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Statistical Studies of Non-price Competition in the Structure of Public Procurement in the Russian Federation

SVETLANA ALEKSANDROVNA SERGEEVA*

Moscow Metropolitan Governance University, 107045, Moscow, Sretenka, 28, Russian Federation, Tel: +7(495)8954569;

Email: **sergeeva931999@mail.ru**

ALEXANDER ALEXANDROVICH ARIONCHIK

Moscow Metropolitan Governance University, 107045, Moscow, Sretenka, 28, Russian Federation

Abstract

The principle of securing competition is one of the basic principles of the contract system in public procurement in the Russian Federation. The law on the contract system in procurement stipulates that the contract system in procurement is aimed at creating equal conditions to ensure competition between the parties to procurement. An important aspect is that the competition for procurement should be based on compliance with the principle of fair price and non-price competition. The purpose of this provision is to identify the best conditions for supplying goods, performing works and

providing services. The analysis of the state of non-price competition in the procurement structure requires statistical studies of the phenomenon. The article considers the theoretical basis of non-price competition; it presents an analysis of methods of statistical study of non-price competition.

Keywords: **Statistics; Public Procurement; Non-Price Competition; Contract System**

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INTRODUCTION

Today, procurement attracts the attention of not just experts, but the whole of civil society. Openness and transparency of procurement are the guiding principles for procurement for public use. Both customers and consumers of goods, works and services are interested in the quality of the needs satisfaction. The structure of the procurement of goods, works and services for state, municipal and corporate needs of the Russian Federation has undergone dramatic changes over the past year and a half. Shift away from the placement of state orders to the contract system in procurement allows to cover the entire cycle of procurement. Since January 1, 2014, the procurement structure has expanded considerably and includes the following steps:

I - Identification of the need in procurement; substantiation and planning of procurement;
II - Identification of the supplier (contractor, executor);
III - Conclusion, execution of the contract;
IV - Control, monitoring and audit of procurement.

The contract system enabled the growth of budget savings resulting from the implementation of procurement procedures; there was a significant increase in support for small businesses and improvement in the quality of small businesses participating in procurement. The existing negative phenomena in the economy have caused a number of problems in the implementation of procurement. The most significant of them today, according to both customers and suppliers, include growth in the number of cases of failed procedures for identifying the supplier (contractor, executor), growth in the number of contracts terminated, forced reduction of terms of contracts by customers in order to reduce financial risks of the suppliers. The factors affecting the operation of the contract system in procurement in 2015 include:

- Weakening of the ruble exchange rate, which affects the level of execution of contracts for products originating from foreign countries;
- Reduction of the limits of budgetary obligations for 2015 brought to the customers and review of limits of budgetary obligations for 2016-2017, which does not allow to conclude contracts with a maturity of more than one year;
- Inability to predict the rise in prices;

- Economic sanctions;
- Imposition of restrictions on the import of certain groups of goods from abroad.

At the same time, quite deep development and changes in the statutory regulation of procurement suggests substantial development of procurement in the Russian Federation.

Development of a competitive environment is of fundamental importance at each stage of procurement. In accordance with the law on the contract system, special importance is given to non-price competition in the procurement of goods, works and services for state and municipal needs. However, the solution of urgent issues of development of non-price competition in procurement requires statistical data on the process.

The concept of "statistics" is used in the following interpretations:

- Statistics as a branch of science;
- Statistics as a scope of practice.

The authors' definitions of "statistics" include the following concepts:

- Baldin, Rukosuev [1] – consistent implementation of the collection, compilation, processing and analysis of economic information needed for the development and adoption of rational managerial decisions in business structures at various levels of management;
- Ioda [2] – social science that studies the quantitative aspect of the qualitatively defined mass socio-economic phenomena and processes, their structure and distribution, placement in space, movement in time, dependencies, trends and patterns in a given place and time;
- Salin [3] – science of the quantitative aspect of mass socio-economic phenomena and processes in close connection with their quality content.

Analysis of the above authors' interpretations of the concept of "statistics" allows to conclude that the statistics can be viewed as a set of techniques and methods of collecting, processing and analyzing numerical information on socio-economic phenomena and processes in society. Statistics as a scope of practice allows to develop specific systems of parameters and indicators of the status of socio-economic development in its various aspects to make managerial decisions [4]. E.V. Ioda notes that the statistics is "an effective tool, instrument of knowledge used in the natural and social sciences to establish the specific laws that apply in specific mass phenomena studied by this science."

Domestic government statistics includes procurement. The government oversees the state of procurement, while a variety of forms of statistical reporting serve as monitoring tools. Statistical forms containing dozens of indicators characterizing the procurement processes allow the head of procurement to carry out a comparative analysis of the

provisions of a particular organization in the general procurement system. Comparison of indicators contributes to finding the miscalculations, vulnerabilities, etc., which in turn leads to the development of strategies for procurement in the current legal and socio-economic conditions.

An analysis of foreign sources on the theory and practice of development of the competitive environment allows to note one of the important areas – the study of competitors [5]. Collection and processing of cross-sectoral information, competitive intelligence allow an objective assessment of the capabilities in the procurement market [6]. Strategies for competitive bidding are considered by Albano, Dimitri, Pacini, Spagnolo, who offer the following competitive ratios:

- Optimistic (or-optimistic ratio) – based on the premise that companies do not collude;
- Pessimistic (pr-pessimistic ratio) – based on the possibility of collusion among companies.

It is important that these ratios must be calculated before the beginning of the bidding process (bidding format is not defined, the exact number of participants is unknown). Calculation of the ratios contributes to the preparation of decisions on division of procurement into lots. Variables that allow the calculation of the competition ratios are following:

n – Adjusted number of individual participants (expected number of bidders);
N – Number of individual participants (absolute expected number of bidders);
L – Number of lots (number of lots the contract is divided for).
Optimistic ratio can be determined through the ratio of adjusted number of participants and number of lots:

$$OR = \frac{n}{L}$$

Pessimistic ratio allows to calculate attempts to divide lots without formal competition by probable collusion of participants.

Scientists note that both ratios may be viewed as complementary and must be used together in order to obtain information on the expected levels of competition in different bidding formats [7]. Domestic scientists consider the competition in the procurement structure as one of the main factors for the development of the procurement structure itself and the development of the efficiency of procurement. Managing the procurement process requires information of state statistical observations that allow to develop a methodology to ensure customers' activities. To assess the effectiveness of procurement, foreign experts use, for example, value for money criteria, conformity of production with demands of consumers while simultaneously assessing the reasonableness of such demands, principle of transparency in procurement, etc. [8].

Issues of development of competition in public procurement in foreign countries are presented in the following areas:

- Absence of collusion and availability of free entry into market; prices are falling towards marginal cost;
- Suppliers get an incentive to reduce production costs;
- Competition is an important engine of innovation [9].

The "company position/industry attractiveness" matrix proposed by M. Porter was the basis of the matrix of qualification assessment of potential suppliers at creating equal competitive conditions of identifying the supplier (contractor, executor). M. Porter notes that the "company position/industry attractiveness" matrix in any version was used effectively by companies such as McKinsey, Shell, General Electric, since the analysis of the industry in general and a certain unit in particular allows to define the strategic objectives of the competition development. The position of M. Porter that "every business unit has its own peculiarities and requires special analysis of the competitive position" is important to our study [10].

RESEARCH METHODS

The development of non-price competition is an important task of the contract system in procurement. Analysis of the literature suggests that non-price competition is a set of methods of struggle aimed not at conquering a price advantage over the competitors but rather at the provision of products with improved consumer properties to the 0customer [11-13]. Opponents of such an interpretation of the concept of "non-price competition" put forward the following arguments:

- This interpretation distorts the content of the objective function of the competitive rivalry, which consists in conquering predominant position in the market;
- The methods used are often not intended to increase customer value of the product;
- This interpretation does not reflect the essence of non-price form of competition.

Non-price competition methods are based on the characteristics of the products. The nature of price competition is to try to win superiority over the others, which is also typical for price competition. Understanding of the essence of the above types is essential for non-price competition in procurement [14,15].

Statistical indicators underlying the forms of state statistical observations provide a head of contract department or a contract manager an opportunity to use them for comparisons and managerial decision-making. At the same time, the number and content of the indicators used in the forms of state statistical observations of procurement do not always answer questions that arise. The organization can develop a system of indicators for procurement monitoring using not only indicators of forms of state statistical observations, but also their own indicators. The practice in procurement monitoring conducted by the Moscow City Department on Competition Policy indicates

that the feasibility of selecting a particular indicator is determined by the objectives and tasks of monitoring. With the introduction of the Federal Law No.44-FZ "About contract system in the procurement of goods, works and services for state and municipal needs" into force on January 1, 2014, the need emerged to create and use indicators including not only the two correlating figures, but also more complex ones, which allow to integrate dozens of figures that measure various properties of procurement. Integral indicators may include not only a set of specific figures, but also simple figures. Each component of the integral indicator has its weight in the total value of the indicator and reflects the importance of the studied component. Analysis of statistical studies within the framework of monitoring of Moscow City procurement allowed to determine the basic requirements for the indicators:

- Indicator should meet the objectives of the procurement monitoring;
- Assess the level of implementation of procurement with the standard;
- Provide a comprehensive assessment of the object of statistical study;
- Summarize information on the procurement, without distorting it;
- Meet the demands of a manager.

No less important are the requirements to the indicator on the need to be structurally related to other indicators; ensure general comparability; be accurate, comparable, credible and reliable.

RESULTS

Competitive relations in the field of public procurement are the subject of intense scrutiny by both scientists and practitioners. Federal Law No. 44-FZ "About contract system in the procurement of goods, works and services for state and municipal needs" dated 05.04.2013, Article 8 "The principle of competition" determines that the contract system in procurement is aimed at creating equal conditions for competition between the parties to procurement. It is also noted that any interested party has the ability to become a supplier (contractor, executor), in accordance with the legislation of the Russian Federation and other regulations on the contract system in procurement. In accordance with this law, the competition for procurement should be based on compliance with the principle of fair price and non-price competition between the parties to procurement in order to identify the best conditions for supplying goods, performing works and providing services. The law prohibits customers, specialized organizations, their officials, committees on procurement, members of such committees, members of procurement to commit any actions that are contrary to the requirements of 44-FZ and lead to a restriction of competition. In addition, Article 20 of 44-FZ contains a paragraph on compulsory public procurement discussion, which will be expressed in the form of actual direct public control over public procurement. According to the law, public discussion must begin from the date of publication of procurement plans in the unified information system, containing information on procurement subject to mandatory public discussion, and end no later than the time limit within which the identification of the supplier (contractor, executor) may be canceled by the customer. Specifics of

organization of competitive relations in public procurement were considered on the example of Moscow. The main feature of the current public procurement system in Moscow is permanent actions of legislators and managers aimed at increasing their efficiency, minimization of costs and reduction of corruption. The "Portal of Suppliers" under the Tender Committee of Moscow is a convenient and reliable small-volume procurement tool for state needs in accordance with paragraphs 4, 5, 28 of Part 1 of Article 93 of Federal Law No. 44-FZ "About contract system in the procurement of goods, works and services for state and municipal needs". This criterion allows the supplier to come to the electronic conclusion of a contract by publishing offers. The customer gets an opportunity to form a cart in the online store through the selection of offers from suppliers. The "Portal of Suppliers" is ease in operation. The algorithm of operation on the "Portal of Suppliers" includes seven steps:

Step 1 – You need to receive an electronic signature;
Step 2 – Create an account on the Portal of Suppliers;
Step 3 – Log in to your personal account;
Step 4 – Publish the offer;
Step 5 – Receive the draft contract from the customer;
Step 6 – Approval and signing of the draft contract with the customer;
Step 7 – Receive a contract signed by the customer.

This algorithm can be represented as a chain of successive actions: receive an electronic signature → prepare the workstation → register on the Portal of Suppliers → log in to the personal account → create an offer → wait until the customer sends the draft contract → agree the draft contract with the customer and sign it. The "Portal of Suppliers" is a visual representation of the image and reputation of the supplier. A complex rating of the supplier based on the following indicators is formed on the portal:

- Experience of the supplier;
- Quality of contract execution;
- Reputation of the supplier.

The calculation is carried out on three groups of suppliers based on the amount of contracts per year:

- 1 mln to 5 mln rubles;
- 5 mln to 50 mln rubles;
- At least 50 mln rubles.

The "Portal of Suppliers" is a unique resource for the business community. The business community maintains and constantly updates "Handbook of production" by kind of production; government customers do so by category of production. "Handbook of production" is maintained by the principle of self-regulation.

The "Portal of Suppliers" is a single showcase all of Moscow procurements:

- About procurement and contracts under 44-FZ;
- About procurement and contracts under 223-FZ;

- About selection for subsidies;
- About tenders for transient objects.

Data of the Portal of Suppliers are publicly available, including in the form of multivariate statistics (graphs, tables and diagrams) on the following parameters:

• Offer;
• Contract;
• Suppliers;
• Charity auctions;
• Invitations from customers to participate in procurement;
• Monitoring of indices of publicity and transparency of procurement as performance indicators;
• Customer ratings on indicators of activity in public procurement.

DISCUSSION

Thus, the "Portal of Suppliers" is an effective result-oriented management technology, which includes:

To coordinate the activities of public organizations and business communities with the work of the executive authorities of Moscow in order to promote competition, it was decided to create a Public Council for the Development of Competition in Moscow. Regulation "On the Public Council for the Development of Competition in Moscow" emphasizes that the Public Council is an advisory body established to ensure public control. The main objectives are to provide stable connection between the Moscow state authorities and improve the efficiency of work on the development of competition.
The Public Council has the following functions:

- Assessment of the development of competition in Moscow by sectoral areas of activity of the Moscow Government.
- Monitoring of placement by Moscow executive authorities of information on the site on the Internet and assessment of availability of information on competitive procedures and other competitive activities disclosed by the Moscow executive authorities on the official websites.
- Activities aimed at explaining the goals and objectives of the competition policy established by the antitrust laws to economic entities and their activities, as well as prohibitions and consequences of their violations.
- Implements and coordinates the work on carrying out independent assessment of public competition.
- Monitoring of the content of inquiries from the business community to the Moscow executive bodies on the issues of development of competitive relations and accounting of these proposals by Moscow executive authorities.

In order to develop competition in public procurement in Moscow, a number of activities aimed at improving the contract system have been developed. One of the main features of Moscow public procurement system is the existence and development of information support system for the city order (EAIST), which provides operation on the whole process of organization of public procurement, from planning to monitoring of the execution of government contracts.

The development of preventive mechanisms for concerted actions of economic entities aimed at preventing, restricting or eliminating competition in the auction is provided separately.

Horizontal product differentiation lies in the difference between consumer characteristics of products of different brands (main consumer properties, spatial distance, etc.). The goal is to attract buyers by attaching the properties to the product that meet the needs of potential buyers.

Vertical product differentiation lies in the difference between the levels of qualitative parameters of the same set of consumer characteristics of products of different brands. The researchers of this phenomenon say that the considered type of differentiation must reflect the quality of products (performance characteristics; repair, storage and disposal costs; warranty, etc.). The goal is to attract customers by the "price-quality" principle.

Information product differentiation can be regarded as the selection of a particular product by providing the buyer information on the price, distinctive properties and location. This is primarily advertising. The important point is the fact that advertising is often a source of misinformation and manipulation tool, which reduces competition [16].
One of the most topical issues of development of the procurement system from the perspective of the business community is to ensure maximum transparency of the procurement process. At the same time, despite the "ostentatious" interest, city customers rarely use additional methods to attract and inform potential suppliers about the upcoming bidding, arguing that the collection of information on opportunities is the task of the supplier, rather than the responsibility of the customer. However, they do not consider that such an approach contradicts the successful practices of organization of procurement in the corporate segment, where the customer is interested in the maximum number of participants, as this increases the chance to choose the supplier offering the best conditions, especially in the context of an auction procedure.

CONCLUSION

Thus, the economic content of product differentiation doesn’t lie in the improvement in consumer product parameters or the presence or absence of real differences in the substitute products, but rather in the perception of product differences by the buyer. The main goal is to highlight the perception among consumers of similar products by attaching the distinctive properties to them [17]. Dimitri et al. points out that the distinctive properties of the product must be considered as a subject of non-price

competition [18]. One of the main problems of lack of effectiveness of the public procurement system is the low quality of contract execution monitoring by the customers, which in turn leads to inefficient and even misappropriate use of budgetary funds. There are several causes of this situation:

• Lack of regulation of public procurement;
• Lack of practice of formation of committees on acceptance of the goods, works and services by customers;
• Low motivation and a formal approach of a number of customers to order execution control;
• Affiliation of a number of customers with specific suppliers.

Another problem is the poor quality of customer's claims activities, and often lack thereof. In this case, the main role of the low efficiency of claims activities or complete lack thereof is played by minimization of motivation of the customer, as the recovered penalties are not returned to the customer, but transferred to the budget in the form of savings. In addition, there are some personnel problems that do not allow customers to carry out work with claims and lawsuits efficiently and in a timely manner.

Thus, non-price competition is a form of competition between sellers, through which they ensure the attraction of customers by creating sustainable product-specific preferences. The distinctive features of price competition include a sufficiently wide range of methods of its implementation. As noted above, the object of competition in this case is qualitative parameters of the product and a set of its consumer properties. Methods of non-price competition in case of the object of rivalry choosing qualitative parameters of the product are following: quality; reliability; lifetime; technological perfection. The criterion of success is to ensure the most desired "price – quality" ratio. If the object of rivalry chooses consumer parameters of the product, the competition revolves around the forms of sales methods, advertising and other methods of this kind of non-price competition aimed at expanding the controlled part of the market demand, i.e. at attracting new customers.

Non-price competition is valid if there is a need for the distinction of products. This need is typical for procurement of goods, works and services for state and municipal needs. The use of non-price competition methods is evidence of market segmentation and wide differentiation of needs for goods, works and services from customers. In this approach, non-price competition can be considered a kind of tool to bring the structure of the market supply from suppliers, contractors and executors in line with the structure of demand from customers.

The symbolic value as an additional cost that the buyer is willing to pay for the purchase of a product of particular brand is interesting for our study. J. Baudrillard introduced the concept of symbolic value (sign-value) to reflect changes in consumer behavior orientations. This change was based not on real consumer properties of products but rather on the imaginary value perceived by the consumer. Certainly, the information

environment plays the leading role in the formation of symbolic value [19].

Economists of the XVIII century defined the ideal type of competition as perfect competition. They meant a market model where individual buyers and sellers cannot influence the price but form it by their contribution to the supply and demand. The perfect competition for them was such type of the market structure where the market behavior of buyers and sellers lied in adapting to the market equilibrium conditions. In line with the development of the idea of perfect competition, a considerable amount of time has passed before an attempt to create a logical chain of knowledge about the theory of perfect competition in the XIX century. Later, in the late XIX – early XX centuries, economic development contributed to the emergence of critical views on the theory of perfect competition, which in turn led to the emergence of the theory of imperfect competition. Over the next century, leading representatives of economic thought have made further attempts of knowing the essence of competition and development of the theory of its functioning and mechanism of action [20,21].

In the XXI century, the value of competition manifested itself in its understanding as a procedure of discovery and emergence of new knowledge. In this case, the result of competition is discovery of new resources and realization of their combinations, discovery of new products and markets, creation of new and improvement of existing technologies, creation of new types of organization.

Thus, the development of a competitive environment in procurement in accordance with the contract system provides for price and non-price competition. Non-price competition is quite a complex phenomenon that requires deep professional competencies of the customers that allow to control the process of procurement of goods, works and services for state and municipal needs from the standpoint of modern strategic analysis, quality control, etc.

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