GOVERNMENT PROCUREMENTS AS A TOOL FOR THE DEVELOPMENT OF SMALL AND MEDIUM BUSINESS IN RUSSIA

The question of the development of small and medium business is relevant for several decades. This article considers questions regarding the support of small business through the government procurement system. In the framework of the present study, the author attempted to systematize data on the dynamics (since the adoption of the Federal Public Contracts Act), and the structure of government procurement in terms of participation of small businesses in the procurement process, which revealed certain trends. The main research methods were vertical and horizontal analysis of dynamic series, correlation and regression models of the panel data. Data on the participation of small businesses in government procurement are grouped according to various criteria depending on the purpose of analysis. Groups of data were analyzed by 83 subjects of the Russian Federation, which enabled a full-scale assessment of the effectiveness of procurement in terms of the economy. To assess the influence of procurement on the development of small businesses, three hypotheses were put forward: increasing the number of customers placing orders for small businesses, as well as the reduction in the share of customers who do not meet the requirements of the law on the 15-percent threshold; this leads to an increase in budgetary savings, the increase in the number of applications for small businesses leads to an increase in the number of data entities in the regions, the number of orders placed for small businesses affect the cash flow of small businesses. On the basis of panel data for the period 2011–2015 years, a unified information system of state and municipal procurement which built econometric models, have confirmed the hypothesis put forward.

Keywords: small businesses, government procurement, government orders, budget savings, the state customer, regions, business development, cash flow of small businesses, contract procurement system, Law № 44-FZ

Introduction

History and modern practice of economic development in most countries clearly demonstrate the role of small and medium businesses in the national economy. The value of small business in the mobility of resources, employment and innovative development of the economy has been repeatedly emphasized in the studies of both domestic and foreign economists.

For example, T. A. Fink points out that in the USA small businesses provide 53 % of employment in the economy, and in Japan — 71 % [1, p. 177–181]. Similar data was given by V. Y. Vilisov and A. V. Vilisova, stressing that the share of small business in GDP formation of developed countries accounts for 50–65 % of GDP [2, p. 162].

However, small business is not a leader of economic development in all countries. The presence of institutional problems, such as corruption, oligopoly and lack of normal investment climate is emphasized by many researchers. Thus, the presence of corruption in India indicated by M. Honorati, T. Mengistae, while A. Gil, S. P. Sharma and X. S. Mand [3] indicated the absence of the necessary legal framework and level of education. Meanwhile, no one denies that the development of small business, promote competition, diversify the economy, reduce poverty and unemployment [4–6].

In Russia, a small business has not yet taken a worthy place in the economy, although it has the potential. In the transition to market relations, the problem affects many researchers, such as R. Malikov [7], A. V. Wilensky [8], P. Mjagkov, S. Fesenko [9], and others. In this period the reasons for the development of entrepreneurship was evident for the country, only taking a leap in the policy of economic freedom. However, recent research in this area suggests that, despite the significant number of market reforms, development of small and medium entrepreneurship in Russia remains series of...
problems. For example, D. V. Manushin [10; 11] defines the existence of administrative barriers as one of the key factors hindering the development of small and medium businesses. The presence of competitive barriers is recognized by many modern scholars such as A. N. Palagina [12], C. A. Popov [13], E. A. Abbasov [14]. Similar conclusions made in the study of the world Bank put Russia in 92nd place in terms of the development of small business. In this list, the Russian Federation, is regarded as countries such as Kazakhstan, Tunisia, Belarus, Moldova, as well as many developing countries⁴.

Small business—is the most tenacious part of the economic entities, the ability to adapt to any changes in legislation, consumer demand and trends of scientific and technological progress. However, explicit or implicit restriction of competition is one of the most negatively influencing factors. Statistics show that, despite the reforms, the rate of growth in the number of small businesses in the economy is constantly slowing down (see Fig.).

The contribution of small business in the creation of GDP does not exceed 20 %⁵.

In the last decade, one of the reforms aimed at promoting competition and facilitating the access of small businesses to markets was the system of government procurement. Act of July 27, 2007 №209-FZ “On the development of small and medium enterprises in the Russian Federation” as the main support of business goals designated to ensure the competitiveness of small businesses, as well as assisting them in promoting their goods (works, services), results of intellectual activities on the Russian market and the markets of foreign countries⁶. The same law is defined as necessary measures to support entrepreneurship in the involvement of such actors as suppliers (performers, contractors) in the procurement of goods, works, services for state and municipal needs (article 7).

**Theoretical Aspects of Small Business Support Through the System of Government Procurement**

Participation of small businesses in the supply of goods (works, services) for the state needs to a great extent contributes to the increase in volume and geographical distribution of their products. Therefore, the most important principle of the new procurement system, which started with the adoption of the Act of 05.04.2013 №44-FZ “About contract system in the procurement of goods, works and services for state and municipal needs” (hereinafter—the Law №44-FZ), was the principle of

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competition, involving the creation of equal conditions for competition between all participants in the procument.

The issue of the access of small business to government procurement is not new. All programs in support of small business were created and implemented in Russia during 1996–2001, including the first program adopted by the Russian government, Decree of December 18, 1995, №1256, constantly stressed the necessity of developing the legal framework of participation of entrepreneurs in government procurement. However, in spite of the program objectives, the issue had not been legally resolved. Formally, the law from 14.06.1995 № 88-FZ “On State Support of Small Business in the Russian Federation”, the requirement to host the subjects of Small Business has been established for at least 15 % of the orders, but the law itself on orders (Federal Law of May 6, 1999, №97-FZ) did not set any specific rules of engagement for small business, so they rarely became winners of competitions.

Adopted in 2005, the No. 94-FZ “On placing orders for goods, works and services for state and municipal needs” established a real guarantee of small business to participate in government order—establishes the requirement to place orders at 10–20 % of such entities, excluding purchases from a single supplier. Similar requirements are set and are in the current Law №. 44–FZ.

In the economic literature, the question of the effectiveness of such measures to support entrepreneurship, participation in public procurement were discussed for a long time. Most economists recognize that the development of competition in this area and providing small businesses access to procurement remains declarative in many ways. Such statements can be found in the works of M. G. Umnova [15], A. O. Imihovich [16], O. Vorobyeva [17] and many others. The major problems include—corruption, lack of transparency of the system, the lack of a single supervisory body and others [18–20].

I. V. Baltutite [21] points out in his work the complexity of software applications by small businesses because of their limited financial resources. The lack of specialists in procurement, as well as the complexity and volume of current legislation is specified as a problem by V. U. Galkin [22]. Centralization of public procurement, and, as a consequence, their enlargement, was reported by I. I. Krotov [23], K. Karjalainen and K. Kemppainen [24] believe that significant barriers to entry for small enterprises in public procurement is associated with the absence of an electronic trading system, an effective system of monitoring of participants in the procurement process.

Despite the fairly wide coverage in the Russian scientific literature, the role of government procurement in the development of MP entities, comprehensive assessment of their effectiveness is absent. The bulk of the research is to analyze the legislation (eg [17, 25, 26]), a generalization of the problems of business participation in procurement and review of legal practice [27], or to the assessment of the overall dynamics of purchases from small businesses [28]. Of particular interest to the SB method of estimating the contribution of subjects in the government procurement system, proposed by S. Pinkovetskoy [29], which involves the calculation of a number of factors. The disadvantage of this method is the lack of analysis of time series, which does not allow the assessment of the changes in the role of small businesses in procurement procedures.

Thus, in the absence of a comprehensive assessment and understanding of the need for transformation of the procurement processes and revitalization of small business development, the need for such assessment is clear.

Assessment of the Role of Small Businesses in Government Procurement

Analysis of the participation of small businesses in public procurement since the adoption of the law on public orders No. 94-FZ, above all, revealed the existence of certain trends (Table 1).

The analysis of the data indicates a trend towards an increase in the number of applications, submitted by small businesses more than 3 times, accompanied by an increase in their share in the General volume of purchases from 15 % to 27 %. However, a comparative analysis of the dynamics of filings with the performance of the contracts shows that the share of applications of small businesses, who won on the results of the placement of orders, increased not so significantly—from 11.7 % to 23 %. Despite the fact that the proportion of winners among small businesses increased in total volume of

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filings, there has been a decline in the share of bids won in competitive procedures with 36.46% to 28.5%. The highest values were characteristic for 2007–2008—more than 45%.

Table 1

<table>
<thead>
<tr>
<th>Indicators</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>The total number of applications, thousands</td>
<td>2 224.6</td>
<td>3 194.0</td>
<td>2 496.5</td>
<td>2 514.3</td>
<td>2 516.1</td>
<td>2 401.0</td>
<td>3 935.1</td>
<td>3 777.1</td>
<td>3 826.9</td>
</tr>
<tr>
<td>— including applications of small businesses, thousand</td>
<td>340.4</td>
<td>432.1</td>
<td>355.9</td>
<td>585.5</td>
<td>418.1</td>
<td>361.9</td>
<td>495.8</td>
<td>626.7</td>
<td>1 061.9</td>
</tr>
<tr>
<td>— in % of the total number of applications filed</td>
<td>15.30</td>
<td>13.53</td>
<td>14.25</td>
<td>23.29</td>
<td>16.62</td>
<td>15.07</td>
<td>12.60</td>
<td>16.59</td>
<td>27.75</td>
</tr>
<tr>
<td>Number of contracts and agreements, thousands</td>
<td>5 593.0</td>
<td>7 517.4</td>
<td>9 320.4</td>
<td>10 851.9</td>
<td>11 684.5</td>
<td>11 232.5</td>
<td>11 853.1</td>
<td>14 515.7</td>
<td>6 692.0</td>
</tr>
<tr>
<td>— including those with small businesses, thousand</td>
<td>1 348.1</td>
<td>1 997.8</td>
<td>2 267.4</td>
<td>1 819.9</td>
<td>129.8</td>
<td>122.8</td>
<td>156.9</td>
<td>185.2</td>
<td>310.6</td>
</tr>
<tr>
<td>— in % of the total number of contracts</td>
<td>24.10</td>
<td>26.58</td>
<td>24.33</td>
<td>16.77</td>
<td>1.11</td>
<td>1.09</td>
<td>1.32</td>
<td>1.28</td>
<td>4.64</td>
</tr>
<tr>
<td>The number of bidders who won the bid, thousand</td>
<td>1 061.7</td>
<td>1 324.9</td>
<td>1 318.2</td>
<td>876.0</td>
<td>835.4</td>
<td>904.4</td>
<td>1 084.0</td>
<td>1 303.8</td>
<td>1 292.6</td>
</tr>
<tr>
<td>— in % of the number of applications</td>
<td>47.72</td>
<td>41.48</td>
<td>52.80</td>
<td>34.84</td>
<td>33.20</td>
<td>37.67</td>
<td>27.55</td>
<td>34.52</td>
<td>33.78</td>
</tr>
<tr>
<td>— including applications of small businesses, thousand</td>
<td>124.1</td>
<td>198.1</td>
<td>161.4</td>
<td>184.1</td>
<td>130.4</td>
<td>123.0</td>
<td>157.7</td>
<td>186.4</td>
<td>303.2</td>
</tr>
<tr>
<td>— in % from the total number of participants who won the bids</td>
<td>11.69</td>
<td>14.95</td>
<td>12.25</td>
<td>21.01</td>
<td>15.62</td>
<td>13.60</td>
<td>14.55</td>
<td>14.30</td>
<td>23.46</td>
</tr>
<tr>
<td>— in % of the number of applications filed by small businesses</td>
<td>36.46</td>
<td>45.84</td>
<td>45.37</td>
<td>31.44</td>
<td>31.20</td>
<td>33.99</td>
<td>31.81</td>
<td>29.74</td>
<td>28.55</td>
</tr>
<tr>
<td>Total value of concluded contracts, billion rubles</td>
<td>1 713.7</td>
<td>2 967.8</td>
<td>3 709.8</td>
<td>3 292.2</td>
<td>3 892.4</td>
<td>7 218.5</td>
<td>7 168.3</td>
<td>6 880.6</td>
<td>6 328.1</td>
</tr>
<tr>
<td>— including small businesses, trillion rubles</td>
<td>90.7</td>
<td>180.4</td>
<td>191.1</td>
<td>57.5</td>
<td>93.1</td>
<td>106.7</td>
<td>117.7</td>
<td>126.8</td>
<td>226.5</td>
</tr>
<tr>
<td>— in % of the value of concluded contracts</td>
<td>5.29</td>
<td>6.08</td>
<td>5.15</td>
<td>1.75</td>
<td>2.39</td>
<td>1.48</td>
<td>1.64</td>
<td>1.84</td>
<td>3.58</td>
</tr>
</tbody>
</table>


The number of contracts awarded to small businesses significantly decreased in 2010, from 16% to 1% of the total number of contracts. Reasons for the decrease were a few factors:
— since 2010 they reduced the list of goods which must be procured from small businesses for 27 points;
— in 2010, in effect at this time, the law №94-FZ was amended to reduce the number of small purchases, which significantly limited the possibilities of participation of small businesses in public contracts;
— with the enactment of law No. 83-FZ "On amendments to certain legislative acts of the Russian Federation in connection with improvement of legal status of state (municipal) institutions" dated may 8, 2010 has been extended Autonomous institutions and newly formed budgetary institutions of a new type in the placement of orders for state needs by moving under the action of another procurement law — No. 223-FZ.

Most revealing are the data on the share of small businesses in the total amount of the contracts. Throughout the study period, this figure did not exceed 6.08%. If we compare the share of small businesses in the value of contracts and data on the proportion of the winning bids of small businesses,
it becomes apparent that there is a tendency to increase the number of small orders placed for small businesses. However, in terms of the new Law №44-FZ, there has been an increase in all analyzed parameters.

In order to evaluate the role of small businesses in government procurement, the data were analyzed for 83 subjects of the Russian Federation (Republic of Crimea and Sevastopol are not included in the analysis because of the insufficient practice of participation in procurement procedures under Russian law). The evaluation was based on official data of the Federal State Statistics Service.

In the study, a preliminary assessment of the impact of procurement has been given in terms of the economy during the transition period in 2014, and as a whole for the period under review. Analysis of the data revealed that in 2014, under the conditions of entry into force of the Law № 44-FZ, only 6 of the 83 regions represented in the sample, showed positive growth economy index: Buryatia (0.012 %), Dagestan (0.41 %) Kaluga region (0.02 %), the Magadan region (0.78 %), Orenburg region (0.21 %) and Udmurtia (0.04 %). This average level of savings fell from 6.92 % to 4.27 %. Thus, the work in the new law is expected to expand the competition and increase the efficiency of government procurement in terms of budget savings did not justify itself. However, the situation in 2015 has changed significantly in the direction of improvement, as the saving rate exceeded the national average values achieved in the conditions of the pre-existing Law №94-FZ. The most consistently high results on the effectiveness of government procurement (saving more than 6 %) showed 10 regions from 83: Bashkortostan, Vladimir Region, the Jewish Autonomous Region, the Kaluga Region, Kamchatka region, Leningrad, Lipetsk region, Udmurtia, Khanty-Mansiysk AO, Yaroslavl region. Traditional outsiders to the savings are the Republic of Dagestan and the Chechen Republic.

Comparative analysis of data on the number of customers who place orders for small businesses, and the share of customers who do not comply with the requirements to host the small businesses are at least 15 % of the procurement budget, this indicates that a significant number of regions are characterized by negative trends in the field of ensuring their access to government procurement.

As negative trends deal with the growing number of customers that do not comply with requirements of placement of 15 % of the procurement budget to small businesses, it also includes a decrease in the number of customers that host applications for such entities. Marked negative trends in the period under review was characterized for 16 regions of Russia: Jewish Autonomous region; the Republic of Karachay-Cherkessia and Tuva, Krasnodar, Krasnoyarsk, Perm, Stavropol, Lipetsk, Vologda, Smolensk, Saratov, Sverdlovsk, Tomsk, Tyumen, Ulyanovsk and Yaroslavl regions. However, in many other regions there is one of these trends, in 25 regions the increase in the number of customers was not accompanied by a reduction in the percentage of customers who comply with about 15 percent threshold, in 15 regions there has been a reduction in the number of customers that host applications for small businesses, and at only 27 there was a tendency towards improvement of considered parameters. Thus, evaluation of time series shows that in 40 % of cases, the increase in the number of customers that host applications for small businesses, has led to increased budgetary savings.

Econometric Modeling of the Impact of Government Procurement to Small Business in Russia

For a more detailed analysis of the impact of procurement on business development an econometric model was built, in which hypotheses was based on panel data over the period of 2011–2015 Unified information system. To build the models, we used groups of data: the number of state and municipal customers who have placed applications for small businesses (ZAK_SMP), the number of customers from the number to place applications for small businesses, those that do not fulfill the requirements of procurement of at least 15 % of small businesses (TREB), budget savings as a result of procurement procedures (ECON), the number of small businesses in constituent entities of the Russian Federation (KOLSMP), the turnover of small enterprises by regions (OBOR).

To analyze the participation of small businesses in the procurement three hypotheses were made:
1. The increase in the number of customers placing orders for small businesses, as well as a decline in the share of customers not complying with the requirements of the law on the 15 % threshold, lead to the growth of budgetary savings.
2. The increase in the number of applications for small businesses leads to increase in the regions.
3. The number of orders placed for small businesses, affect the cash flow of small businesses.

To build the models, we used package Eviews. The confirmation of the first hypothesis was based on constructing the equations of linear regression, which looks like this:
The conclusion of the results of the regression in the Eviews package is presented in Table 2.

Table 2

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>8.260664</td>
<td>0.727121</td>
<td>11.36078</td>
<td>0.0000</td>
</tr>
<tr>
<td>ZAK_SMP</td>
<td>0.000540</td>
<td>0.000129</td>
<td>4.188313</td>
<td>0.0000</td>
</tr>
<tr>
<td>TREB</td>
<td>-0.037816</td>
<td>0.009614</td>
<td>-3.933570</td>
<td>0.0001</td>
</tr>
<tr>
<td>R-squared</td>
<td></td>
<td></td>
<td></td>
<td>0.103240</td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td></td>
<td></td>
<td></td>
<td>0.098887</td>
</tr>
</tbody>
</table>

The data obtained can be interpreted as follows. First of all, the analysis of the equation on the "null hypothesis" and the student's t-test reflects the accuracy and statistical significance of the regression equations. The derived equation makes it possible to conclude that an increase in the number of customers placing orders for small businesses on a 1% savings will increase by 0.0005%. Despite the apparent insignificance of the impact factor, it should be borne in mind that the total value of purchases made at the end of 2015 was 6.5 trillion rubles, and the number of customers placing orders for small businesses made up only 40%. Thus, the savings amount to more than 27 million rubles, while the increase in the number of customers by 1%. If the number of customers will increase by 2 (up to 80% of the total) the amount of savings will increase to 108 million rubles.

The equation also reflects the impact the number of customers not complying with the requirements of a 15-percentage threshold have on savings. The number of customers amounted to an average of 66% of the region in 2015. By reducing the number of customers by 1%, the budget will be able to get an additional 0.03% savings. In the case of reducing the number of customers who do not meet the requirements of the law, by a factor of 2, total savings can amount to more than 53 billion rubles, which is comparable to the annual federal budget expenditures on housing and environmental protection.

In the course of analyzing the correlation of the indicators used to test the second hypothesis, the non-linear power-law relationship between the variables, resulting in a regression equation takes the form revealed:

$$KOLSMP = 12953.239 + 0.00338 \times ZAK\_SMP^2.$$  

The conclusion of the results of the regression is presented in Table 3.

Table 3

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>12953.24</td>
<td>1509.453</td>
<td>8.581410</td>
<td>0.0000</td>
</tr>
<tr>
<td>ZAK_SMP^2</td>
<td>0.003378</td>
<td>0.000331</td>
<td>10.20366</td>
<td>0.0000</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.201338</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td></td>
<td></td>
<td></td>
<td>0.199404</td>
</tr>
</tbody>
</table>

Evidence suggests that the number of small businesses by 20% is determined by the growing number of customers who place orders for these subjects. Undoubtedly, this explanatory variable cannot be considered as the only factor affecting the development of entrepreneurship in the regions, since there are important and the availability of credit, and the availability of development institutions, and conditions of doing business, and other factors. Nevertheless, the impact of government procurement on the business development can be assessed as sufficiently high.

Indicators of t-statistic and P-value (Prob) also show the reliability of the results and the adequacy of the model. Thus, the model shows a stable dependence of the development of small businesses, depending on the number of customers who place orders for small businesses.

When analyzing the indicators of the number of customers that place orders for small businesses and money turnover of small businesses a non-linear relationship with logarithmic trend line was
identified. As a result, a decision was made on the construction of the logarithmic regression equation, which took the form of:

\[ \ln(\text{OBOR}) = 12.934 + 0.884 \times \ln(\text{ZAK}_{\text{SMP}}). \]

The conclusion of the results of the regression is presented in Table 4.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>12.93439</td>
<td>0.309804</td>
<td>41.75018</td>
<td>0.0000</td>
</tr>
<tr>
<td>LOG(ZAK_{SMP})</td>
<td>0.884642</td>
<td>0.046957</td>
<td>18.83953</td>
<td>0.0000</td>
</tr>
<tr>
<td>R-squared</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td>0.516737</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The results reflect the significant impact of purchases placed among small businesses, the amounts of turnover of such enterprises. In accordance with the calculated value of R², the value of the turnover of small enterprises by 51% is explained by the dynamics of the number of customers’ goods (works, services) of small businesses. Indicators of the significance of constructed regression equations indicate the absence of errors and representative model.

**Conclusion**

Summing up the results of the constructed models, we can conclude that hypothesis is confirmed in econometric modeling. Development of subjects of small business in the system of government procurement has a double meaning. The increase in the number of procurements from small businesses leads, on the one hand, to the growth of the economy of budgetary funds, and on the other to increase in the number of small businesses and their contribution to GDP.

Based on calculations made, we can unequivocally say that the authorities need to focus on more rigid compliance requirements of the legislation establishing the requirement to buy from the small business subjects not less than 15% of the annual volume of purchases, as well as to introduce personal responsibility for failure to comply with such requirements. In addition, to enhance the capacity of social control and improve the adequacy of estimates which are necessary statistical foundation of the causes of deviation from the practice of the legal requirements, reasons for non-compliance with requirements of the law must be accessible and understandable to the public. In the context of severe budgetary constraints and economic stagnation solution to the problem of access of small businesses of government, procurement will help to solve other problems, such as employment, the growth of tax revenues from small businesses to the budget system, and expand competition in the public sector.

**References**


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