



KEY PERFORMANCE INDICATORS OF THE PROCUREMENT SYSTEM AND THEIR RELATIONSHIP WITH DIGITALIZATION

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ABSTRACT

Objective: The following hypothesis has been put forward and confirmed in the article: the system of key performance indicators can be effectively applied in the budgetary sphere, namely, in the state (municipal) procurement. **Methods:** To confirm the hypothesis, the article examines the regulations governing the issues of state and municipal procurement and the stages of digitalization and also develops a system of criteria for the effectiveness of the system of state and municipal procurement. **Results:** A system of performance indicators has been proposed in conjunction with digitalization through the regional information unified automated procurement management system (EASUZ) and the contract execution portal (PIK), considering the centralization and unification of forms.

Keywords: State and municipal procurement; Efficiency criteria; Centralization of procurement; Execution of state (municipal) contracts; Electronic store; Budget legislation.



INDICADORES-CHAVE DE DESEMPENHO DO SISTEMA DE APROVISIONAMENTO E A SUA RELAÇÃO COM A DIGITALIZAÇÃO

RESUMO

Objetivo: A seguinte hipótese foi levantada e confirmada no artigo: o sistema de indicadores-chave de desempenho pode ser efetivamente aplicado na esfera orçamentária, ou seja, nas compras estaduais (municipais). **Métodos:** Para confirmar a hipótese, o artigo examina as normas que regem as questões de licitações estaduais e municipais e as etapas de digitalização e também desenvolve um sistema de critérios para a efetividade do sistema de licitações estaduais e municipais. **Resultados:** Foi proposto um sistema de indicadores de desempenho em conjunto com a digitalização por meio do sistema unificado de gestão automatizada de compras regionais (EASUZ) e do portal de execução de contratos (PIK), considerando a centralização e unificação de formulários.

Palavras-chave: Compras estatais e municipais; Critérios de eficiência; Centralização das compras; Execução de contratos estatais (municipais); Loja eletrônica; Legislação orçamental.

1 INTRODUCTION

The historical aspects of the contract system formation in Russia have determined the priority of the principle of increasing efficiency. An effectively built procurement mechanism in Russia is essential in the formation of budget policy (Gladilina et al., 2019). Improving the effectiveness of public procurement is becoming one of the most important strategic tasks of executive authorities involved in the planning and practical implementation of public procurement to increase the efficiency of the targeted allocation of budget funds, as well as to ensure the progressive business and economic development of the country as a whole, its regions, and individual municipalities (Trofimovskaya & Vershinina, 2021). The procurement system, as an instrument of legal and economic relations, does not exist abstractly and by itself but aims to achieve certain practical results, in other words, benefits, more specifically, maximizing such benefits. By introducing a particular legal mechanism into use or withdrawing it from the circulation of legal and economic relations, the legislator selects the best variant of the ratio of all mechanisms in such a way that the system as a whole brings the maximum amount of benefit. How to determine which indicator will unambiguously and unconditionally signal and reflect the effectiveness of the procurement system? What parameters and output data can be used to avoid making a mistake and, as a result, reduce the efficiency of the system? The analysis of approaches to the evaluation of the procurement system, including the evaluation of the profitability of individual



mechanisms of such a system, is an important issue.

The objectives of the article are to determine the essence and objectives of the procurement system; to determine the effectiveness of the procurement system and analyze the developed approaches to evaluating the effectiveness of the procurement system, both from the point of view of the adequacy of the reflection of the corresponding indicator of the real level of efficiency of the system and from the point of view of economic analysis, when the use of this or that indicator will be considered from the point of view of a separate tool for regulating the relations of subjects. A separate task is to systematize performance indicators and select from them those indicators that can be called key performance indicators, as well as develop proposals for improving existing criteria for evaluating the effectiveness of the procurement system.

The relevance of these issues is largely due to the insignificant doctrinal development of criteria and approaches to evaluating the effectiveness of the procurement system, the strong fragmentation of research data, and the lack of a full-fledged systematization of such approaches, especially given the recent large-scale changes in the procurement system, including in terms of appropriate adjustments to some indicators.

The subject is doctrinally and normatively established approaches to evaluating the effectiveness of the procurement system, regulatory legal acts regulating the procurement of goods, works, and services to meet state and municipal needs. In particular, we decided to choose the procurement system of the Moscow Region as the main regulatory basis for assessing regional legislation.

2 METHODS

The theoretical basis was the scientific research of leading Russian authors in the field of procurement process management, such as O.V. Arkhalovich (2013), O.L. Lobanova (2018), and Zh.Yu. Yuzefovich (2018). The works of M.I. Odintsova (2019) were used to assess the effectiveness of the procurement system from the point of view of the economic analysis of law. Also, the works of foreign researchers were used for comparative legal assessment, the main of which were the works of G. Darrin and M. Lewis (2007).

The methodological basis was general scientific and private scientific methods of cognition. The work was carried out through the use of methods of system analysis,



elements of economic-statistical and comparative-analytical methods.

The information basis of the study was made up of statistical materials containing the disclosure of indicators of the state and municipal procurement system, as well as specialized Internet sites that publish materials on the topic of legislation and practice of state and municipal procurement.

The degree of reliability and validity of scientific statements, conclusions, and recommendations contained in the work is confirmed by the study and analysis of scientific publications on the topic of research, the application of the modern methodology of scientific research, the use of a significant amount of factual data (statistical material, expert opinions, data, calculations performed by us).

3 RESULTS AND DISCUSSION

3.1 Theoretical and practical foundations of public procurement performance indicators

Currently, it is impossible to talk about the existence of a universal definition of the effectiveness of public procurement and the methodology of its calculation. First of all, it is worth noting that efficiency can be considered both from the point of view of the effectiveness of hotel procurement and the effectiveness of the entire procurement system.

Law No. 44-FL establishes the principle of procurement efficiency. Article 12 of the Law states: "State bodies, management bodies of state extra-budgetary funds, municipal bodies, state-owned institutions, other legal entities, in cases established by this Federal Law, when planning and carrying out purchases, must proceed from the need to achieve the specified results of ensuring state and municipal needs". The main task, based on this article, is to meet state and municipal needs in the prescribed amount. The main goals, in turn, include: achieving goals and implementing measures provided for by state and municipal programs of the Russian Federation and its subjects, fulfilling international obligations, including interstate programs, as well as performing the functions and powers of various state and municipal bodies of the Russian Federation (State Duma of the Federal Assembly of the Russian Federation, 2013).

Since the funds allocated for public procurement are financed from the budgets of the appropriate levels, it is necessary to consider the definition of efficiency specified in the Budget Code of the Russian Federation (hereinafter referred to as the BC RF),



which does not fully comply with the definition of Law No. 44-FL.

Article 34 of the BC RF states that the principle of efficient use of budgetary funds means that when drawing up and executing budgets, participants in the budget process, within the framework of their budgetary powers, must proceed from the need to achieve the specified results using the least amount of funds (economy) and (or) achieve the best result using the number of funds determined by the budget (effectiveness) (State Duma of the Federal Assembly of the Russian Federation, 1998).

Combining the provisions of the two laws, we can say that efficiency is achieved by best meeting needs through the least use of resources. Simplifying, the principle of the effectiveness of the procurement system can be described by the words "the best, for the lowest price" (Khatuntsev, 2018, p. 221).

Considering the issue of efficiency, we believe that it is appropriate to switch to quantitative performance indicators, such as KPI (key performance indicators). KPI can sufficiently reflect the degree of achievement of the above-mentioned goal.

The KPI term, as such, is borrowed from the economic theory of law and is a way of managing the behavior of the performer within the framework of the relationship between the principal and the agent. In this case, it is necessary to resort to the theory of economic analysis of law, in particular, its use as a tool for solving one of the varieties of agency problems – a situation of insufficient awareness of participants, when the principal does not know the characteristics of the agent, including its performance (which generates unfavorable selection), and, in turn, the agent is not interested in making efforts to achieve the result in which the principal is interested (Odintsova, 2019).

In the case of consideration of the contract system, the principal may be a broader organization, for example, the administration of the federal level of government or the level of authority of the subject, and the agent may be an institution of the level of authority of the subject or the level of the municipality, respectively. In each specific situation, it is the contractor who is at a lower (immediate) level of solving the problem, has a greater degree of information, and has more opportunities to manipulate performance indicators. While the principal, not having all the information, will be deprived of the opportunity to accurately and unambiguously determine the quality and effectiveness of the agent's work. To minimize the risks of the principal, we need to establish the most accurate performance indicators of the agent, which on the one hand will reflect the actual level of efficiency of the agent, and on the other hand, will be difficult to manipulate them. In our case, this prism of consideration applies both

directly to the form of construction of the contract system and the assessment of individual KPI.

3.2 The degree of digitalization of the stages of procurement activities in the subjects of the Russian Federation, as an indicator of efficiency

The use of a unified procurement information system is recognized by several researchers as an integral part of the procurement system. The degree of digitalization of the stages of procurement activity differs in different subjects of the Russian Federation. Therewith, any transition from paper interaction to electronic interaction is recognized by the expert group of the Federal Antimonopoly Service (FAS) as a positive competitive practice.

Thus, it was noted in 2019 that the use of an electronic storage system for small volume purchases is a pro-competitive practice. Describing the different mechanisms and models of this instrument, the FAS RF separately noted the Government of the Ryazan region (2017) and Rostov region (2018) regions, noting that the use of the electronic form of small-volume procurement creates conditions for transparency and publicity of procurement procedures, expanding access, including for small and medium-sized businesses, to procurement procedures, including those cases where procurement legislation does not contain mandatory requirements for conducting bidding and allows directly entering into contracts with a single supplier.

In 2020, the Antimonopoly Service separately noted the use of the "Supplier Portal" automated information system by the Government of Moscow (Mayor of Moscow, 2018). The Supplier Portal system is another analog of the regional system for concluding small-volume contracts, aimed at increasing the efficiency of purchases from a single supplier and supporting small and medium-sized businesses.

We already noted that the Moscow region, in turn, is one of the flagships among the subjects of the Russian Federation in terms of the depth of digitalization of the procurement process, among the already noted EASUZ (regional information unified automated procurement management system) systems and Electronic store and PIK (contract execution portal) EASUZ subsystems. Special attention should be paid to the latter. Unlike most regional systems that simplify the work of customers when interacting with the unified information system (UIS) or increase the number of de facto competitive purchases through the system of electronic stores, the electronic contract execution system takes the introduction of procurement activities to a completely different level. Until now, when describing quantitative indicators, we talked only about

indirect indicators of the effectiveness of meeting state and municipal needs, leaving out the quality and accuracy of the direct execution of contracts.

Several researchers noted the importance of using such a quantitative indicator of efficiency as the timeliness and quality of contract execution (Katvalyan, 2020). Since all the interaction between the customer and the supplier, first of all, took place on paper. The use of indicators of the effectiveness of the procurement system from the point of view of contract execution was possible only in terms of operational verification of the effectiveness of individual purchases. The use of electronic document management systems allows considering the use of such an indicator as "timeliness and quality of contract execution" at the system level. Not to mention the relevance of using this tool in the current period of the coronavirus pandemic.

Considering the criterion of digitalization from the point of view of economic analysis of law, it can be argued that the formalization of interaction between participants in the procurement process leads to greater transparency and reduced incentives for unfair behavior. The time of sending and signing the relevant execution documents may differ in a situation where the interaction takes place outside of electronic systems. In this sense, the electronic system acts as an independent intermediary, with whom it is impossible to agree and sign "acts retroactively". By minimizing the scope for such actions, digitalization of procurement relations significantly reduces the risks of manipulating such indicators of the effectiveness of procurement relations as "timeliness and quality of contract execution".

In the context under consideration, the "quality of performance" is achieved largely due to the inevitability of carrying out claim work and collecting penalties from contract performers by the customer, which, in general, is not a common practice for most customers, especially at the municipal level. As rightly noted by several researchers, state and municipal institutions tend not to notice certain violations, just to fulfill the municipal task in full by the end of the calendar period in which these budget funds must be used, under the threat of holding the heads of the budget institution accountable (Article 306.1 of the BC of the Russian Federation) (Rustamova & Davletkhanov, 2019). Therewith, the public interests of the effective use of budgetary funds are also being infringed. Electronic document management equally stimulates both the customer and the contractor under the contract to the timely and proper fulfillment of their obligations under the contract.

As suggestions for expanding electronic interaction, it seems right to introduce an electronic system for collecting and analyzing prices of goods, works, and services

based on existing systems of supplier portals. Considering that the needs of state and municipal institutions are overwhelmingly typical, it would be extremely convenient to form a single electronic database of prices that would be adjusted in the present time or to implement the technical possibility of sending requests for price offers through existing automated electronic systems. The introduction of such functionality would significantly reduce the risks of price manipulation, which we mentioned when considering the quantitative indicator of the efficiency of budget savings.

The definition of the effectiveness of the procurement system strictly depends on the definition of the essence and objectives of the procurement system, the latter, in turn, can be divided into the main goal and additional goals. The main goal of the contract system, reflecting its essence, is to achieve the best satisfaction of state and municipal needs through the least use of resources. Performance indicators of the procurement system as a whole should be built around this goal. Additional objectives of the contract system include the development of competition, promotion, and protection of small and medium-sized businesses, support and protection of goods, works, services of Russian production (production of the EAEU countries). Additional goals, in contrast to the main, may vary depending on the direction of the economic, political, and legal policy of the state.

Attempting to systematize approaches to evaluating the effectiveness of the procurement system, two main groups of such indicators can be identified: quantitative and non-quantitative (qualitative) indicators. Quantitative indicators are formally defined, calculable in nature, which allows considering and fixing performance indicators in the present and considering them in dynamics. Non-quantitative (qualitative) indicators are not calculable and in most cases have the appearance of compliance with certain positive or negative procurement practices. Therewith, the regulatory approval of the relevant quantitative and qualitative indicators is an independent tool for regulating the behavior of participants in the procurement system. The use of quantitative and qualitative performance indicators together is a comprehensive analysis of the performance indicators of the procurement system.

The following are among key quantitative performance indicators in the framework of a comprehensive assessment of the use of indicators 1) the share of justified, partially justified complaints to the Federal Antimonopoly Service (FAS of Russia) (from the total number of published auctions); 2) the share of failed auctions from the total number of announced auctions or the average number of bidders; 3) the share of total cash savings from the total amount of announced auctions; is highly preferable. The

approach of the Committee on Competition Policy of the Moscow Region in using these macro indicators fully takes into account the problems and nuances that arise in the practical and theoretical spheres of quantifying the effectiveness of the contract system.

Meanwhile, as a general disadvantage of these indicators, an insufficient degree of diversification of these indicators for individual commodity markets was identified, which could serve as a clearer and more definite indicator of low-competitive or problematic commodity markets requiring operational or systemic solutions.

In addition, for each of the above indicators, one or another degree of possibility and types of manipulation were identified, from the point of view of the economic analysis of the law and the problem of the principal agent. These conclusions can also be used to improve and detail the rules for determining indicators in the future.

The possibility of manipulation can be compensated by the use of non-quantitative (qualitative) indicators of the efficiency of the procurement system.

4 CONCLUSION

The use of qualitative indicators was proposed within the framework of this study, using approaches developed in the antimonopoly compliance mechanism, expanding the methods of preventing violations of procurement legislation to the use of unconditionally positive practices as indicators of the effective operation of the procurement system.

We attributed the following to such key qualitative indicators: 1) the criterion of digitalization of procurement activities; 2) the criterion of centralization of the procurement system; 3) the criterion of unification of procurement activities. Each of the criteria was considered separately, detailed descriptions were given of both the criteria themselves and options for their interpretation, depending on the regional specifics of procurement systems. As a result, the presence of all three key non-quantitative indicators of the effectiveness of the procurement system, which can be used for a comprehensive assessment of the procurement system of the appropriate level, was found to be universally recognized as positive.

The following can be indicated as a separate conclusion of this work. The procurement system of the Moscow region has fully accepted the performance indicators that are developed by the standards and approved by the scientific community. There is a tendency to increase the number of quantitative indicators of



the effectiveness of the procurement system, the use, and expansion of pro-competitive procurement practices.

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