2013; Hoxby and Turner, 2013).

In order to find the magnitudes and determinants of mismatch in this paper we concentrate on USE scores of students. It is necessary to justify the fact that USE results can be comparable between different students or, in other words, USE is an example of unified exam and we can use USE scores to judge the abilities of the student. Ilya Prakhov in his paper (Prakhov, 2013) analyzes this fact based on the requirements for the unified examinations of Bishop (Bishop, 1995; Bishop, 1997) and concludes that USE meets these requirements.

We also describe the level of current inequality during the admission process using educational production function. We examine different factors that can determine students' educational results: different school factors, social background and so on.

As it was mentioned before, the theoretical framework of this research is based on the game theory and its two-sided matching model of universities-applicants, which was introduced by Gale and Shapley in 1962 (Gale and Shapley, 1962), and also on the idea that while choosing university, each student takes into account the probability of being accepted to each of the universities and utility of studying at each university. In the empirical part of the study we use data from the Longitudinal Panel Study of Educational and Occupational Trajectories (Moscow panel). We focus on the Moscow students due to the fact that this sample includes respondents from the same region: the absolute majority of applicants graduated from high schools in Moscow and applied to the universities in the same regions. Hence, we eliminate a set of transaction costs associated with admission (for example, moving costs, living expenditures during the studying process and so on). In other words, there are no regional barriers of admission to the university and in these settings the choice may be determined only by student achievement. We studied the discrepancies from this state and evaluate the level of inequalities during admission process in the case of the USE.

Results

We calculated the prevalence of perfect matching as well as factors which determine two types of mismatching. In other words, we estimated the importance of various characteristics (family factors, school variables and so on) in the genesis of mismatching and also we found determinants of student educational abilities. Based on these empirical estimations, we describe the level of accessibility of higher

education within one important regional higher education market and provide possible policy implications concerning the inequalities during the admission process. The results presented may be useful not only for policy makers, but also for households.

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***Shipkova, Olga*¹: Behavioural Economics for Higher Education Institutions: Is It Useful?**

Abstract: The decision-making process of a master program choice is analysed basing on the conceptual and methodological framework of Behavioural Economics. A modified version of The Career Decision-making Difficulties Questionnaire is used to identify the obstacles arising from a master program choice. We adopt the MINDSPACE methods of influence to the context of a master program choice. We use the framework of Fogg's behaviour model to analyse three groups of key problems that reduce the quality of a master program development: the problem of attendance, the problem of poor quality assignments and violation of the written assignments and reports delivery deadlines. The tools of influence on key factors in Fogg's model are suggested within each issue.

Introduction

The range of higher education providers and degree programs constitutes a daunting choice environment for prospective students. The challenge is further compounded by the multitude of information, sources, influences, opinions, support and advice available. The decisions concerning education include carried in time expenses and benefits. We make them limited number of times. Such decisions are often influenced by our emotional state and exclude the possibility of training on own mistakes. The choice with such a set of characteristics makes an example of decision-making process with a high degree of uncertainty. As a rule, such a choice is not reasonable enough and often does not consider the individual's long-term interests in respect of professional development. The application of heuristic procedures leads to systematic mistakes and the results of such decisions deviate from the effective ones. Nevertheless, the quality of the made decisions in this field has essential impact on further vital and professional strategy of a person. The behavioural economics helps to find out why individuals make actions, which lead to inefficient balances kept for the long period [1] and enriches the standard economic approach by identifying the psychological factors through which specific environmental conditions shape individuals' choices in education. That is why the behavioural economics of education can form the theoretical base to identify heuristics, which are used by individuals when making a choice in the field of education, and biases, which can become a consequence of their use. It is necessary to enhance the capability of individuals to make decisions in education by means of nudging which encourages a certain type of behaviour without imposing restrictions.

The problem of educational program choice is also particularly important from

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the point of view of financial resources efficient use in the education sector. The people whom it was not originally targeted often choose the educational program. Random and, thus, the wrong choice leads to the fact that teaching effectiveness is reduced about the forced adjustment of volume, depth and content of the initial training program. Because of those, performance indicators that were planned originally, are unattainable. Behavioural economics of education enables us to understand and, therefore, to try to avoid such a suboptimal outcome revealing the peculiarities of the people behaviour in different situations, as well as the essence of the real decision-making process. It should be noted, that the analysis of various solutions in behavioural economics is different from the classical economic analysis weighting the benefits and costs. In particular, the benefits obtained during and after graduating from a university, remain more complex than a simple trade-off of fees versus earning potentials. Moreover, the study of behavioural context should be carried out at all stages of decision-making concerning the educational program: from the moment of the choice and enrolment in it to the moment of the training itself and successful finishing because in the last stage there is a threat of a voluntary or compulsory deduction from the educational program. In this case, the purpose of the design is to keep the student body until the end of training and achieve high results. Behavioural approaches have the potential to better manage the complexity of such a choice, to understand how prospective students currently make decisions and how they might be helped to make better decisions consistent with their own aims.

Aim of the Project

We use insights from behavioural economics into how people make decisions to better inform our understanding of choice in relation to higher education. The research aims to assist the ones who develop master programs, as well as others who advise and influence study choices, to more effectively support prospective students in their decision-making. We try to present some guidelines on how to choose the appropriate behavioural economics tools for assisting a master program choice and reaching high educational results during studying by combining the goals of educational institution and professional interests of any particular student.

This study summarizes recent findings from the emerging field of behavioural economics of education and applies this knowledge to student`s master program choice and the master program design in such a way to help reach both universities and students` goals in mastering the educational program.

Hypotheses and Methodology

The research for this study comprises three stages.

First, we demonstrate the relevance of focusing on the formation of the decision-making competence in the field of education through tools of behavioural economics, and to identify the basic difficulties in making such decisions in order to

adjust the direction of forming this competence. For comparison, our paper seeks to examine two different samples: the first one includes students of popular specialties and the second one concerns technical students (whose specialties are not highly demanded). Testable hypothesis implies the existence of wrong decisions when choosing specialties in both samples. The first sample includes 178 students of popular profiles associated with the economics, management, as well as public administration, from neither economics nor management-specialized universities. The covered universities are Moscow State Regional University, Moscow State Pedagogical University, Moscow City Teacher Training University and D. Mendeleev University of Chemical Technology of Russia (non-technical students). The second sample covers 135 technical students from D. Mendeleev University of Chemical Technology of Russia. We investigate the specialties which are core ones for the University. We ask the students from both samples to assess the expected (decision) utility and actual (experience) utility of the chosen field of study in 10-point scale. Then, we attempt to identify the difficulties of master program choice (including decision-making process itself). The survey is carried out in two ways: some students respond to the questionnaire, submitted on paper, the other ones - remotely via the formation of profiles in Google forms. The respondents are asked to evaluate a particular difficulty for the 9-point scale.

Secondly, we adopt the MINDSPACE methods of influence [2] to the context of a master program choice in order to affect potential students' preferences for a particular master program.

Finally, we consider the tools, which influence the behaviour of students to maintain the student body and to achieve high educational results basing on the analysis of the Fogg's behaviour model in the context of three key problems that reduce the quality of a master program development: the problem of attendance, the problem of poor quality assignments and violation of the written assignments and reports delivery deadlines. The problems identification was carried out by a survey of teachers working on master's programs; moreover, it was considered the authors' own experience.

Results

Except the main approach by Kahneman-Tverski [3], whose key notions are the concepts of "heuristics and biases", there are alternative approaches. For instance, in his approach G. Gigerenzer emphasizes the importance of social and emotional determinants at a decision-making process [4]. These factors promote heuristics formation and choice. Thus, heuristics make an intermediate link in an explanation of the observed behaviour. Within such an approach, a person works not only in the conditions of limited cognitive abilities, but also with a limited tools kit.

Basing on a combination of these two approaches, our research is methodically carried out by means of students' polls.

In the first questionnaire, we ask the students to estimate the chosen field of

study in ten-point scale to identify the deviation in the evaluation of the education program utility.

The second tool we use is the questionnaire modified option developed by I. Gati [5], which reveals the career decision-making difficulties (The Career Decision-Making Difficulties Questionnaire - CDDQ). We use it to solve the problem of difficulties type identification which students may have when choosing a master program. The modification does not transform but adjust it to the peculiarities of the choice. Structurally, all difficulties are divided into two groups: 1) prior to beginning the process and 2) during the process. The first group includes four categories of difficulties related to a lack of readiness: a lack of motivation to engage in the decision process, general indecisiveness concerning all types of decision-making, dysfunctional myths (e.g., irrational expectations) about the process of decision-making and a lack of knowledge about the steps involved in this process. The second group of difficulties related to the lack of information and inconsistent information: a lack of information about self, a lack of information about programs, a lack of information about ways of obtaining additional information, unreliable information, internal conflicts, which include conflicts within the individual, and external conflicts, which include conflicts involving the influence of significant others.

The use of this modified questionnaire in the pilot research allows us to reveal concrete difficulties students face when choosing a master program. Moreover, such a survey may precede by the distribution of students in groups for further work on the decision-making capacity formed in the field of education with an emphasis on the identified difficulties.

Moreover, behavioural tools can help practitioners select, design, or apply nudges. As for the analysis of the decision-making context and design issues of the educational program mastering process, we conduct it in the framework of B.J. Fogg behaviour model (FBM). The FBM has three principal factors that the author refers to as motivation, ability, and triggers. In brief, the model asserts that for a person to perform a target behaviour, he or she must (1) be sufficiently motivated, (2) can perform the behaviour, and (3) be triggered to perform the behaviour. All three factors must be present at the same instant for the behaviour to occur [6].

In our study, we adopt the mentioned tools to the context of a master program choice and the successful development of its curriculum.

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Strizhakova, Ekaterina¹: Intellectual Capital as the Main Factor for Sustainable Development of the Russian Economy

***Abstract:** This paper studies factors that influence intellectual capital in Russia. We found out that institutional factors affect negatively on the value of the intellectual capital, the number of patents influence most in positive way. The main aspects that need to be changed are the process of obtaining patents, as well as the education system. It is necessary to change the learning process, taking into account not only the logical type of intelligence, but also the other kinds. Our research has proved the direct relationship between the level of emotional intelligence, especially between self-motivation and the value of intellectual capital, therefore it is necessary to teach people to understand and manage their own and others' emotions and take benefit from them.*

Introduction

The economy of knowledge is the highest stage of development of the post-industrial economy. The main factor of development in the innovation economy is the intellectual capital. In the future, our country must also be transformed into the country with a high level of intellectual capital. Thus, the increasing of the value of the intellectual capital makes it possible to achieve sustainable development in the country.

Aim of the Project

The purpose of the project is to explore the factors influencing the country's intellectual capital. In our opinion, the intellectual capital is a set of human, organizational and consumer capital. But in my opinion it is necessary to include intellectual resources and emotional capital in the human capital.

Hypotheses and Methodology

The main theoretical hypothesis of this study is the following: we believe that the process of achieving sustainable development of the Russian economy should be based on the increasing the value of the country's intellectual capital.

The methodological foundation for the study is based on the use of scientific methods and research techniques. The use of a systematic approach allowed to form a holistic view of intellectual capital, highlight the relationship of its structural elements. Periodization and classification were used to exist the main problems with intellectual capital. Application of the laws of induction, logical operations of abstraction and generalization are used to identify the main factors influence on the

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intellectual capital. The use of special mathematical and statistical methods of research are applied for analysis of the intellectual capital in Russia.

Let us assume that the intellectual capital of the country depends on these factors: the cost on civil science (X1), the number of organizations, performing research and development(X2), the number of patents (X3), institutional factors (X4). We obtain a system of equations:

$$145,6A_1 + 3536A_2 + 38564A_3 + A_4 = 789;$$

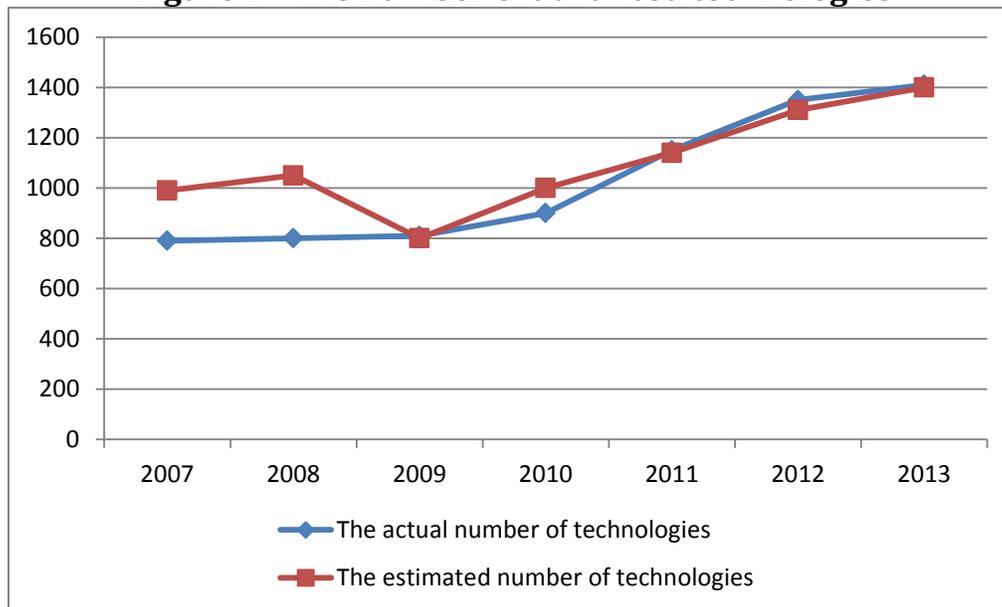
$$180 A_1 + 3682 A_2 + 41414 A_3 + A_4 = 1138;$$

$$192 A_1 + 3566 A_2 + 44211 A_3 + A_4 = 1323;$$

$$215 A_1 + 3605 A_2 + 44914 A_3 + A_4 = 1429.$$

The solution of this system: $A_1 = 1.28$; $A_2 = 0.5$; $A_3 = 0.08$; $A_4 = -4287$, thus function is $Y = 1,28X_1 + 0,5 X_2 + 0,08X_3 - 4287$ (figure 1).

Figure 1 - The number of advanced technologies



The correlation coefficient $r = 0,879$, Pearson $R^2 = 0,772$, the following table shows critical value and calculated value of the indicators. So the constructed function describes the emergence number of a new technologies in a good way.

Table 1. Indicators for assessing the adequacy of the regression model

| The indicator | Critical value | Calculated value |
|---------------------------------------|-----------------|------------------|
| Student's criterion, tr | 2.57 | 4.12 |
| Fisher criterion, Fr | 6.61 | 16.93 |
| The criterion of the Durbin-Watson, d | $0.6 < d < 1.1$ | 1.2 |

Usage the values of beta coefficients determines the effect of each of the factors on the total score. The change of the first factor by 1 % gives 2.25% of the total score, the change in the number of organizations that perform research and

development on a 1% effects on the number of advanced technologies by 18% and the change in the number of patents per 1% - 34 %. Institutional factors, including the lack of prestige of scientific work negatively affect the value of intellectual capital in the country.

Measures should be taken on the impact of all factors that influence the value of intellectual capital. But the greatest impact on the value of intellectual capital has patents in the country. The patent system is quite complicated, it takes a lot of resources for obtaining a patent. As a result, small firms, individual inventors prefer not to participate in this process, "leave" the invention of their country abroad.

Education system also influences on the value of the intellectual capital in the country very much. Howard Gardner theory of multiple intelligences was developed in 1983. In his work «The structure of the mind» (Howard Gardner, Frames of Mind) G. Gardner denies the existence of a common G-intelligence, but allocates 7 types of intelligence (then added 2 more species): word smart, number smart, picture smart, body smart, music smart, nature smart, people smart, self-smart, problem solving smart intelligence.

The existing education system gives maximum importance to the development of logical (mathematical) intelligence and linguistic form of intelligence. At the same time the remaining 7 types of intelligence are mostly developed in various schools of additional education (music, art, sports).

The use of different kind of intellect in the educational system allows to develop and maximize the potential of a child, teach future workers more effectively to the specific needs of the country's economy, increase the intellectual capital of the country.

Let us discuss to another component of intelligence - emotional intelligence which is the ability to understand their own and others' emotions, and manage them. There are many researches showing that people who understand their and other people's emotions better interact with others with a minimum cost. It was found out that the efficiency of the management of more than 90% dependent on emotional intelligence, and the importance of emotional intelligence are twice times higher than the amount of intelligence and technical skill factor in the D. Goulmen's research. So it is important to make efforts to improve the emotional intelligence.

Students of 2-3 courses, studying the economy, accounting, logistics, management and marketing took part in the research. The following components of emotional intelligence were evaluated: emotional awareness, management of their emotions, self-motivation, empathy, recognition of other people's emotions. Also, academic successes were assessed both at school and at university, the presence of a hobby, as well as its recognition with any awards. It was proved that, really, students with a higher level of emotional intelligence show a higher level of the received ratings, and self-motivation is the most important component influenced on the intellectual capital of a student.

Results

To increase the value of intellectual capital in the country is necessary to identify the efforts of institutions such as education, health, social protection and guarantees of the population. In my opinion, in order to form an effective system of education it is necessary to carry out government policy with a common approach. It is useful to apply the theories of intelligence at school to differentiate children between forms at school according to their kind of intelligence. There are specialized 10-11 classes in modern school, but it is possible to do it earlier. Thus teachers can make lessons according to the interests and the average level of students. Children would be interested in the subject, the average level of the lesson will be higher, and students will receive more useful information.

The problem of raising emotional capital is also very important. If we teach students to recognize their own and other people's emotions and manage them, the emotional intellect will turn into the emotional capital, and the total amount of intellectual capital will increase.

I hope that the proposals given in this work will improve the level of the country's intellectual capital, so our country will successfully overcome the difficulties facing it and achieve the level of the strongest countries.

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Tatarnikova, Valeriya¹: System Modernization of Region Intergovernmental Fiscal Relations in Conditions of Asymmetric Socio-economic Development of Municipalities

***Abstract:** The research work will describe the basic elements of the intergovernmental fiscal relations system in Russian Federation, and focus on intra-regional system of such relations and problems on this level. Now research work considers equalizing transfers. It highlights the main points of the methodology distribution of equalizing transfers in Tomsk region and considers estimation of these transfers in each municipality. It shows budget provision differentiation of the municipalities in accordance with the methodology. The research work argues the necessity of modernization of intergovernmental fiscal relations and the introduction of new tools, designed to stimulate economic development of municipalities.*

Introduction

In recent years, more and more attention has been paid to the issues of sustainable economic growth of the Russian Federation subjects and municipalities as their constituent territories. At the moment municipalities simply need to be able to independently meet modern challenges, reducing their dependence on the financial resources of the regions. These goals cannot be achieved without the system modernization of intergovernmental fiscal relations in the Russian Federation. Thus, the priority directions of the state policy of regional development are the following [4]:

- provision scientific and technological development of the region;
- achievement of a balanced and sustainable socio-economic development of the Russian Federation subjects and municipalities.

To achieve the goals, it is necessary to solve the tasks of improving the formation, distribution and provision of intergovernmental transfers from the budgets of different levels of the RF budget system and reducing the level of subsidized areas.

Aim of the Project

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The purpose of the research is to develop and substantiate theoretical provisions, methodological and practical recommendations for improving the system of intraregional intergovernmental relations in the context of asymmetric socio-economic development of territories

Hypotheses and Methodology

At the current moment the equalizing function prevails in the system of intergovernmental fiscal relations in our country. The shift in emphasis and the development of a stimulating function will become the driver of the socio-economic development of the territories. It is planned to use the following scientific and instrumental apparatus during the research: economic-statistical groupings, methods of financial, economic and statistical analysis, correlation-regression analysis, situational, comparative analysis and system analysis.

Various instruments of intergovernmental fiscal relations are aimed at solving various state problems. Equalizing transfers play an important role in the system of intraregional intergovernmental fiscal relations, which task is to ensure the budgets of municipalities with the means to fulfill their own powers. In Tomsk region, the amount of funds for providing equalizing transfers the budget provision of the municipal district (MD) and city district (CD) from the regional budget depends on the gap in the budget provision (BP) between the "richest" municipality and others [2]. In order to determine such gaps, it is necessary to calculate the budgetary provision of each municipal unit (MU) by means of the ratio of potential incomes and expenditures taking into account the number of population. the Tomsk region includes 20 municipal unit: 16 municipal districts and 4 city districts. We consider the finance on equalizing transfers for local budgets, which were provided in the draft law on the regional budget for 2016 and the planned period of 2017 - 2018, as well as the differentiation of municipalities in terms of budget provision.

Table 1 - MU budget provision, equalizing transfers on 2016 [3]

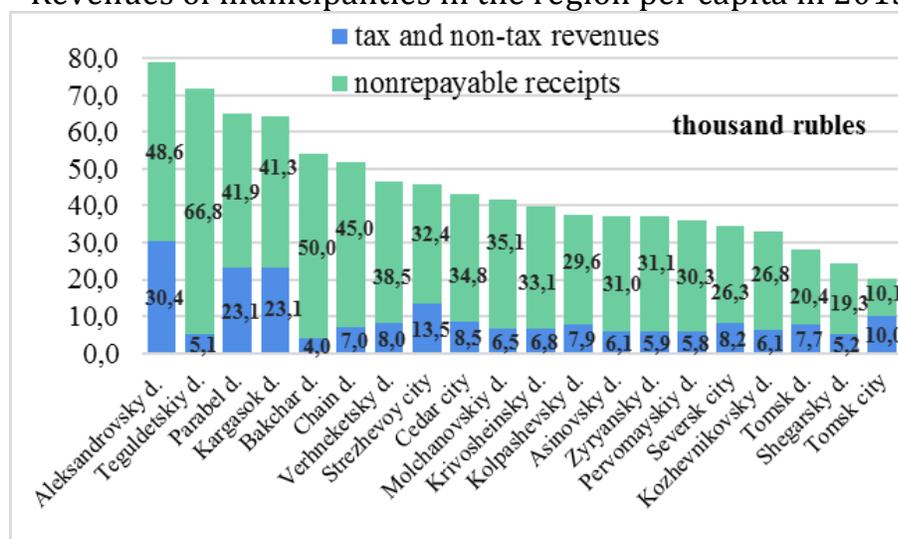
| MU name | BP before equalizing | degree of lagging behind the level of equalizing | MD (CD) transfers distribution based on BP, thousand rubles | subventions distribution to MD budgets on the execution of powers to calculate transfers, thousand rubles | transfers distribution to settlements, thousand rubles | total sum, thousand rubles |
|-------------------|----------------------|--|---|---|--|----------------------------|
| Tomsk city | 1.115 | -1.115 | 0 | | 3 835 | 3 835 |
| Parabel d. | 0.876 | -0.876 | 43 436 | 13 987 | | 57 423 |
| Kargasok d. | 0.867 | -0.867 | 66 024 | 22 560 | | 88 584 |
| Aleksandrovsky d. | 0.745 | -0.745 | 55 157 | 9 362 | | 64 519 |
| Seversk city | 0.571 | -0.571 | 428 471 | | 661 459 | 1 089 930 |
| Teguldetskiy d. | 0.548 | -0.548 | 345 322 | 80 878 | | 426 199 |
| Strezhevoy city | 0.52 | -0.52 | 334 268 | | 129 607 | 463 875 |

| | | | | | | |
|--------------------|-------|--------|------------------|----------------|----------------|------------------|
| Asinovsky d. | 0.458 | -0.458 | 198 799 | 38 916 | | 237 715 |
| Tomsk d. | 0.42 | -0.42 | 55 810 | 7 219 | | 63 029 |
| Molchanovskiy d. | 0.408 | -0.408 | 86 425 | 14 326 | | 100 750 |
| Shegarsky d. | 0.398 | -0.398 | 108 257 | 21 996 | | 130 253 |
| Pervomayskiy d. | 0.346 | -0.346 | 120 225 | 19 740 | | 139 965 |
| Kolpashevsky d. | 0.319 | -0.319 | 360 722 | 44 105 | | 404 827 |
| Krivosheinsky d. | 0.307 | -0.307 | 100 888 | 14 100 | | 114 988 |
| Kozhevnikovskiy d. | 0.306 | -0.306 | 146 931 | 23 124 | | 170 055 |
| Zyryansky d. | 0.291 | -0.291 | 89 907 | 13 874 | | 103 781 |
| Cedar city | 0.289 | -0.289 | 29 563 | | 47 038 | 76 601 |
| Bakchar d. | 0.272 | -0.272 | 106 096 | 13 987 | | 120 084 |
| Chain d. | 0.271 | -0.271 | 121 093 | 13 536 | | 134 629 |
| Verhneketsky d. | 0.252 | -0.252 | 187 091 | 18 386 | | 205 477 |
| Total sum | | | 2 984 483 | 370 097 | 841 939 | 4 196 519 |

Annually the most provided MU is Tomsk city in Tomsk region. The budget provision in this municipality is equal to 1.115 in accordance with the approved methodology. Since it is stipulated that the leveling is carried out to the level of 90% of the most provided municipal unit (Tomsk), then all municipalities are subsidized in this case. The average budgetary provision of the Tomsk region is 0.479. The coefficient of variation in the budgetary provision of municipalities is 50%, the standard deviation is 0.24, which indicates a high degree of differentiation. In total, 4.2 billion rubles are planned for equalization of the budget provision of local budgets in the regional budget in 2016. It is 8.9% of the amount of tax and non-tax revenues of the regional budget in plan of 2016.

Next, we consider revenues of municipalities in the region per capita in 2015 in terms of tax and non-tax revenues and nonrepayable receipts (figure 1).

Figure 1 - Revenues of municipalities in the region per capita in 2015 [5,7]



In the Tomsk region the most prosperous municipality is the Alexandrovsky district, its revenues amount 79,0 thousand rubles per person, including tax and

non-tax revenues of 30,4 thousand rubles based on this revenues distribution graph. Tomsk city is the least subsidized municipality in the revenue structure, because own revenues occupy 50% including tax and non-tax revenues. In other municipalities the share of non-repayable receipts exceeds 61%. This shows need to build up their own economic potential in municipalities. Return to the method of distribution equalizing transfers and note its disadvantages:

1. City districts and municipal districts are evaluated under equal conditions, although in practice such calculation is not correct due to the different level of development of the territories, the ability to accumulate own revenues;

2. The specificity of municipal districts is not taken into account for calculation of the budgetary provision. It should introduce typologization of municipal districts;

3. A significant amount of annually allocated equalizing transfers does not stimulate local governments to implement measures for increasing their own tax base among other instruments of inter-budgetary relations.

It should be noted that local governments are well aware that the methodology for distributing these equalizing transfers implies the following: the lower the tax potential and the receipt of tax revenues in the territory, the more financing will be provided, on the other hand the growth tax revenues will lead to decrease financing. In this regard, the total amount of the fund for financial support of local budgets should be limited to a level that will achieve a minimum budget provision.

In addition, all regions, including the Tomsk region, need to pay attention to the tools of regulating intergovernmental fiscal relations, which stimulate the development of the economic and tax potential of the territories. It is advisable to provide annual financing in the form of grants for the achievement of the best indicators on priority areas development for the region in the region budget by municipalities.

Expected Results

The development of the system of region intergovernmental fiscal relations is a priority task for both the federal center and the regions. The solution has to be done in conditions of socio-economic development differentiation of the territories, which requires a special approach. Is needed to do this, an effective combination of equalizing and stimulating tools, an evaluation of the effectiveness of intergovernmental fiscal relations in terms of identify problem areas, and therefore the following tasks are planned within PHD work:

- carrying out of the complex analysis and revealing of problems of intraregional intergovernmental fiscal relations;
- design of a methodology for the grants allocation stimulating municipalities with different levels of socio-economic development to increase the tax potential of their own territory;

- development of scientific and practical recommendations for the modernization of the intergovernmental fiscal relations system, with the strengthening of their stimulating component for territories with different levels of development.

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Tong, Xuheng ¹: Informative Impact of Credit Rating: A Comparative Study under Institutional Environment of Chinese and European Financial Market

Abstract: We are going to see a mysterious linkage between *bond and stock market* from the point of view of Credit Rating Agencies (CRAs). Each listed company with Credit Rating Changes is under our examination to see the informative impact on their common stock returns. This event study starts from the entry of CRAs to **Chinese** financial market to the most recent period (1988-2016). In general, our research doesn't achieve significant *results* after rating events until taking into account of *institutional actors' characteristics*: high percentage of state shareholding, domestic individual investors, among others; relevant laws, rules and post-crisis reforms; along with difference between local and global CRAs under market segmentation. There is a further extension to compare results with the same Hypotheses and Methodology, getting from both **Western Europe** (continental and Anglo-Saxon Europe), and **Central and Eastern Europe**. The comparison between developed market and developing markets in transition helps us to find how *features of institutional environment* will contribute to classic *literature* and change general *empirical findings* around credit ratings. On the framework of *New-institutionalism Theory*, we will also clarify how behaviors of CRAs will adapt to *institutional environment*.

Introduction

Credit Rating Agency (CRA), just as the name implies, is a kind of organization whose basic function is to assess the level of default risk of specific financial instruments and their issuers for both private and public entities. This appraisal will be concluded and disclosed in the form of rating to the public.

Beyond all critics of CRAs during crisis (2008), public attention has shown, conversely, that CRA is becoming an indispensable part of the financial market.

Through this study, we are able to build a background by giving basic institutional environment on Chinese and European financial markets with a comparative perspective. Further consideration is going to extent the comparison to the Central and Eastern Europe (New Europe), where the institutional environment is in transition compared to the developed markets in France and Britain, while the financial regulation is harmonized on the European Union level but still with their nuanced distinguished characteristics.

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Aim of the Project

On the framework of *New-institutionalism Theory*, we will discuss why a discussion of market environment is important to a research of CRAs in China, and how the institutional effects will change the classic theories and existing evidence on international market (In our study, we will take France/continental European market and British market/Anglo-Saxon market as a proxy).

Theoretical discussion, background information and literature review help us to constitute our hypothesis, which are waiting to be tested empirically.

Hypotheses and Methodology

The choice of topic also has some sort of **originality**.

We get some conceptual ideas about emerging markets but speaking of empirical results, there are a few studies such as those made by Poon and Chan (2007). There are few studies on the same subject for in French and English markets. Based on the similar idea, we are going to conduct a research by using a more recent and comprehensive database and introducing new institutional environment and regulatory reforms post-crisis to constructed our samples(1988-2016).

Next step is to examine the *informative impact of CRCs on common stock returns* of Chinese, French and British listed companies and to *explain* where comes from these similarities and differences behind the empirical results afterwards.

We suppose the institutional actors (both issuers and investors), behaviors of CRAs and regulatory rules, along with relevant post-crisis reforms under different financial market segments could have certain impact on the overall results.

We have **four hypotheses**:

H1: Generally speaking, do CRAs convey informational content on Chinese stock market? Compared to the results obtained in France and in Britain? And those of New Europe?

H2: Do market segmentation lead to different reaction to “downgrades”?

H4: Do Chinese and European stock markets’ perception of CRCs different after the crisis?

H3: Do Credit Ratings offered different agencies generate different reactions?

The access of Bloomberg has largely facilitated the collection of data. We then cross rating activities with the public companies listed on continental China markets and HKSE. Under the classic *market model* of **event study**, a comparative examination will be also conducted in France, in Britain and furthermore in New European Countries.

We fixed our estimation *window* at [-115,-15] for a period of 100 days and event *windows* [-15,+15] for 31 days (including event day), under which there are also some sub-windows to test results.

In order to get Abnormal Returns (ARs), Average Abnormal Returns (AARs) and Cumulative Average Abnormal Returns(CAARs), we use following *equations*:

Firstly, by using daily common stock price for both market (P_m) and individual equity (P_i), we get R_{mt} and R_{it} on day t respectively:

$$R_{it} = \text{Ln} (P_{i,t} / P_{i-1,t}) \quad (1)$$

with R_{it} : actual common stock return observed for individual equity i on day t :

$$R_{mt} = \text{Ln} (P_{m,t} / P_{m-1,t}) \quad (2)$$

with R_{mt} : market return on day t ,

$$R_{it} = \alpha_i + \beta_i * R_{mt} \quad (3)$$

To get α_i and β_i , the software uses OLS as *estimation* method and then, we calculate R_{nt} (expected return for each stock i on day t during event window(s) $[p,q]$) by market model:

$$R_{nt} = \hat{\alpha}_i + \hat{\beta}_i * R_{mt} \quad (4)$$

with $\hat{\alpha}_i$ and $\hat{\beta}_i$ obtained above by equation (3)

We could get then :

$$\text{AR by } AR = R_{it} - R_{nt} \quad (5)$$

with AR: difference between return observed in reality and return expected by investors.

On a certain day t , AAR and SAAR (standardized average abnormal return) are calculated by the following equations:

$$AAR_t = \text{Sum} (AR_{1t} : AR_{it}) / N = \sum_{i=1}^N AR_{it} / N \quad (6)$$

$$SAAR_t = AAR_t / S(AAR)_t \quad (7)$$

$$\text{With } S(AAR)_t = \text{STDEV} (AAR_{1t} : AAR_{it}) / \sqrt{N} \quad (8)$$

CAAR are related to testing windows. Taking a random period of [p,q] from the total 31days of the event, we have:

$$CAAR = \sum_{t=p}^q AAR_t \quad [1 \leq p, q \leq 31] \quad (9)$$

We chose *T-test* and two non-parametric *tests* to get the results.

Results

Inconsistent to earlier findings, our results showed that Credit Rating Changes (both upgrades and downgrades) had no impact generally speaking. However, observations on Shenzhen and HK contributed to statistical significance.

Crisis (2008) had effect on common stock returns. Both increasing and decreasing in rating resulted in negative responses in HK while in continental Chinese markets, the event has modified the reactions of investors in front of downgrades and upgrades.

We also discussed the difference between CRAs. According to our studies, downgrades of “Big Three” were perceived good news but signals given by Chinese agencies was translated into bad news. As for upgrading modifications, market had a negative anticipation and it went the other direction shortly after the event.

In comparison, the results obtained in Europe, more detailed in France and in Britain, are different, which are presented as followed:

In the first case, downgrades brought negative significant ARs a day after the event while upgrades had a positive anticipation, followed by negative ARs in post-event period.

In the second case, downgrades brought negative significant ARs and it lasted longer than in the previous case: to a ten days post-event window while upgrades had a positive anticipation, followed by none significant market reactions afterwards.

It's evident that these two developed European markets share much in common and our findings are conform to general results obtained from American markets. The slight differences will need a more clarified analysis according to the institutional arrangement and regulatory reforms.

Other environmental comparison with China and Central and Eastern New Europe is still waiting to be conducted in the further process of research.

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Tsuda, Miki¹: Corporate Social Responsibility Promotion in Post-Soviet Countries: Assessing the Role of State and Entrepreneur

Abstract: *My research focuses on international business side of the stakeholder approach on Corporate Social Responsibility (CSR) in post-Soviet countries. Companies have generally widened and enriched CSR activities, it reveals they don't address integrated economic development issues due to marketing strategy, international regulations, and limited communications among stakeholders. What is more, CSR is one of the major components for social development while it is quite alien to the focused region. Here my research investigates to 1) to what extent voluntary CSR practices can be effective and beneficial towards the public and 2) does the state promote or regulate CSR in order to attain his own state development goal. The main objectives of the research are 1) to build new conceptual framework for CSR literature, 2) to answer the proposed research questions with a critical case studies, and 3) to contribute to institutional approach. The research is taking on board quantitative/qualitative data, thematic triangulation, and stakeholder approach as a main theoretical framework. Comparing to the global trends of CSR, the research focuses on two countries, namely Russia and Azerbaijan as a case study by the author's field work in order to analyze two research questions.*

Introduction

This paper focuses on public policy side of the institutional approach on Corporate Social Responsibility (CSR) in the countries confronting with political and economic difficulties. While CSR is one of the important components of current international business, CSR in post-Soviet countries is focused in this research since it is not well researched due to their political and business mentality different from the West while it is indeed observed large amount of project initiated by the local. My research aims to gain such nuanced understanding and to disentangle the puzzle of how CSR is practiced, perceived, and shape state development in emerging markets, namely post-Soviet countries, here this paper investigates these two research questions:

- 1) To what extent voluntary CSR practices can be effective and beneficial towards the public?
- 2) Does the state promote or regulate CSR in order to attain his own state development goal?

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Aim of the Project

CSR should be clarified what kind of role state and companies perform in responding to these development goals and what problems they take responsibility for. At the same time, states require adequate policy space to meet their public policy objectives such as the provision of public goods as well as the country development. Given that state has a role of promoting and regulating CSR, which reflected on states' political and corporate culture is a series of challenge for developing and emerging economies in the context of providing both business and social value. The main aims of this research project can be summarized as follows:

- 1) To build a new conceptual framework for CSR literature: This research analyzes the impact of CSR in post-Soviet countries which is considered to be alien to them. This inquiry comes from my own experience that local Russian/Azerbaijani businesses have different implication, more or less, an aversion to Western idea such as a company's CSR identity, informal and invisible practices which are not written on their CSR reports.
- 2) To answer the proposed research questions with a critical case studies: This study will elucidate relatively neglected topic in CSR literature in post-Soviet countries and contribute to the field of CSR with a new conceptual framework, whose research questions will be tested by a critical case study, namely post-Soviet case.
- 3) To contribute to "institutional approach": This research intends to take on board an institutional approach; using both quantitative and qualitative methods to account for the variation of CSR, which ultimately aims to contribute both to academic and to business.

Hypotheses and Methodology

This research consists of a series of questions derived from my experience and observation in the region, during which it became quickly evident that there exists a significant gap between the ways in which Western practitioners view and depict practitioners in post-Soviet area during political and economic crisis, and the ways in which practitioners in the area perceive themselves as being practitioners situated within this context. While the latter illustrates a view of counterparts of post-Soviet area as practitioners in imitation of CSR in West - passive, powerless to change the model with their environment, the former exposes an entirely different view - that practitioner in the region have long been educated, worked, and still remain strong and very public local practitioners during Soviet time in context of their communities , as evidenced through the voices of practitioners within my experience and former interviews. My strong motivation, which I have made an effort to convey through this research, maintains the view that approaches to CSR practices must be contextually and socially specific, and that international (Western) CSR discourse cannot hope for useful results for local context without

considering it as such, with questioning how, and by whom is CSR practiced and in whose favor?

At the same time the private sector-led marketing generates economic and social problems such as social inequality and anti-globalization movement, and makes CSR undemocratic but only responsible for the elite in the companies' headquarter, not for the society (Crouch, 2010). Various international and national initiatives have been striving for re-building trust among states, business and civil society through meeting social needs. Although the globalization accelerates states and private enterprises to put forward international CSR standards activities, it also encounters the difficulty to implement CSR due to national political and corporate cultures differences over the world.

This paper aims to analyze the gap in terms of how states and business form, promote, regulate and exercise the power of effective CSR enacting. The goal of this study is to evaluate the effectiveness, including the impact of CSR, international business agenda, the limitations for the state's CSR promotion, and regulation in the industry. Taking into account the abovementioned, research problems in this paper are considered how and to what extent the state interacts and regulates state development goal via CSR is unclear. As stressed "theoretical triangulations" by Denzin (1970), the general approach in any study is to use a small set of research questions or hypotheses, and gather data specifically with the dimensions considered, while approaching data with "multiple perspectives" and research questions or hypotheses would have value.

I have chosen to argue here that CSR practices in non-Western society are deeply embedded within connotation and practice typical to the western society from which it evolved over time. As such, CSR practice in post-Soviet countries and the others may be interpreted directly via these means as mismatching, reproducing the socio-economic structures of historically western social order through business. Thus CSR practices in the area are strongly influenced by the dominant discourse and a series of CSR practices and its institutions. In terms of discourse, Foucault's work on discourse provides that where meanings are contested and power relations determined; such perspective makes the assumptions in my own analysis of CSR discourse as the important point how CSR practices influence the society. Beginning with an overview of the CSR research methodology as a means of clarifying out these issues, this analysis moves on to describe a theoretical framework based upon Fuller and Tian's (2006) concept of social capital, symbolism, and stakeholder approach are useful methods to analyze CSR. This paper will use these theories addressing the question of how CSR is promoted and regulated. Using these theoretical frameworks, it often happens that CSR activities have utilized the existing corporate symbolism well in order to obtain legitimacy (symbolic capital) through activities oriented towards apparently sounds but controversial CSR. Stakeholder approach recognizes the dynamics as well as complex relationships among organizations and their stakeholders, and that such a relationship of

responsibility and accountability of CSR. It also enables identification of those public policy stakeholders and interest groups such as states, companies, international organizations and civil society to whom the business might be considered accountable, thus to whom an adequate account of its activities would be deemed necessary.

With this theoretical method articulated through my former interviews with them and own experiences within CSR community, provide a more intricate understanding of how they view their own business responsibility practices against this via their own views of themselves at international level and the dynamic of evolution of the CSR movement in post-Soviet countries over the decades.

As explained previously, this research is taking on board data and thematic triangulation and it mixed up methods to solve its puzzles, which can be analogous to be named “methodological triangulation” in the sphere of sociological research. In this regard, I am considering an analysis of the variation in CSR practices, which will be utilized as a stepping stone for the qualitative analysis. In order to measure CSR, I mainly reply on the interview with practitioners, am essentially looking at the divergence of views between the state and private entities.

Results

Since the majority of the scholarly work done so far in this CSR literature is based on Western countries, it is a highly challenging task to collect and operationalized qualitative data in post-Soviet countries. Indeed post-Soviet countries are strategically important both for world politics and business considering the huge number of population and business potential. However, over the last decades, they have been experienced political and economic unstable development, which led to undesirable consequences for the economy and the society as a whole, which makes us go-beyond the state centric approach in making sense of the practice of CSR. My ultimate goal is to get my work published as a book by a well-known publisher since the topic of my research is highly relevant to contemporary CSR issues. Expected impact of the research is to draw attention of business structures and contribute to International Business/Entrepreneurship in strategically important and rapidly growing area of business, CSR as a new alternative and its application in business operations. This research is expected to share the best practices, initiate, and promote future studies between relevant stakeholders.

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Turabaeva, Ayzhana¹: Analysis of Theoretical Backgrounds of Institutional History of Russia and Their Use in Modern Conditions

***Abstract:** The article based on the analysis of foreign theories and theories of our country of development of national economies and institutional systems emits the characteristic features of the Russian institutional system. The projection leads of these features for the whole historical process of our country and contemporary reality. During the analysis the significance of the historical background of institutional development and their immediate relevance at the present time was stated.*

Introduction

Causes and effects of different social and economic events, successful and unsuccessful experience are explained by many factors – errors of management, global market conditions, problems of financing, competition or, on the contrary, monopolizations, etc. However, one of the major factors among everything is process of historical development, genesis of various economic relations. Especially importance it for Russia, in context of disputes about ending the transition period in Russia. What criteria of this period, what role and matter Russia economy play in the world, what her social and economic conditions. In my opinion, to answer many questions of the present stage of social and economic development of our country is obviously possible by studying of institutional economic history of Russia by which we will mean "the history understood as science about processes of emergence and development of the "rules of the game" defining human relations and the mechanism inducing (stimulating or obliging) to their execution"[7].

Aim of the Project

Aim of the project is detection of key lines of the Russian institutional system on the basis of analytical consideration of theories of institutional development, ethno genesis [3], the theory of Institutional Matrices [2]. The use of the identified trends on particular examples of the present stage of socio-economic development of Russia.

Hypotheses and Methodology

Hypothesis is the thesis about discrepancies of formal and informal institutes on single questions, considering the values of historically developed informal institutions.

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One of the main methods in this work is the extrapolation in time - the attempt to transfer the main trends identified in the institutional analysis of history of Russia on the existing reality. To confirm - statistics for different periods. Theoretical analysis of the basic concepts on the basis of the objectivistic approach.

Results

During the research the discrepancy of formal and informal institutes.

So, for example, one of problems for many regions of Russia is the low level of entrepreneurship development. As one of the reasons it is possible just to call such characteristics as "collectivism", the relations of "distribution economy"[1], adherence to office work.

For confirmation of conclusions we will give several examples.

There is a set of the points of view on a question of why in Russia have cancelled serfdom much later, then in the West. There are various explanations: connected with recognition of efficiency of work bigger in comparison with the earth, geographical specifics of Russia, etc. However, I consider that the answer is covered also in needs of peasants who have apprehended reform as imposed from above and finally haven't been satisfied with this freedom.

Of course, examples of ruthless operation and the revolts proved by it are known. However and after reform of 1861 took place of a revolt (because of release without the earth, with the earth of the worst quality). So according to the Ministry of Internal Affairs for 1861 there were 1859 peasants uprisings. In the end, the reform was completed 20 years later. [8].

However, the land issue was not fully resolved. It was assumed that the situation will change after the Stolypin reform in 1906. However, as a result the village was split. The most enterprising peasants were rejected by the villagers [7].

The following example is, by many estimates quite successful and taking place in our history, system of collective farms of the Soviet period which basis were just "collective property" (in different degree) also centralized relations of «distribution economy».

Thus, despite the existence of formal prerequisites for development of business: grants, programs, "tax holidays" and in general lower rates for comparison, for example, with a personal income tax, essential increase in enterprise activity isn't observed. By in my opinion, the reasons are explained by as objective economic prerequisites (lack of solvent demand, big risks), and also by ethnic and social. It is possible to speak about demonstration of the distributing relations and office work – at a high rate of a personal income tax and social assignments people are ready "to overpay" for an opportunity "to fulfill according to the standard, not to take the risk, etc."

Thus, during the analysis of historical process, ethno genesis, objective economic indicators, it has been revealed that, for example, within transition period in economy - during the periods of origin of new institutes - it is possible to

approbation and adaptation of national economy in a framework of the western systems, by new methods, their synthesis with traditional for the country institutes . However, first of all actual task is to reveal and "decipher" roots of these or those events of national history, her economic system, and on the basis of the analysis of these prerequisites to design and enter any norms, reforms, formal institutes.

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Wadehra, Shivani¹: Eliciting Households' Cooperation for Efficient Waste Management

Abstract: *Delhi's landfills continue to be used as dumpsites for all kinds of waste although the Municipal Solid Waste Management Rules, 2000 explicitly restrict landfills use to disposal of only inert, non-recyclable and non-biodegradable waste. It is widely acknowledged that waste segregation at household level is possibly the most efficient way to address this problem. In practice, however, inducing such behavior at household level is a challenge for public authorities responsible for waste management. This paper frames the problem of non-cooperation by households as a 'social dilemma' and the empirical part of the research is designed accordingly. The data comes from 900 households across 15 localities in Delhi (11 in the treatment group and 4 in the control group). Since the literature on resolving social dilemmas highlights the importance of information and norms, subsets of households received additional interventions in terms of (a) a comparison of the amount of 'own'-waste generated with that of 'others' and (b) an economic incentive to cooperate (i.e. segregate waste). In order to ensure that the findings of the study are policy relevant and can be put to practice, the Residents' Welfare Associations in the chosen localities were co-opted as collaborating partners.*

Introduction

The Growing Problem of waste

Delhi generates 8360 TPD (approx.) of municipal solid waste (MSW) per day. Studies have shown that there is a clear linear relationship between per capita solid waste generation rates and income levels for Indian households [Viswanathan, 2006] and that India's per capita MSW generation rates are likely to keep pace with the economic growth rates [Goel, 2008], which means that already burgeoning mountains of waste will only grow further.

At present, rag pickers collect the recyclables from the Dhalaos (garbage collection points) but as they forage in refuse dumps, are susceptible to a lot of diseases and come in contact animal excreta, sputum, dead animals and at times medical waste [Sarkar, 2003]. Segregating waste at the source will not only improve the quality of work environment of the rag pickers [Sarkar, 2003] but legitimizing their role would help decrease the burden on the municipalities and thus benefit the society as a whole, as it would not only provide the waste pickers with better work conditions, would reduce emissions to air, soil and water but also increase the amount that can be recycled.

Interviews with households brought out that households do not engage in segregation at source and also, there is lack of knowledge about the existing rules.

However, in India, the existence of the kabadiwala model brings to highlight that households recycle glass bottles and newspapers either because of knowledge of the system or because of the monetary incentives attached with recycling these. Also, discussions with rag pickers highlighted that packaging materials, milk packets are collected by them to earn a living.

Policy Setting

The rules as stated in Municipal Solid Wastes (Management and Handling) Rules (MSW Rules), 2000, state that it is the responsibility of the generator of waste to ensure delivery of waste in accordance with the collection and segregation system notified by the municipal authority and in order to encourage this, the municipal authorities shall undertake a phased programme to ensure community participation in waste segregation. The rules also specify that landfilling will be permitted for non-usable, non-biodegradable and non-recyclable inert waste [Municipal Solid Wastes (Management and Handling) Rules, 2000].

The recently notified MSW Rules 2016 mandate the waste generator to segregate the waste into biodegradable and non-biodegradable waste before it is collected.

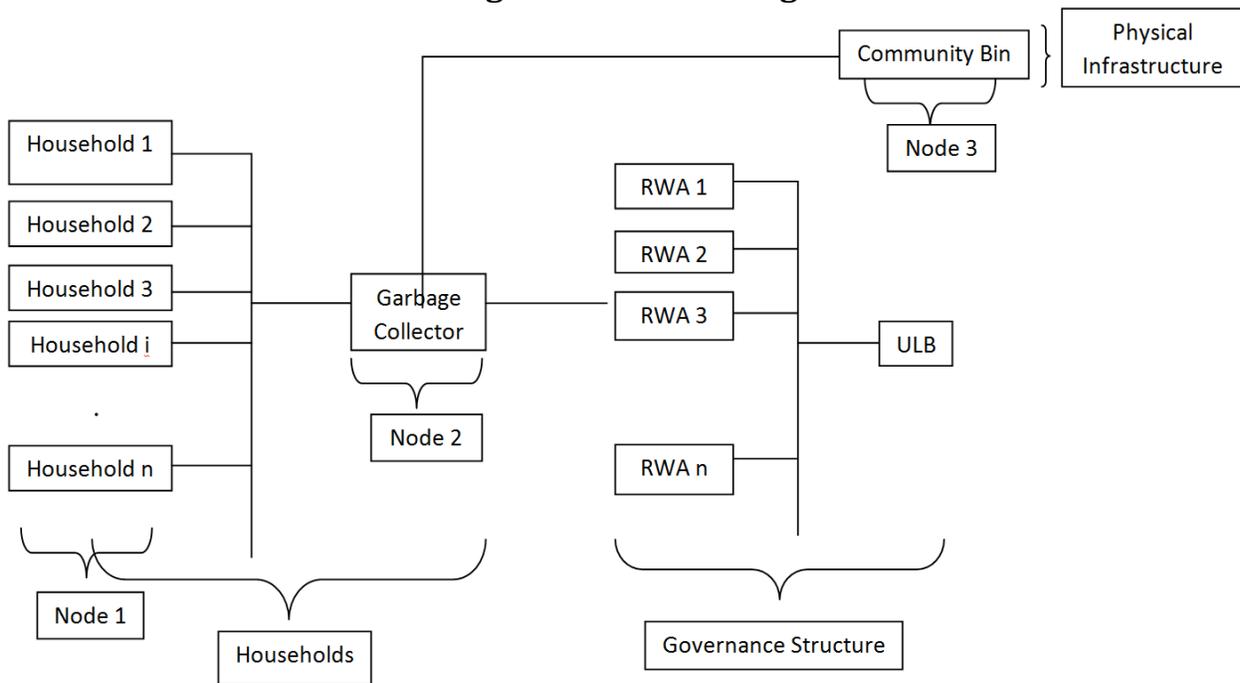
Institutional Setting

Waste management involves institutions (nodes) at various levels and the interplay between these institutions determines whether rules are complied with or not. The figure below gives a visual representation of the institutions (nodes) involved in dealing with this dilemma. In the chain of waste collection, the first node is the householder- waste generator, the second – garbage collector, the third – community bin (physical infrastructure), fourth – transport (physical infrastructure).

Waste is generated at the household level which is collected by the garbage collector. This garbage collector is generally appointed by the Resident Welfare Association (RWA) of the locality. RWAs are legally recognized entities which are registered under the Cooperative Societies Act. Garbage collected is dumped at the community bin located outside the locality. This community bin could also serve other surrounding localities and market places. The Urban Local Bodies (ULBs) are responsible for the upkeep and cleaning of these community bins.

In order to effectively manage waste, each of these nodes has to coordinate with each other as actions of each have a bearing on the actions of the node preceding it.

Figure 1. Field setting



This study focuses at the **first node- households, as this is beginning of the chain and is the focus for bringing about a ‘change in waste disposal behavior’ in accordance to the MSW Rules 2016 is required.**

Aim of the Project

The above discussions reveal that there is a clear disconnect between the rules formulated at the level of authorities and implementation at the household level. While the policy framework and the knowledge of the externalities should lead the society as a whole to reduce the generation of waste at source and to ensure proper disposal of waste, individual households waste disposal behavior showed otherwise.

The objective of the study is to examine the impact of series of interventions— information, norms and economic incentives, on the behavior of households. The study focuses on households as the policy now shifts the onus on to the waste generators, seeking to answer the following research questions--

- What are the determinants of households’ waste segregation behavior?
- How can the behavior of households be influenced in order to achieve better adherence to rules?

Hypotheses and Methodology

Hypothesis

- a. Provision of information on the benefits of segregation has a positive effect on the household’s behavior towards compliance to rules.

- b. Communication of peers' actions can help achieve a desirable conduct—generating lesser garbage.
- c. Knowledge of incentives has a greater impact than information or communication of peers' actions.
- d. Provision of incentives can help sustain the actions of the households.

Methodology

The study follows a field experiments approach, categorizing the groups in control and treatment households. Municipal Corporation of Delhi's property taxes categorization was used for stratifying households on the basis of income. A total of 900 households across 15 localities were sampled—660 in treatment (11 localities) and 240 in control (4 localities).

In the first round, data on socio-economic variables, demography, environmental preferences and awareness and weight of waste generated was collected.

In the second round, all the households in the treatment group were provided with dustbins and garbage bags and benefits of segregation (Information Intervention). In addition to compare the effect of norms and economic incentives with respect to information, localities also received information on comparison of waste generated with respect to waste generated by others and economic incentives for segregating.

In the third round, a week after the intervention, we monitored to capture any change in their waste disposal behavior and also weighed the garbage. Monitoring was done again, a month after the interventions to compare the impact of the interventions over a longer time period and also to understand if there were any spillover effects.

Results

The study looks to take into account the effect of information, communication between the groups, and group's dependence of benefits to induce desirable action. The study finds that the interventions will have a positive effect on the households' behavior though the impact of economic incentive will be the greatest in changing the behavior as well as sustaining it.

The non-segregating households reported that it is not worthwhile to segregate as the garbage collector mixes it together. Households also reported that garbage collector has asked them not to segregate as he segregates later on. Such responses highlight that garbage collector could nullify the actions of the household, so it is important to educate the garbage collector of the rules as well.

The study finds that information campaigns, detailing the benefits of segregation for the environment and rag pickers had an impact on changing the waste disposal behavior of the households. In addition to the above, field observations also highlighted that feedback to the residents, in terms of amount of

waste diverted from landfill—composted or recycled would also influence their actions.

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