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"Access of Firms to Government Support: Econometric Analysis of Factors"

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Contents

Introduction. 3
Literature review. 3
Data and hypothesis. 5
Upper level. 5
Lower level. 6
Model 8
Results 9
Literature 10

Introduction.

Interaction between a state and business within this state is an issue with long history of analysis and research and has different approaches. The roles of the state vary from laissez-faire position to one, in which state owns practically all businesses. The desired role of a state is hard to determine due to many factors and is obviously different for countries and even for the country at different times (for instance, in case of war, government role increases very much). Nowadays, this issue is again under heated discussion since many countries in order to come through the crisis increased their presence in business. This takes forms of changing regulations and rules, owning businesses, helping with credit, government procurement, money pumping and others. One of the most powerful tools for ruling the economy, especially if we remember Keynes, is state procurements. They can drag a country out of the crisis if applied properly. However, state-business interaction is a two-way road, which means that business actions should be taken into consideration and they can be different: companies can follow the rules, can change the rules by lobbying, can even merge with authorities, etc. In the last case, as far as procurements are concerned, they become ineffective, because procurements become a tool for corruption. The aim of this study is to analyze current situation with government support, including procurements, in Russia and define the current type of interaction between the state and business. This objective is especially actual since several changes have been recently made in Russia in this field and the topic is widely discussed. Basing on the information from 1000+ companies, we will try to derive the real picture of state-business interaction.

Literature review.

Academic discussions on the topic spring from George Stigler's paper "The theory of economic regulation" (1971), the main thesis of which was that "as a rule, regulation is acquired by the industry and operated primarily for its benefit". He succeeded to show this by providing a couple of econometric models, in which he proved, firstly, that in competition between railroads and trucks, the former used legislative power to limit trucks' potential and, secondly, that licensing can be used and actually was used by certain professions to build an entry barrier. All in all, George Stigler can be considered as an author of "state capture" model, though this term was introduced by Hellman, Jones and Kaufmann in paper "State Capture, Corruption and Influence in Transition"(2000). They argued that in Russia in 1990-s long-

established companies were dominantly receiving government support due to “special relations with authorities” in spite of their comparative inefficiency. The authors also singled out the following levels of companies’ interaction with the state:

1. Administrative corruption – “petty” forms of bribery in connection with implementation of laws, rules and regulations.

2. Influence – shaping and affecting formulation of the rules without payments.

3. State capture – as mentioned, it is shaping and affecting formulation of the rules through private payments to public officials and politicians.

Timothy Frye in his papers discovered that in Russia it is not a “capture model” but an “elite exchange”. In his research titled “Capture or Exchange? Business Lobbying in Russia” (2002) he argues that the firms which succeeded in lobbying faced with increased liabilities. Notably, they were inspected, especially by tax departments, and prices were controlled more frequently and statistically different from non-lobbying companies. According to Frye, “inspections offer excellent opportunities for corruption for politicians and bureaucrats”.

Frye confirmed, founding on 500+ enterprises base, that large firms influence legislation, but he also discovered that type of property matters on the regional level: state-owned companies receive much more help than privatized firms. Another discovery from his analysis is that, though lobbyists indeed use personal ties to get benefits, half of them resorted to the help of business organizations, which means that nowadays professional associations play significant role, more significant than usually expected.

The last model of state-business relationship is primarily developed by Dani Rodrik. The main idea of his “new industrial policy” is the following: “the right model for industrial policy is not that of an autonomous government applying Pigovian taxes or subsidies, but of strategic collaboration between the private sector and the government with the aim of uncovering where the most significant obstacles to restructuring lie and what type of interventions are most likely to remove them”. In Russia in 2000-s government support policy underwent changes: growing firms with restructuring and investment planning started to receive help from regional authorities, which can be treated as a shift towards “new industrial policy” model, according to his results.

In this paper, we are going to define the model of interaction on each level of three-tier authorities' structure: federal, regional and local. The main differences from previous studies are, first, extended database: we have 1013 enterprises and representatives from almost all sectors. Databases in previous research lacked many sectors, but we have an extended database, which increases the precision of estimates and the scale of analysis. Second, multilevel models: we are going to analyze region qualities on the upper level and with these estimates we will build the model on company level.

Data and hypothesis.

There are two datasets: the first one concerns regions and the second one is about companies with lots of characteristics. Our goal on this level of analysis is to define those factors, which can reveal the true picture and be passably interpreted. The following passages describe chosen factors and corresponding hypotheses.

Upper level.

As was already mentioned, we are going to determine factors which influence the probability to receive government help on regional basis. We have chosen the following factors:

1. Distance from Moscow. As a rule, distant regions are not very much developed, which means that these regions have higher probability of receiving help. There is no direct logic connection between distance and development but this factor can be a valid proxy for this indicator.

2. Average temperature in January. The logic is the following: the lower the temperature is, the bigger the costs are, because spending on heating increases in this case. The bigger are the costs, the less competitive is an economy and, hence, the probability of receiving help is higher. However, we should be aware of regions rich of natural resources. They will distort the picture, because they have low temperature and they are rich, but they are rich not due to wise policy or competitive economy.

3. Budget spending efficiency. With the help of this factor we will try to analyze whether we have the "new industrial model" in Russia.

4. Exemptions. If the region stimulates business with the help of exemptions, it will need federal help ceteris paribus.

5. Result-orientation of authorities. Positive correlation is expected.

6. Business-group characteristic. Associations, which include major companies, are likely to succeed in receiving help in comparison with the ones, which do not include.

7. Number of bureaucrats. We are going to compare the share of bureaucracy in a region with an average one. The Russian Federation consists of 83 regions and this is quite enough to rely on average share. The hypothesis is that bigger share of bureaucrats means that they work less efficiently to cope with all duties, which, in turn, affects the probability.

8. Unemployment rate. The hypothesis is quite obvious: government help is a tool for providing social politics, hence, the higher the rate is, the higher is the probability of receiving help.

9. Migration. The impact of this factor is expected to be positive: cheap workforce enables regions and companies to cut costs.

10. Inflation. This factor is included but its sign is hard to forecast.

11. Gross Regional Product per capita. This is a standard measure of economic development. As was stated earlier, regions with small GRP are likely to receive government help.

Undoubtedly, no one can be sure that it is a full list of factors, there can be better ones, but the problem is that usually collecting this very data is too difficult and expensive. Besides, the talent of a researcher should be applied to find the best factors within possibility boundaries and we hope that we coped with this challenge.

Lower level.

The base counts 1013 units of observations and includes, besides manufacturing companies, firms from sector of service. This is a crucial advantage, because previous studies' databases were limited to manufacturing and we have an opportunity to enlarge the researched field. We have chosen the following factors:

1. Number of workers. As proved in previous studies, the bigger the company is, the bigger the probability to participate in government procurement is. We take this factor in logarithms in order to smooth the high degree of the factor. We will lose other information in the shadow of great numbers of workers unless we take the logarithms.

2. Date of establishment. Certainly, we are interested whether the company is founded in Soviet times or not. We are going to test the hypothesis that long-established Soviet companies are much more successful in lobbying and receiving government orders than new-born companies. It was true for 1990-s (one can remember cases with “Red directors”) and we are especially interested whether it holds true nowadays, because as a rule Soviet plants cede in efficiency to modern companies (remember AVTOVAZ) and it is disputable whether government should help them more than others.

3. Ownership. We see if government is among owners and, if so, we test whether the company is likely to succeed in receiving government orders. Relying on previous studies we expect that having the state among owners increase the probability of success of the enterprise. We are going to draw additional attention to those companies, which denied revealing the information about ownership. We are doing that for two reasons: first, the group of deniers is big enough to be specially treated and, second, hiding the beneficiary of the company leads to the expectations that not everything is smooth with the company. May be the beneficiary does not want to be known in public due to his position or affiliations. For our study this means that we should include this factor separately. Another guess, connected with ownership, is that presence of foreign stock matters; that is why we take this factor into consideration.

4. Participation in holdings. Our hypothesis is that if a company is a member of the holding, it is easier to lobby its interest and, hence, the impact is positive. We also separate leaders of the holdings because we expect that they have even higher influence.

5. Type of the city. We believe that it is connected and, anyway, since we want to get unbiased estimates, we should include as much logically connected factors as possible and type of the city is one of them.

We also make dummy-variables for sectors in order to eliminate sector influence on other estimators and eliminate regions in which the number of observations is less than 5 due to representative issue.

Model

The initial logit-model for estimating probability of receiving help is constructed as follows:

$$P(FedHelp) = F(B_0 + (B_1 + U_r)LnSize + B_2 foundation92/98 + B_3 foundation98 + B_4 StateOwner + B_5 ForeignStock + B_6 OwnershipNOanswer + B_7 Holding + B_8 HoldingHead + B_9 MoscowSPB + B_{10} Center + B_{11} PGT + B_{12} grp08 + \sum_{i=13}^{21} B_i Sectori + e)$$

Special attention should be paid to U_r coefficient since it is derived from upper-level factors. It is special for every region *r* and is treated as variation of slope due to differences in region.

The model can be measured for different periods, we now estimate for the period from 2006 to 2008. The results are the following:

Variable Name	FedHelp
lnSize	0.49***
Foundation92/98	-0.26
Foundation98	-0.60
State_Owner	1.19***
Foreign_Stock	0.65
Ownership_No_answer	-0.47
Holding	-0.36
Holdinghead	-0.16
Moscow_SPB	-0.83
Center	0.27
PGT	-0.09
grp08	0.00
sector1	0.44
sector2	-1.40
sector3	0.46
sector4	0.29
sector5	1.40**
sector6	1.12*
sector7	0.29

sector8	-0.04
sector9	0.51
sector10	(omitted)
cons	-5.33***

legend: * p<0.05; ** p<0.01; *** p<0.001

Results

Our main hypothesis, that long-established companies receive much help, is proved. This factor is very strong and significant for probability. The presence of the state among owners also matters and the coefficient is significant, hence, our hypothesis is also proved. The finite value of influence can be computed as marginal effect.

The model is initial and we are going to proceed with analysis in further directions: we are going to monitor all above-mentioned factors and find the important ones on upper and lower levels. We are also going to test the hypothesis that we have “new industrial policy” model in Russia. We expect that the result will be negative, but we hope for the best and we are looking forward to positive outcome.

Literature

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