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Access of firms to public procurement in Russia in the 2000s: before and after radical reform of regulation



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# Andrei Yakovlev<sup>1</sup> and Olga Demidova<sup>2</sup>

Access of firms to public procurement in Russia in the 2000s: before and after radical reform of regulation<sup>3</sup>

## **Abstract**

This paper considers the main consequences of the radical reform of public procurement in Russia carried out in 2005-2006. Using data from two surveys of manufacturing enterprises in 2005 and 2009 we show that before the reform firms with government stakes, old firms (established before 1992) and larger firms had advantages in access to government orders. Our analysis of the 2009 data demonstrated substantial growth in the share of firms participating in government procurements. Large firms retain their advantages in access to government orders. The fact of having fulfilled government orders in 2005 has a positive influence on a firm's participation in government procurements in 2009. Estimated scales of "kickback" in 2009 were virtually the same as in 2005. Our analysis of the 2009 data also revealed that factors of active restructuring of the enterprises had no influence on the enterprises' access to government orders. The results of our analysis enable us to conclude that the principal goals of the radical reform of public procurement in Russia were never achieved. We discuss the reasons for this failure and provide some policy implications.

Keywords: Russia, regions, corruption, government, procurement

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## Introduction

Corruption in government procurements remains one of grave problems in transition economies. A reaction to this problem in Russia came in 2005-2006 in form of a radical reform of government procurements. This paper analyses the key ideas of the reform and the main parameters of firms participating in government procurements before and after changes in regulation.

Our analysis is based on data from a survey of 957 manufacturing enterprises conducted in 2009 by the Institute for Industrial and Market Studies at HSE. The surveyed firms were located in 48 regions of Russia and represented eight manufacturing sectors. These enterprises employed about 8% of the average payroll across the whole sample, and in 2007 they produced about 6% of the total output of manufacturing industries.

The questionnaire included questions about firms' participation in supplies to government orders, the extent of "kickback" in the public procurement system etc. A similar survey with the same sampling was conducted in 2005, and this enabled us to construct a panel of 499 firms and to have a unique opportunity to compare the situations before and after the radical change in the legislation.

Our regression analysis confirmed the hypotheses that in 2005 firms with government stakes, old firms (established before 1992) and larger firms had advantages in access to governmental orders. Our analysis of the 2009 data showed a substantial growth in the share of firms participating in government procurements. As before, large firms retained their advantages in access to government orders. However for the old firms, the corresponding coefficient became insignificant. On the other hand, firms located in the more developed Russian regions have gained advantages in access to government orders.

Our analysis of the 2009 data also revealed that factors of active restructuring and modernization of the enterprises (presence of large-scale investment projects in 2005-2008, exports, ISO certification) had no influence on their access to government orders. At the same time, the fact of having fulfilled government orders in 2005 has a positive influence on a firm's participation in government procurements in 2009. Estimated scales of "kickback" in 2009 were virtually identical. The results of our analysis enable us to conclude that the principal goals of the radical reform in 2005 were never achieved.

The paper is structured as follows. Section 2 gives a review of previous studies. Section 3 provides an overview of the public procurement system in Russia. Section 4 describes the empirical data used in the analysis. Section 5 presents our main hypotheses and methodology. In Section 6 we discuss the results of our analysis, and Section 7 contains our basic conclusions and policy implications.

#### **Previous Studies**

The problems arising from corruption in government procurements are discussed in many theoretical studies (Lambert-Mogiliansky & Sonin, 2006; Auriol, 2006; Evenett, 2005) and descriptive works (Handbook for Curbing Corruption in Public Procurement, 2006). The studies are not limited to transitional economies, however; corruption in developed economies is also a topic of research. For instance, taking the example of Norwegian exporters, Soreide (2006) argues that large firms have more ways, including illegal ones, to influence the outcomes of tendering procedures in public procurements. Hyytinen et al. (2006) use logit models to show that national firms were given preference in auctions for cleaning services conducted by municipal authorities in Sweden over the period 1990-1998.

At the same time, corruption in government procurements is clearly a more urgent issue in developing and transitional economies. One of the main sources of empirical data for transitional economies in this field is the Business Environment and Enterprise Performance Survey (BEEPS), which is a joint initiative of the European Bank for Reconstruction and Development (EBRD) and the World Bank. The survey was first undertaken on behalf of the EBRD and World Bank in 1999 – 2000, when it was administered to approximately 4000 enterprises in 26 countries of Eastern Europe and Central Asia (including Turkey) to assess the environment for private enterprise and business development (see details at

<u>http://www.ebrd.com/country/sector/econo/surveys/beeps.htm</u>). The survey is conducted every three years, and the number of participating countries has risen to 29.

Even the first BEEPS study revealed that along with current "administrative" corruption and the phenomenon of state capture, corruption in government procurements is very widespread in transitional economies. The study measured the latter form of corruption based on the respondents' answers to the question: "If the firms in your industry carry out government orders, what percentage of contract value is usually paid as additional rewards or gifts in order to ensure that the contracts would be awarded?" The respondents were also asked to estimate how widespread this practice was and how often the firms in their industry had to pay kickbacks for government orders.

According to the first BEEPS round, in 1999, 12% of all respondent firms believed that procurements to the government and public organizations often went hand in hand with kickbacks. Of the surveyed firms, 52% did business with the state, and the share of those citing kickbacks as a regular practice was as high as 24%. For Russia, the corresponding figures were close to average in the sample, i.e. 12%, 56%, and 22%.

A more detailed analysis of the collected data showed that the firms involved in corrupt practices within the government procurement system exhibited better performance in terms of current sales, capital investment, and employment, and also demonstrated greater confidence in the future of their businesses for the next three years. All these findings were the same for CIS and Eastern European countries, but the two regions proved to be strikingly different with respect to the situation of "state capture" (Hellman et al., 2000).

Additional surveys conducted by BEEPS revealed that while the countries studied made relatively good progress in other spheres, the indicators for the field of government procurements worsened. For example, in 2002, 14% of respondent firms in Russia mentioned that kickbacks were a frequent phenomenon. In 2005, this answer was given by 22% of 599 firms surveyed in the BEEPS framework (Anderson & Gray, 2006). By way of comparison, this kind of answer was given by 4% of firms in Spain, 8% in Turkey, and 13% in Germany in 2005-2006.

A regression analysis conducted using the 2005 data showed that new private enterprises and firms in manufacturing were more frequently involved in corrupt relations regarding government procurements. On the contrary, firms with foreign ownership stakes were less predisposed to give kickbacks for public contracts (Anderson & Gray, 2006).

At the same time, data from the fourth BEEPS round in 2008-2009 indicated that tendencies in Russia and other transitional countries were diverging. While 12% of the respondents in the countries covered by the survey (excluding Russia) cited kickbacks as part of the procurement process, whereas for Russian participant firms the corresponding figure was 28%.

These results raise doubts about the efficiency of the new system for handling procurements in Russia. At the same time, the sample of the fourth BEEPS round in Russia covered a relatively small panel component; the number of firms with available data from the previous rounds was about 300. In manufacturing, where corruption was much more typical according to Anderson & Gray (2006), the number of such firms was 200.

# Public Procurement System in Russia: Institutional Context

Russia inherited its inefficient procurement system from the planned economy. After the demise of the old Gossnab system, the Russian government continued with the direct financing of state enterprises and public entities (without competitive bidding). The lack of reforms in public procurement created strong opportunistic incentives for managers and officials that led to a high level of fraud and corruption. As result, Russia in the early and mid 1990s responded to a huge budget deficit with sizeable cuts in public spending and by regularly refusing to pay for public orders.

An understanding of these problems was the basis for the first reform of public procurement pushed by the Russian government, and especially by vice-prime minister Boris Nemtsov, who was so appointed in the spring of 1997. This attempt to reform the procurement system based on a model law on public procurement elaborated in 1994 by UNCITRAL – UN Commission on International Trade Law

(http://www.uncitral.org/uncitral/en/uncitral\_texts/procurement\_infrastructure.html).

Due to the resistance of the State Duma (Russian parliament), a new regulation was introduced by presidential Decree #305 (<a href="http://gov-zakaz.ru/modules/content/index.php?id=13">http://gov-zakaz.ru/modules/content/index.php?id=13</a>). According to Decree #305, competitive bidding became obligatory for all procurements involving more than 2500 minimum wages permitted by law (this amount was equal to USD 35,000 in 1997). The new regulation gave public entities the opportunity to use different types of procurement procedures and also introduced the requirement to publish bid information as well as obligatory training of procurement specialists for all public buyers (customers).

However in implementing the reform government faced serious constraints. First of all Decree #305 did not spell out the enforcement rules. There were no real sanctions for abuse by suppliers, for failure to publish bid information or for other violations of the law. The concerned department at the Ministry of economy had only 30 staff employees. Apart from other duties, these people were responsible for approval of single-sourcing requests for the whole country and, according to estimates by a ministry representative, they had on average only 15 seconds for evaluating a single request. No unified information on public procurement was collected, and even basic statistical data were lacking at the time.

Thus the Russian government tried in 1997 to reform public procurement according to the policy advice of international organizations, but the system remains inefficient due to extremely weak enforcement. The economic and political crisis of 1998-1999 removed Mr. Nemtsov from the government and public procurement reform from the political agenda.

The second attempt to reform the public procurement system is closely associated with activity of Igor Artemiev, one of leaders of the Yabloko party, who was appointed in 2004 to head of the Federal Antimonopoly Service (FAS). Subsequently, the volume of government orders on goods and services placed with enterprises rose dramatically along with the expansion of Russia's fiscal revenues. For instance, according to data presented in the World Bank Report (2006), the total volume of government procurements in 2002 was about \$12 billion, or 8.7% of consolidated budget expenditures, while in 2004 the corresponding figures shot up to \$22 billion or 11.7% of fiscal expenditures. Unlike in the 1990s, the government began to fulfill its obligations by via contracts for procurement of goods and services. As a result, government orders became an important source

<sup>&</sup>lt;sup>4</sup> That list included open tendering; restricted tendering; request for quotations; request for proposals without negotiations; two-stage tendering; request for proposals with dialogue; request for proposals with consecutive negotiations public tender; competitive negotiations; single-source procurement

of revenue for many firms.<sup>5</sup> However, at the same time the system of government procurement in the RF was notably affected by increasing corruption. For example, World Bank experts stressed the strong decline in the average number of contractors participating in public tenders (World Bank, 2006).

In 2004 the Russian government decided in favor of active industrial policy and a 'developmental state' model. Public procurement was considered an important tool in this new political-economic agenda. Therefore the inefficient system of public procurement regulation and high level of corruption (kickbacks) became a matter of growing concern to the Russian government and prompted radical changes to the legal framework for government procurements. These changes were initiated by FAS head, Igor Artemiev, with the strong support of the minister of economic development and trade, German Gref, in the autumn of 2004. FAS drafted a new law on public procurement, and already in July 2005 this draft was adopted by the State Duma as Federal Law 94-FL "On the Placement of Orders to Supply Goods, Carry Out Works, and Render Services for Meeting State and Municipal Needs", which entered into force on January 1, 2006 (see <a href="http://www.gov-zakaz.ru/modules/content/index.php?id=59">http://www.gov-zakaz.ru/modules/content/index.php?id=59</a> for all updates to January 1, 2011). To make public procurements more efficient, the following key ideas were to be implemented:

- Setting up conditions for competition by way of securing free access to participation in public procurements for all economic agents, firstly small and medium size enterprises (SME). To ensure access for new participants, it was prohibited to set qualification requirements when assessing and selecting applications; suppliers' "quality" features were brought to a reasonable minimum (qualifications and business reputation of potential performers). To foster SME entrance to the public procurement market, 94-FL set very low thresholds for making competitive purchase procedures for public customers obligatory (60,000 rubles or USD 2000 in 2006-2007, 100 thousand rubles or about USD 3.4 thousand in spring 2011).
- Secure maximum transparency of procurements. Prior to 94-FL, information on tender might be published in a local newspaper almost without any standards, but with 94-FL all procurement information was unified and placed on a common official site <a href="http://www.zakupki.gov.ru/">http://www.zakupki.gov.ru/</a>. To make public procurements transparent and to limit bid manipulation by public customers, applications were selected in accord with the minimum price criteria.
- <u>Fighting corruption</u>. Corruption during the period when 94-FL was being drafted and adopted was viewed as a key problem for public procurements. A completely formal and unified approach to all procurement procedures with strict limitations on the behavior of the government's purchasers, and on their procurement-responsible employees, together with transparency, was expected to deal with the problem and influence the selection of suppliers. Another important anti-corruption instrument was to build up simple control measures, implying simple procurement procedures with easier controls on the regulator's side.

Implementation of these ideas was supported by a significant increase in specialized staff employees of FAS<sup>7</sup> as well as by a set of sanctions stipulated in the Code for Administrative

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<sup>&</sup>lt;sup>5</sup> For instance, according to the survey conducted by the HSE and World Bank in 2005-2006 (1002 manufacturing firms across 48 regions and 8 sectors) 28% enterprises claimed to have sold goods or services to the government in 2004.

<sup>&</sup>lt;sup>6</sup> Both Artemiev and Gref represented liberals in Putin's government, came to Moscow from Saint-Petersburg city administration and were closely connected with Mr. Putin.

<sup>&</sup>lt;sup>7</sup> About 1200 staff employees of FAS and its territorial units were responsible in 2009 for the enforcement of 94-FL.

Violations. If 94-FL rules were not observed, the Federal Antimonopoly Service and its territorial bodies could cancel bid results and impose fines on procurement-responsible officials in public customer organizations. Later 94-FL was treated as a part of antimonopoly legislation and aligned with the Federal law "On protection of competition" (135- FL). Sanctions for breaking the 94-FL were expanded to the level of criminal liability. Complaints of suppliers whose interests suffered in the bid process were reason enough to start a case and impose sanctions. In case of disagreement, controlling bodies based their actions on the presumption of supplier's good will and customer's unfairness.

Adoption of 94-FL followed by singificant increase in public spending for goods, works and services (see the Table 1). At the same time, according to FAS, due to competitive bidding procedures 94-FL led to huge savings of public money. An FAS press release in September 2010 announced the relevant figures: 770 billion rubles for 2006-2010. Igor Artemiev considers this economic effect as an important argument in public discussions with 94-FL opponents.

Table 1. Scale of public procurement in Russia, 2005-2009

	2005	2006	2007	2008	2009
Nominal Russian GDP	21.7	26.9	33.2	41.8	39.0
(trillions of rubles, current prices)					
Nominal public procurement in Russia	1.1	1.7	3.0	3.7	4.0
(trillions of rubles, current prices)					
Nominal GDP (2005=100%)	100	124	153	193	180
Nominal public procurement (2005=100%)	100	158	272	340	366

However, the means chosen by the FAS to address corruption (maximizing the unification and formalization of bidding procedures and using the lowest-price award method as the main way of selecting suppliers) raised serious doubts among experts, including those at the international level (World Bank, 2006). At the World Bank, for example, experts warned of the risks of simplified procedures and urged the introduction of a pre-qualification framework for suppliers and other "quality selection" procedures for all procurements of "complicated" products and services.

Later practical use of 94-FL revealed numerous problems of an objective nature, making it hard for public customer organizations to perform their key functions (see their detailed description in HSE (2010)). Manifestation of these problems at the time of implementing the new system of supplies brought about numerous changes to 94-FL. In all, 19 packages of amendments were made between July 2005 and end-2009. The legislative activity was building up with time: 2005-2006 saw only 2 packages of amendments to 94-FL, in 2007-2008, 7; and in 2009 the law was amended 10 times. These changes led to an increase in the number of exceptions to 94-FL and a big increase in single-sourcing.

In summer 2008 the Accounts Chamber presented its report including acute criticism of 94-FL. Based on an analysis of the problems of public customers, Sergei Stepashin, head of Accounts Chamber, stressed that 94-FL provided new opportunities for corruption. The Report of Prosecutor General's Office in December 2009 concluded that FAS could not properly control violations of 94-FL; the procurement regulation included about 20 factors that encouraged corrupt practices. Finally

<sup>&</sup>lt;sup>8</sup> According to *FAS annual report 2009*, in 2009 specialized staff employees of FAS organized 33587 inspections, controlled 125865 procurements procedures (less than 1% of *total number for all Russia*), detected 50033 cases of 94-FL violation, issued 2130 orders to eliminate violations, initiated 12817 proceedings against public procurement employees on administrative infractions, imposed 5549 fines (total amount 159 million rubles); considered 27464 complaints from suppliers, approved 9257 complaints and issued 8721 orders to eliminate violations

in the summer and autumn of 2010, in the context of the 'gold tomographs' affair (regular purchases of expensive medical equipment at prices 2-3 times higher than the producers' price level in 2007-2009), the Russian President, Medvedev, demanded an improvement in public procurement regulation (<a href="http://news.kremlin.ru/news/8614">http://news.kremlin.ru/news/8614</a>, <a href="http://news.kremlin.ru/news/8614">http://news.kremlin.ru/news/8614</a>, <a href="http://news.kremlin.ru/news/8617">http://news.kremlin.ru/news/8617</a>, <a href="http://news.kremlin.ru/news/8617">http://news.kremlin.ru/news/8618</a>.

It is important to note however that criticisms of 94-FL come mostly from the heads of the federal, regional and local authorities as well as from public customers and their procurement-responsible staff obliged to organize all procurements according to 94-FL rules. In this context, Perm governor Oleg Chirkunov stressed in his article in Vedomosti in March 2011 that critical arguments in this discussion are practically the same for honest public servants and dishonest corrupted officials (<a href="http://www.vedomosti.ru/newspaper/article/257205/goszakupki">http://www.vedomosti.ru/newspaper/article/257205/goszakupki</a>). Therefore it would be important to obtain more independent estimations of 94-FL efficiency based on empirical data and reflecting not only the viewpoint of procurement specialists, but also that of suppliers.

#### Data

We based our analysis on the results of two surveys of Russian manufacturing enterprises. The first survey was conducted in 2005-2006 by the HSE Institute for Industrial and Market Studies (IIMS) together with the World Bank, at the request of the Ministry of Economic Development and Trade in connection with the first round of its monitoring of competitiveness of manufacturing industries. In all, 1002 firms participated in the survey. The main results of the first round are described in Golikova et al. (2007) and Desai and Goldberg (2007).

The second survey, covering 957 enterprise directors, was conducted by the IIMS in February-June 2009. According to the monitoring program, the 2009 survey questionnaire asked firms about the intensity of competition; capital investments; export and innovative activities; ownership and control structures; their interaction with authorities; market conditions for labor and other production factors; and major barriers to running a business.

The surveyed enterprises were located in 48 regions and represented eight manufacturing sectors: food products, textiles; wearing apparel; wood and wood products; chemicals and chemical products; basic metals and fabricated metal products; machinery and equipment; electrical equipment, electronic and optical products; and vehicles and other transport equipment. Company CEOs made up 67.5% of the respondents; deputy directors general in charge of economy and CFOs constituted 31%; and in 14 enterprises, the respondents held other positions.

The parameters of our sample in 2009 can be described in the following terms: the average surveyed enterprise had 587 employees; 73% of the enterprises had been established before 1992 and 10% after 1998. The government held stakes of 11%; foreign shareholders participated in 10% of the total firms in the sample. Of all enterprises, 41% were located in regions with "below average" investment potential, while 30% were in regions with "above average" potential (as graded by the rating agency of The Expert Weekly magazine). Of the total number of surveyed firms, 28% were members of business groups; 54% exported their products in 2008; and about two-thirds were controlled by a single dominant shareholder or a consolidated group of owners. The enterprises employed about 8% of the average payroll across the whole sample, and in 2007, they produced about 6% of the total output of manufacturing industries.

The questionnaires for both HSE surveys asked enterprises to describe their role as government suppliers and to estimate the extent to which kickbacks were prevalent in the system of government procurements. However, new questions were added to the 2009 questionnaire

concerning the respondent firms' relations with public authorities, and participants in this round were also asked to assess the impact of Federal Law 94-FL on suppliers.

In both survey rounds there were 499 participating firms. There was no statistically significant difference in the distribution of firms by region and industry compared to the distribution of all firms by industry and region in 2005 and 2009, respectively. This enabled us to form a panel sample that was representative of manufacturing, giving us a unique opportunity to evaluate the general effects of the changes made to the procurement legislation from the suppliers' point of view.

# Key Hypotheses and Methodology

The inefficiency of the former system for the allocation of public orders and unequal treatment of different categories of firms in procurement auctions spurred a new law that strictly formalized procurement procedures. The architects of Federal Law 94-FL asserted that the previous method of allocating government contracts gave preferential treatment to firms with government stakes as well as to larger and older firms. Their claim that 94-FL would create fair conditions of procurement formed the basis for our first hypothesis: preferential treatment to firms with government stakes as well as to larger and older firms before 94-FL (2005 survey data) and limitation of preferential treatment to firms with government stakes as well as to larger and older firms after the adoption of 94-FL (2009 survey data and panel data). If its stated goals had been successfully and fully realized, the factors of enterprise ownership form, size, and time of establishment should have lost their relevance for determining which firms received government procurements

Our second hypothesis concerned the performance of the enterprises selected as contracting parties for government supplies. Ideally, if the selection of successful bidders is truly aimed at the best quality-price ratio, then the selected suppliers should be the best-performing ones. However, the corresponding performance indicators are problematic here. In formalized surveys, respondents are traditionally unwilling to disclose the financial indicators of their activities, and when they do, they often give distorted figures. For this reason, we used a number of indicators that described enterprise restructuring and modernization and which enabled us to obtain an indirect picture of performance.

We were then able to use the questions from the 2009 survey concerning the scale of respondent firms' capital investments in 2005-2008 as well as those pertaining to their ISO certification and shipments for exports in 2008. Taking into account a number of previous studies (Dolgopyatova et al., 2009), we treated ISO certification as an indicator of innovation in organization and management, and viewed exports as an indicator of greater competitiveness in general. Last but not least, we used instances of bank borrowing by respondent firms as an indicator of greater financial stability.

Our third hypothesis addressed the relationship between enterprises and public agencies. Guided by studies of politically connected firms (Bertrand et al, 2004; Faccio, 2006), we assumed that enterprises having a relationship with authorities could expect to be awarded contracts sooner than those lacking such ties. In order to determine the presence of state-enterprise relations, we used government stakes in equity as well as the rendering of support by an enterprise to authorities for the social development of its region as indicators. The latter form of support is widespread in Russia and is often seen as a component in the system of exchanges between enterprises and authorities (Haaparanta et al, 2003; Frye, 2002). We also took into account respondent firms' membership (or lack thereof) in business associations, because in Russia these associations traditionally act as intermediaries between enterprises and the government (Pyle, 2006; Zudin, 2010).

Our fourth hypothesis was that an enterprise's participation in government procurements in 2004 was also a positive factor of being awarded government orders in 2008.

All of these hypotheses were tested with probit models in which having been awarded state contracts in 2004 or 2008 was the dependent variable. The first hypothesis was tested with the 2005 and 2009 data, while the second, third, and fourth hypotheses were tested with the 2009 survey data. To verify the stability of the obtained results, we tested four of the hypotheses with panel data. For the first, second and third hypotheses, we added the factor of enterprise participation in government procurements in 2004 to the regression equation on panel data. This allowed us to perform an additional check on the fourth hypothesis, i.e. that firms which had taken part in government procurements in 2004 were more likely to be awarded state contracts in 2008.

Our fifth hypothesis was related to the assessment of changes in the level of corruption. Departing from skeptical comments made as far back as 2006 by the World Bank experts, and also from the above-mentioned data of the fourth BEEPS round, we assumed that there were no qualitative changes in the situation with respect to corruption in state procurements in Russia following the enforcement of Federal Law 94-FL. This hypothesis was tested using the non-parametric criteria of the Wilcoxon signed rank test and Marginal Homogeneity Test, because the "kickback" variable in the question: "How often do enterprises of your industry have to give bribes or kickbacks to receive public or municipal contract?" was a categorical one.

The Appendix contains a description of the variables used in the econometric analysis.

## Results of the Regression Analysis

As we mentioned above, we used a set of probit models as the main instruments for testing our hypotheses:

$$P\{State\_Procure_i = 1 \mid X\} = \Phi(X_i'\beta), \quad i = 1,...,n, \qquad \Phi(Z) = \frac{1}{\sqrt{2\pi}} \int_{-\infty}^{Z} e^{-t^2/2} dt,$$

where the values of the variables described in the Appendix are included in the X matrix and  $\beta$  is the vector of coefficients under evaluation.

Table 2 gives the results of the valuation of the models used for testing the first hypothesis. All marginal effects for this and other models are calculated for the "average firm". Our regression analysis partly confirmed the first hypothesis, i.e. that in 2005, before Federal Law 94-FL was enacted, firms with government stakes as well as larger and older firms (i.e. those established before 1992) were given preferential treatment in the awarding of government contracts.

Our analysis of the 2009 data revealed that the share of firms taking part in government procurements grew substantially (from 28% to 41%). Under 94-FL, large firms retained their advantages regarding access to government procurements. However, the respective coefficient became insignificant for old enterprises and firms with government stakes (for the models estimated on panel data). We can therefore conclude that the goal of improving access to state contracts for new suppliers, including small and medium enterprises, was achieved, but only partially.

Table 2. Models with basic variables

								, panel, thout	2009 p	anel, with
Variables	2005, ful	1 sample	2005,	panel	2009, f	ull sample		Proc2004		Proc2004
		Marginal	,	Marginal		Marginal		Marginal		Marginal
	Coef.	Effects	Coef.	Effects	Coef.	Effects	Coef.	Effects	Coef.	Effects
Reg_Rating_Mid	0.133	0.046	-0.041	-0.013	-0.100	-0.039	-0.037	-0.014	-0.061	-0.023
Reg_Rating_High	0.161	0.056	-0.005	-0.001	0.463**	0.181***	0.326*	0.126**	0.306*	0.118*
lnSize	0.182**	0.062**	0.177**	0.058**	0.127**	0.0496***	0.148*	0.057**	0.151**	0.058**
Foundation_92-98	-0.021	-0.007	0.293	0.103	-0.037	-0.014	0.232	0.090	0.131	0.050
Foundation_99+	-0.541*	0.157**	10.11**	0.24***	-0.101	-0.038	-0.346	-0.126	-0.322	-0.118
State_Owner	0.527**	0.192**	0.549**	0.196**	0.468**	0.185***	0.301	0.118	0.063	0.024
Foreign_Stock	-0.157	-0.052	-0.172	-0.054	-0.249	-0.094	-0.228	-0.085	-0.236	-0.088
State_Procure2004									1.22***	0.460***
N	741		741		795		409		409	
Control for sector										
included	Yes		Yes		Yes		Yes		Yes	
Count R2	0.734		0.739		0.665		0.677		0.753	
Efron's R2	0.101		0.113		0.117		0.147		0.282	
McFadden's R2	0.077		0.100		0.091		0.115		0.224	
AIC	1.177		1.168		1.273		1.267		1.125	

<sup>\* =</sup> significant at 10%, \* \*= significant at 5%, \*\*\* = significant at 1%.

The 2009 data also showed that the firms located in more economically advanced regions of Russia were awarded government orders more often (approximately 12% more), although this distinction was never observed in 2005. At the same time, as shown in Yakovlev (2010), a study based on the same empirical data; in 2007-2008, the regions with higher investment potential gave less frequent direct government support to enterprises. We can suppose that, depending on the level of development, the various regions of Russia have adopted different models of interaction between enterprises and authorities in recent years. These interactions are based on direct government support of enterprises in the less developed regions, but in the most advanced regions, the government exerts influence on enterprises via public procurements.

To test the second hypothesis, we expanded the set of basic variables to include some that describe enterprise performance: "ISO" (certification of management according to ISO or other international standards); "Invest" (the scale of capital investment made by the enterprise in 2005-2008); "Export" (the amount of exports in 2008); and "Credit" (issuance of bank loans to the enterprise in 2008). The results of our evaluation of the respective probit model are given in Table 3. The coefficients of all of the new variables turned out to be insignificant. This means that reliance on the procedures stipulated in 94-FL failed to ensure that the better-performing firms would participate in government procurements.

Table 3. Models with basic variables and variables of active modernization of the enterprises

Variables	ariables 2009, full s		2009, panel, without State_Proc2004		2009, pane State_Pro	
	Coef.	Marginal Effects	Coef.	Marginal Effects	Coef.	Marginal Effects
Reg_Rating_Mid	-0.074	-0.028	-0.034	-0.013	-0.101	-0.038
Reg_Rating_High	0.471***	0.184***	0.313*	0.121*	0.277	0.107
InSize	0.087*	0.033*	0.106	0.041	0.126	0.048
Foundation_92-98	-0.032	-0.012	0.225	0.087	0.127	0.049
Foundation_99+	-0.089	-0.034	-0.417	-0.149*	-0.359	-0.130
State_Owner	0.494***	0.195***	0.332	0.130	0.003	0.001
Foreign_Stock	-0.246	-0.092	-0.232	-0.086	-0.264	-0.098
Invest_Insig	0.094	0.036	0.068	0.026	0.002	0.001
Invest_Active	-0.017	-0.006	0.042	0.016	-0.031	-0.012
Export_10-	-0.131	-0.050	-0.059	-0.022	-0.059	-0.022
Export_11+	-0.077	-0.030	-0.138	-0.052	-0.125	-0.047
ISO	0.122	0.047	0.083	0.032	-0.039	-0.015
Credit	0.124	0.048	0.115	0.044	0.109	0.041
State_Procure2004					1.247	0.467***
N	765		397		397	
Control for sector included	Yes		Yes		Yes	
Count R2	0.667		0.673		0.766	
Efron's R2	0.121		0.152		0.288	
McFadden's R2	0.095		0.120		0.229	
AIC	1.284		1.290		1.149	

To test the third hypothesis, we also added variables to the basic set describing relations between enterprises and authorities: "Support" (support obtained by authorities from firm in 2007-2008) and "Association" (membership in business associations). As seen from the data presented in Table 4, the relevant coefficients turned out to be insignificant in the models estimated with panel data. For this reason, we would suppose that the procedures established in Federal Law 94-FL limited the influence of relations with the state on the selection of suppliers for procurement on government orders.

At the same time, the fact of having filled government contracts previously played a very important role in the participation of a firm in government procurements in 2008. This factor was not only highly significant in all models (p<0.01), but its inclusion in the models, by all measures, (count R2, Efron's R2, McFadden's R2, AIC) notably increased the goodness of fit.

Table 4. Models with basic variables and variables describing relations between enterprises and authorities

Variables	2009, full sample			2009, panel, without State_Proc2004		el, with cc2004
	Coef.	Marginal Effects	Coef.	Marginal Effects	Coef.	Marginal Effects
Reg_Rating_Mid	-0.081	-0.031	0.004	0.001	-0.020	-0.007
Reg_Rating_High	0.501***	0.196***	0.403**	0.155**	0.358**	0.138**
lnSize	0.100**	0.038**	0.114*	0.043*	0.121*	0.046*
Foundation_92-98	0.006	0.002	0.264	0.102	0.181	0.070
Foundation_99+	-0.085	-0.032	-0.313	-0.113	-0.290	-0.105
State_Owner	0.491***	0.193***	0.366*	0.143*	0.118	0.045
Foreign_Stock	-0.261	-0.098	-0.269	-0.098	-0.268	-0.098
Support_2	0.023	0.009	0.258	0.097	0.209	0.079
Support_3	0.017	0.006	0.370	0.144	0.244	0.095
Support_4	-0.016	-0.006	0.392	0.154	0.234	0.091
Association	0.179*	0.069*	0.060	0.023	0.040	0.015
State_Procure2004					1.241***	0.465***
N	764		394		394	
Control for sector included	Yes		Yes		Yes	
Count R2	0.666		0.693		0.759	
Efron's R2	0.114		0.148		0.286	
McFadden's R2	0.090		0.118		0.229	
AIC	1.282		1.279		1.135	

Furthermore, we attempted to determine whether there were any changes in the role of kickbacks in obtaining access to government contracts.

The above-mentioned BEEPS database contains answers to the question: "When establishments like this one do business with the government, what percent of the contract value would be typically paid in informal payments or gifts to secure the contract?" in 2002, 2005, and in 2008 (see table 5). In Russia the situation worsened. In 2008 the share of firms which accepted kickbacks for access to government orders and the average size of bribes increased, although the increase in the size of the average "kickback" is observed also for the other countries. But at the same time, in other transition countries the share of firms that paid bribes to obtain public contracts decreased continuously.

Table 5. Top-managers of enterprises in manufacturing industry responded to the question:

"When establishments like this one do business with the government, what percent of the contract value would be typically paid in informal payments or gifts to secure the contract?"

	,	2002		2005		2008	
Payments or gifts to secure the contract	Russia	other transition countries	Russia	other transition countries	Russia	other transition countries	
Yes, payments gifts are paid	24.19	23.58	23.44	21.59	25.59	15.82	
No payments/ gifts are paid	75.81	76.42	76.56	78.41	48.82	63.77	
Don't know					11.85	10.13	
Refusal					13.74	10.28	
Total number	124	1429	128	3242	211	632	
Average kickback	6.04%	7.50%	6.53%	6.67%	10.48%	11.04%	

Source: BEEPS, http://www.ebrd.com/country/sector/econo/surveys/beeps.htm

The HSE questionnaire included questions on "kickbacks" in the public procurement system and on participation of companies in public order supplies. Since the same questions were used by the World Bank for a similar sampling during the first monitoring round in 2005, we had a unique opportunity to compare the situation before and after changes in the law on procurement. In the both cases questions related to preceding periods: comparison was made between 2004 and 2008.

Answering the question "How often do enterprises of your industry have to give bribes or "kickbacks" to receive public or municipal orders?", 17% of 2009 respondents chose to say "practically always" or "often", 22.5% companies said "sometimes" (see Table 6). Comparable figures in 2005 were 20% and 14%. In other words, before reforming the system of public procurements "kickbacks" were mentioned by 34% of companies and three years later the figure reached 40%. On the positive side, share of enterprises, considering "kickbacks" as a mass phenomenon declined by 3%. The proportions remained the same for companies performing public order supplies in 2004 and 2008.

Table 6. Top-managers of enterprises in manufacturing industry responded to the question: "How often do enterprises of your industry have to give bribes or 'kickbacks' to receive public or municipal orders?"

	2	2005	,	2009
	Number of	Sampling share	Number of	Sampling share
	firms	(%)	firms	(%)
Almost in all cases	87	8,7	60	6,3
Often	117	11,7	104	10,9
Sometimes	142	14,2	215	22,5
Never	366	36,5	338	35,3
Hard to respond	290	28,9	240	25,1
Total	1002	100	957	100

Using the panel data, we also checked the statistical significance of the disparities in responses to the question about corruption in government procurements. For each enterprise, we compared a pair of answers about kickbacks in government supply transactions in 2005 and 2009. Our principal hypothesis for performing the check was the equality of the mean difference to zero (two-tailed hypothesis test). Equality to zero corresponded to zero changes to the situation regarding kickbacks from the enterprises' point of view. Since the "kickback" variable was categorical (1 = always, 2 = often, 3 = sometimes, and 4 = never), we chose non-parametric criteria to check this hypothesis, namely the Wilcoxon signed rank test and the Marginal Homogeneity Test.

The results of testing this hypothesis using the above-mentioned criteria are given in Table 7a and Table 7b; in both cases, the hypothesis was not rejected. In other words, our respondents believed that there had been no significant changes with respect to kickbacks in the system of government procurements after the enactment of 94-FL.

Table 7a. Wilcoxon Signed Ranks Test

		N	Mean Rank	Sum of Ranks
How often do enterprises of your industry have to give bribes or 'kickbacks' to receive public or municipal orders in 2008? - How often do enterprises of your industry have to give bribes or 'kickbacks' to receive public or municipal orders in 2004?	Negative Ranks	79	83.48	6595.00
	Positive Ranks	94	89.96	8456.00
	Ties	95		
	Total	268		

#### Test Statistics(b)

	How often do enterprises of your industry have to give bribes or 'kickbacks' to receive public or municipal orders in 2008? - How often do enterprises of your industry have to give bribes or 'kickbacks' to receive public or municipal orders in 2004?
Z	-1.456(a)
Asymp. Sig. (2-	.145
tailed)	.113

a Based on negative ranks.

b Wilcoxon Signed Ranks Test

Table 7b. Marginal Homogeneity Test

	How often do enterprises of your industry have to give bribes or 'kickbacks' to receive public or municipal orders in 2008? - How often do enterprises of your industry have to give bribes or 'kickbacks' to receive public or municipal orders in 2004?
Distinct Values	4
Off-Diagonal Cases	173
Observed MH	484.000
Statistic	464.000
Mean MH Statistic	499.500
Std. Deviation of	10.805
MH Statistic	10.003
Std. MH Statistic	-1.435
Asymp. Sig. (2-	.151
tailed)	.171

# Concluding remarks

In this paper, we attempted to determine whether there had been any changes in the supplier selection process since the radical overhaul of legislation on government procurements in 2005, and whether the problem of corruption in this field had been successfully uprooted. We based our investigation on data from two surveys of industrial enterprises.

Our results indicate that Federal Law 94-FL has been partly successful in providing greater access to the system of government procurements for new suppliers. For one thing, the government's stake in ownership at the moment of an enterprise's inception no longer has a stable affect on the supplier selection process. In addition, having a relationship with public authorities (e.g. providing assistance for the social development of a region) was shown to no longer give an enterprise an advantage over other bidders in 2008.

However, enterprise size remains an important factor: as before, large enterprises are given preferential treatment in the awarding of contracts. This result was stable in all of the examined models. Moreover, in 2008, in all relevant regressions over the panel sample, the participation of firms in government procurements in 2004 was a highly significant factor affecting the selection of suppliers. For instance, among the firms that took no part in government procurements in 2004, less than 30% were awarded public orders in 2008. But of the firms that did take part in government procurements in 2004, this indicator was 76%.

The Russian government also failed to realize the broader goals of the reform related to the struggle against corruption and for the improvement of efficiency in government procurements. Our analysis of panel data based on non-parametric criteria showed that assessments of the scale of corruption have not changed. (The BEEPS surveys even provide evidence that the kickbacks for being awarded orders have grown even larger). The selection of suppliers in 2008 was not affected by any of our indicators concerning the competitiveness of the firms (presence of exports, ISO certification, and large-scale capital investment in 2005-2008). However, the involvement of more highly competitive firms in government procurements could testify in favor of those firms better meeting government needs.

All in all, we feel compelled to state that the main goals of the 2005-2006 reform of government procurements were not achieved. What accounts for this failure? In our opinion, the reformers concentrated their attention exclusively on the placement of orders, thereby ignoring the procedures at the stages of planning purchases and the execution of orders. As a result, control was focused on the formal observance of purchasing procedures, with the final results of procurements and fulfillment of state needs left unmonitored and unevaluated.

At this stage, an interesting parallel can be drawn with Chile, where a reform was implemented during the same period in order to give small and mid-sized enterprises (SMEs) greater access to government procurements. The Chilean experience was analyzed in (Escobar, 2008), and the results are striking. Over the period of 2004 to 2007, the share of large enterprises in total government procurements declined from 61.5% to 48%.

However, as shown by Escobar (2008), this decrease was achieved not because the SMEs were granted special privileges but because the general level of participation costs in government procurements declined (such as the costs to suppliers of completing documentation for tenders, consulting with experts on government procurements, and accessing the free services offered at government procurement centers). Such expenses tend to be fixed, and their reduction gave small and mid-sized firms a better chance to participate in government procurements.

In 2005-2006, Russia carried out a very large and quite expensive institutional experiment that emphasized price criteria in the selection of suppliers, with harsh penalties for infringement of these procedures. Today it is evident that this political decision failed to reduce corruption and instead placed a heavy burden of costs on honest participants in government procurements. In a sense, we can say that the Russian experience of 2005-2009 is an example of how the reform of government procurements should *not* be carried out. Nevertheless, a study of this "negative" experience is very important because it will help to prevent a repetition of such errors in the future – not only in Russia but in other developing and transitional economies.

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## APPENDIX Survey Variables

## Variables in 2005 Survey

Variables	Description of variable	Values of variable		Valid
			N	Percent
State_Procure	Participation in State procurements in 2004	0 - no	717	71.6%
		1 - yes	285	28.4%
Sector	Industry	Food	248	24.8%
		Textiles and sewing	92	9.2%
		Timber and woodworking	84	8.4%
		Chemical production	88	8.8%
		Metallurgy and metal working	103	10.3%
		Electrical, electronic and optical equipment	142	14.2%
		Transport vehicles and equipment	90	9.0%
		Machinery and equipment	155	15.5%
		Total	1002	100%
Reg_Rating	Level of economic development of Russian regions according to the classification of the journal "Expert" in 2004	low (reference category)	393	39.2%
		middle	357	35.6%
		high	252	25.1%
		Total	1002	100%
lnSize	Natural logarithm of total number of employees	Minimum		2.2
		Maximum		9.1
		Mean		5.8
		Std. Deviation		1
Foundation	The period of creation of the enterprise	Up to 1992 (reference category)	785	78.3%
		1992 - 1998	121	12.1%
		After 1998	96	9.6%
		Total	1002	100%
State_Owner	State-owned enterprises	0 - no	627	84.2%
		1 - yes	118	15.8%
		Total	745	100%
Foreign_ Stock	Presence of foreign shareholders	0 – no	689	92.5%
		1 - yes	56	7.5%
		Total	745	100%

## Variables in 2009 Survey

Variables	Description of variable	Values of variable	N	Valid Percent
State_Procure	Participation in State procurements	0 - no	566	59.1%
	in 2008	1 - yes	391	40.9%
		Total	957	100%
Sector	Industry	Food	235	24.5%
		Textiles and sewing	89	9.3%
		Timber and woodworking	81	8.46%
		Chemical production	88	9.19%
		Metallurgy and metal working	98	10.2%
		Electrical, electronic and optical equipment	117	12.2%
		Transport vehicles and equipment	86	8.98%
		Machinery and equipment	163	17%
		Total	957	100%
Reg_Rating	Level of economic development of	Low (reference category)	396	41.4%
	Russian regions according to the classification of the journal "Expert" in 2008	Middle	274	28.6%
		High	287	30.0%
		Total	957	100%
lnSize	Natural logarithm of total number of employees	Minimum	1.1	
		Maximum	9.35	
		Mean Std. Deviation	5.72 1.11	
Foundation	The period of creation of the	Up to 1992		
1 ouncation	enterprise	(reference category)	720	75.2%
		1992 - 1998	145	15.2%
		After 1998	92	9.6%
		Total	957	100%
State_Owner	State-owned enterprises	0 - no	708	88.9%
		1 - yes	88	11.1%
Foreign	Duesance of foreign shougholders	Total 0 - no	796 718	100% 90.2%
Foreign_ Stock	Presence of foreign shareholders	4	718	90.2%
Stock		I – yes Total	796	100%
ISO	ISO certification	0 - no	487	50.9%
12.0		1 – yes	470	49.1%
		Total	933	100%
Invest	Scale of the respondent firms'	Absence of investments	284	30.4%
	capital investments in 2005-2008	Insignificant investments	277	29.7%
		Active investments	372	39.9%
G 11	****	Total	933	100%
Credit	Whether enterprise obtained the	no	348	36.5%
	credits in 2008?	yes Total	606	63.5%
		Total	954	100%

Export	Share of export in proceeds from sales	No	493	53.9%
		1 - 10 %	240	26.2%
		More than 11%	182	19.9%
		Total	915	100%
Support	Support obtained by authorities from firm in 2007-2008	No support	219	22.9%
		Less than 0.1 % of proceeds from realization or we do not remember the size	541	56.5%
		0.1-0.3% of proceeds from realization	139	14.5%
		More than 0.3% of proceeds from realization	58	6.1%
		Total	957	100%
Association	Membership in business associations	no	573	62.6%
		yes	342	37.4%
		Total	915	100%

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