

National Research University Higher School of Economics

as a manuscript

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SUPPLIER'S STRATEGIES IN PUBLIC PROCUREMENT

PhD Dissertation Summary

for the purpose of obtaining an academic degree
Doctor of Philosophy in Economics

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Candidate of Sciences in Economics

JEL: H57, H83, D23, D74

Moscow – 2020

The dissertation was prepared at the Laboratory of Empirical Analysis of the Enterprises and Markets in Transition Economies of the Institute for Industrial and Market Studies, National Research University Higher School of Economics (IIMS HSE).

Problem description. Public procurement today is a vital component of developed and developing economies, accounting for an average 15-20% of GDP in costs [Thai, 2001; Lewis, Bajari, 2011; OECD, 2015], and in some developing countries such as Angola and Eritrea, reaching 26% and 33% [Djankov et al., 2016]. OECD countries spend about 13% of their GDP on public procurement, which on average makes up 29% of their total public expenditure [OECD, 2015]. In Russia the total value of procurement made in 2019, including procurement by particular types of legal entities, amounted to 31.6 trillion rubles or 29% of GDP at current prices [ACRF, 2020].

Over the past decade, many developing countries have initiated public procurement reforms [Agaba, Shipman, 2007; Jones, 2007; Mahmood, 2010]. One of the main goals of ongoing reforms in public procurement in Russia and abroad was to limit corruption and stimulate competition when placing government orders [Melnikov, 2008; PwC, 2011; Ivanov, 2014]. Instruments for achieving these goals in Russia have become strict and detailed regulation of the procedures for placing government orders, as well as the active introduction of electronic auctions. However, the results of the reform were rather not in line with the original expectations. There was a constant increase in the forms and manifestations of unfair behavior of participants, procedural violations were noted in 60% of purchases, the average number of applications was reduced, and the share of purchases from a single supplier increased [Yakovlev et al., 2010].

The new Federal Law No. 44-FL “On the Contract System in the Procurement of Goods, Works and Services for State and Municipal Needs” (hereinafter referred to as 44-FL), which entered into force on January 1, 2014, was called upon to solve the problems that had accumulated in public procurement. Along with the regulation

of the stages of procurement planning and contract execution, 44-FL expanded the possibilities for customers to apply various procurement procedures but continued to declare its commitment to the competitive principles of public procurement. Nevertheless, the goals of the current policy contradicted the goals of the public procurement participants. For example, half of the competitive procedures involved no more than one supplier, and despite the norms of the current legislation, the practice of “deliberate choice”, according to which the customer determined the supplier even before the procurement procedure, was widespread [Yakovlev et al., 2015; Avdasheva et al., 2020].

All changes in regulation have had a significant impact on the level of costs associated with complying of suppliers with public procurement procedures, and, accordingly, on their strategies of behavior, including the manifestation of unfair behavior (collusion, coordination, dumping, manipulation of resources in the process of executing a government order, etc.) and differences in conflict resolution mechanisms.

Thus, the contradiction between the goals of the regulator and procurement participants has led to the emergence of new opportunities for dishonest behavior of suppliers that are contrary to public interest and caused not only by corruption motives. Due to the impossibility of ensuring a high-quality supply of goods and guaranteed performance of contracts under the current regulation, bona fide participants were forced to break the rules and leave for the informal zone [Avdasheva et al., 2020].

On the other hand, bona fide suppliers who tried to follow formal rules, often have conflicts that they are forced to go to court or resort to alternative conflict resolution mechanisms. The choice of such mechanisms in this situation is largely determined by the level of costs arising during disputes and litigation with the customer, as well as the low probability of protecting their interests in court in disputes with the state [Galanter, 1981; Frye, 2002; Dolgopyatova et al., 2004; Volchik, Nechaev, 2015].

At the same time, the amount of suppliers' costs associated with compliance with the procedures prescribed by law may overlap the expected positive effects of the regulation [Volchik, Nechaev, 2015]. So, if the costs of regulatory authorities and the costs of customers are financed directly from the budget, then the costs of suppliers affect budget costs indirectly, since suppliers can include their costs of participation in public procurement in the proposed contract price. Therefore, taking into account this kind of costs, as well as the development of measures to reduce them, become an important element in the choice of the supplier behavior strategy.

Meanwhile, the lack of empirical research, as well as the need to understand how, in conditions of weak institutions, suppliers differ in their behavior, how conflicts are resolved and how high are suppliers' costs in a specific area of public procurement, determine the relevance of the chosen topic not only for Russia but also for other developing markets.

Brief literature review. Nowadays international and Russian studies on public procurement do not pay enough attention to the behavior strategies and problems of “ordinary” participants in the public procurement process. So, among the publications of Russian authors, we can distinguish studies on the presence of collusion between suppliers and low competition in public procurement [Balsevich, Podkolzina, 2014; Ostrovnaya, Podkolzina, 2014], information transparency and its impact on pricing [Balsevich et al., 2012], corruption in public procurement [Ostrovnaya, Podkolzina, 2015; Mironov, Zhuravskaya, 2016]. The listed studies, as a rule, rely on the results of the analysis of large sets of open data, which makes it possible to use econometric methods. At the same time, such studies, as a rule, do not reveal the internal problems of the functioning of the public procurement system that its direct participants face, and do not analyze the driving motives of their behavior.

The tool for identifying such issues has traditionally been surveys of participants in relevant markets. However, with regard to public procurement, only a few works are based on the results of surveys of customers and especially suppliers

[Yakovlev et al., 2010]. The same applies to foreign publications. Perhaps the only example of an empirical study of public procurement that considers the positions of different participants in the procurement process is the large-scale PwC project, prepared on the basis of a survey of 5500 government customers and 1800 suppliers [PwC, 2011]. However, to analyze the impact of European Commission directives on the effectiveness of public procurement in EU countries, PwC experts evaluated only the level of competition in procurement procedures and the costs of their implementation by customers and suppliers.

One of the important characteristics of the public procurement market is the relationship between the behavior strategies of all participants in the procurement process. So, on the one hand, suppliers should be guided by the installations declared by customers, since it is the customers who determine the basic conditions and rules in public procurement. On the other hand, customers must take into account the behavior of suppliers, their characteristics and analyze the experience in repeated interactions in order to achieve their own goals. Therefore, supplier behavior strategies must take into account the factors that predetermine customer behavior. A number of researchers refer to such factors as the peculiarities of the purchased products and the stability of the relationship between the customer and the supplier [Tkachenko et al., 2017], as well as the level of costs for suppliers to prepare and submit an application and the amount of effort required from the supplier to fulfill the contractual obligations [Held , 2011]¹. However, supplier behavior strategies that explain differences in their relationship with customers remain a largely unexplored topic.

In the dissertation work, the study of supplier behavior strategies includes identifying types of supplier behavior (including potentially unfair) in relation to the practice of concluding contracts with predetermined suppliers, analyzing differences

¹ So, if participation in the procurement for a supplier does not require much effort, and the subsequent proper execution of the contract is costly, it will be rational for the customer to bet on proven suppliers, since in this case the risks of opportunism at the stage of contract execution are significantly reduced. Conversely, if the preparation and filing of the application is costly and the subsequent contractual obligations are less costly, it will be an effective strategy for customers to attract new suppliers, since the high costs of preparing the application will act as a barrier for opportunistic suppliers.

in conflict resolution mechanisms and assessing the costs of suppliers for public procurement.

Unfair (opportunistic) behavior is traditionally viewed as a phenomenon that occurs when agents in the private sector interact and imply the pursuit of their own, “selfish” goals in contractual relations [Williamson, 1975, 1985; Bergen et al., 1992; John, 1984]. A specific feature of the public sector, including the area of public procurement, is the problem of the relationship between the principal and the agent [Bergen et al., 1992]. The principal-agent problem is less acute in the private sector, as the principal is personified. Indeed, the owner of a private firm generally disposes of sufficient opportunities to efficiently organize the monitoring of agents’ activities. However, such opportunities become weaker in state-owned enterprises or public sector entities, where the owner is the state acting on behalf of society.

In addition to the complex nature of the procured product, another factor complicating the identification of dishonest conduct is an imperfect regulatory environment. This factor is particularly relevant in developing markets. Under conditions of stable and functional legal institutions, the principal can effectively control the activities of her agents by controlling compliance with the rules (due to their adequacy and feasibility). However, developing markets are characterized by excessive and contradictory regulation, pushing economic actors to the shadow sector on a mass scale [De Soto, 1989; Djankov et al., 2002]. This engenders problems for honest agents and for the state (for example, the “work-torule” phenomenon illustrates the existence of unpractical and unfeasible rules within the system [Scott, 1998]). A solution of the principal-agent problem is more difficult under such circumstances because, under inadequate regulation, even honest agents are forced to violate the rules. Consequently, the control and detection of agents acting dishonestly becomes complicated for the principal-procurer. Hence, there is a need to develop alternative approaches for the identification of potential opportunism.

Most studies of opportunistic behavior in contractual relationships are

theoretical [Chen et al., 2002; Harbaugh, To, 2014]. Empirical studies of opportunistic behavior are based on contract data analysis (e.g., [Crocker, Reynolds, 1993; Luminea, Quélin, 2012]) or surveys and are devoted to the analysis of the factors of opportunism in private procurement [Wang et al., 2012; Held, 2011]. In addition, in terms of methodology, existing approaches to the analysis of supplier behavior are based primarily on customer surveys presuming that their responses are credible [Wang et al., 2012; Morgan et al., 2007; Mysen et al., 2011]. However, customers can also give biased assessments or deliberately avoid answering sensitive questions, which spawns doubts as to the credibility of the obtained results and constitutes one of the significant limitations of the approach used in previous studies. For a more detailed review of the literature on unfair (opportunistic) behavior, see Chapter 2.

With regard to the mechanisms of conflict resolution, despite the presence of works devoted to the study of ways to resolve conflicts in contractual relationships in various industries [Bigsten et al., 2000; Chong, Mohamad Zin, 2012; Lee et al., 2016], in the academic literature, there are no studies of conflict resolution mechanisms in public procurement, as well as empirical evidence of the relationship between suppliers' behavior types and conflict resolution mechanisms.

Previous studies of post-contract supplier behavior strategies have shown that Russian enterprises do not refuse to resort to the judicial system to protect their rights, but rather prefer non-judicial conflict resolution tools [Hendley et al., 2000; Dolgopyatova et al., 2004; Yakovlev, 2008]. At the same time, a number of previous studies have shown that enterprises, in principle, estimate rather low the chances of protecting their interests in court, especially if a public body is the defendant [Frye, 2002; Dolgopyatova et al., 2004], and the very costs of conflict resolution arising in the process of fulfilling contractual obligations can be quite high [Volchik, Nechaev, 2015; Li et al., 2015]. A more detailed review of the literature on conflict resolution is provided in Chapter 3.

Similarly, despite the understanding of the importance and relevance of the

problem of public procurement costs, almost no studies on this topic have been conducted in Russia. It can be noted only a few works on estimating the costs of individual customers and suppliers [Balaeva et al., 2014; Volchik, Nechaev, 2015] and one Russian region [Yakovlev et al., 2016]. Among foreign publications, only a few studies on the assessment of public procurement costs can be distinguished (see, for example, [Singer et al., 2009; PwC, 2011; Butter, 2012; Pavel, 2013; Dufek et al., 2013, Nemeč et al., 2016]). A more detailed review of the literature on costs is presented in Chapter 4.

However, the approaches to cost estimation used in these works seem to be rather difficult to implement and very labor-intensive, and involve well-developed public procurement mechanisms, data collection methods, a high level of qualifications of procurement specialists, etc. These factors do not always exist in many developing and transition economies, necessitating the need for simpler and less costly approaches to estimating the costs of public procurement.

The aim of the research is to identify and analyze supplier strategies that include different types of behavior in relation to the practice of concluding contracts with predetermined suppliers, differences in conflict resolution mechanisms, as well as an assessment of the costs of suppliers for public procurement.

To achieve this aim, the following objectives were set:

1. To propose a new methodical approach that allows to identify different suppliers' types in public procurement;
2. To describe the main types of supplier behavior and show the factors influencing the choice of these types of behavior by suppliers in relation to the practice of concluding contracts with predetermined suppliers, including a quantitative assessment of the scope of this practice in Russia;
3. To investigate various mechanisms for resolving conflicts between suppliers and customers in public procurement after the conclusion of a contract and identify factors influencing the choice of a conflict resolution mechanism;
4. To assess the average costs of government procurement in Russia for

suppliers, including the average cost of each type of procurement procedure and their share in the total cost of the contract and to identify the factors affecting the assessment by suppliers of the costs of public procurement determine the factors that influence suppliers' estimates;

5. Formulate recommendations for improving the public procurement system for public authorities.

Personal participation of the candidate for a scientific degree in obtaining the results set out in the dissertation. The personal contribution of the candidate consists in direct participation in the survey (drawing up questionnaire questions, piloting and processing data), obtaining the results set out in the study, and testing them - preparing scientific publications and presentations at scientific conferences. The candidate independently generalized theoretical and empirical works devoted to the analysis of the behavior of participants in public procurement and the assessment of their costs, identified various mechanisms for resolving conflicts, made an empirical assessment of factors affecting the behavior of suppliers and their choice of a conflict resolution mechanism, estimated the average costs for implementation of public procurement in Russia for suppliers, including the average costs of each type of procurement procedure and their share in the total cost of the contract.

Information base of research. The dissertation is based on the results of a mass online survey of customers and suppliers conducted by the HSE IIMS in 2017. This survey focused on the main problems of public procurement regulation. In addition, in the framework of this survey, a number of special topics were studied, including the assessment of the costs of public procurement. To generate the sample, the email addresses of customers and suppliers were collected from the official website www.zakupki.gov.ru (responsible persons from tender documentation for customers and from contract information cards for suppliers from January 2014 to March 2016). To improve the quality of the sample and exclude respondents with little work experience, only those suppliers were selected from the general array that were repeated in the original array at least 10 times over the specified period, which indicates the actual bias of the sample in favor of more experienced suppliers. The

database includes about 175,000 customers, with verified and current email addresses, and 346,000 suppliers. The questioning of this sample was conducted in 2017. The questionnaires were dispatched by the independent research company Anketolog (<https://anketolog.ru/>). A cover letter was sent to the respondents by e-mail explaining the purpose of the survey, and a link to its completion. All answers were collected using the Anketolog system, and at the end of the survey, the system made it possible to upload the results in excel and csv formats.

A total of 1,251 correctly completed questionnaires were received from public customers and 721 from suppliers. The traditionally high volume of e-mailing questionnaires results in a small percentage of respondents' responses, which is ultimately offset by the size of the initial sample. At the same time, it is believed that in such surveys, a more important factor is the representativeness of the sample of respondents [Cook et al., 2000].

In comparison with the usual survey techniques, the online survey method has a number of significant advantages, such as large sample size and coverage of respondents, resource savings, the ability to respond quickly, control the processing of survey data, the possibility of the subsequent communication with respondents [Zhang, 2000; Online research..., 2010]. However, this research method also has a number of disadvantages, including a low response rate, a bias in the sample in favor of respondents with Internet access, restrictions on the length of the questionnaire, difficulties in correcting the results obtained, and the risks of incorrect interpretation of questions by respondents.

When preparing the study, as far as possible, the above disadvantages were leveled. The questionnaires were formed taking into account the previous experience in preparing such surveys, all the blocks of the questionnaire were discussed and agreed with the experts-practitioners in the field of public procurement, and the questionnaires were piloted with the involvement of procurement specialists. The questionnaires were designed in such a way that their completion took no more than 20 minutes. In addition to the questionnaires of customers and suppliers, cover

letters were attached explaining the objectives of the study.

The obtained base of suppliers was used as the main information base of the dissertation research, but in the fourth chapter, data from a customer survey were also used to calculate the share of suppliers' costs in the total costs of public procurement. To compare the resulting sample of suppliers with the general population (a sample of suppliers to whose email addresses the questionnaire was sent), additional information from the Ruslana Bureau van Dijk database (<https://ruslana.bvdep.com/>) was used, including large areas of supplier activity, a federal district, the number of employees and the share of individual entrepreneurs. It was shown that for these indicators the structure of the sample does not differ from the structure of the general population. At the same time, the tools used in the study made it possible to control the received answers to the parameters of the organization and the personal characteristics of the respondents, and the answers themselves were a reflection of the actual situations in the field of public procurement that its participants faced since the respondents (both customers and suppliers) were responsible for purchases or decision-makers.

The structure and logic of the dissertation.

The ***first chapter*** for defining the institutional framework of the dissertation research provides an overview of the public procurement system in Russia and an assessment of its effectiveness from the perspective of public procurement suppliers, which largely determines their behavior strategies. The first section briefly discusses the history of the development of the institution of public procurement, describes the main methods of determining a supplier within the framework of Russian legislation and their share in the total volume of public procurement. The second section presents the supplier survey methodology, data obtained, and a description of the sample. In the third section, for the first time on Russian data, an assessment of the effectiveness of the existing public procurement regulation system from the position of suppliers as its direct participants is given.

The ***second chapter*** is devoted to the analysis of the types of supplier behavior

(including potentially unfair) as one of the characteristics of their strategy of behavior in the public procurement market. The first section examines the theoretical aspects of the concept of unfair behavior from the point of view of economic theory, the factors that make it difficult to identify unfair behavior, and the approaches that were previously used to identify it in the field of public procurement. The second section introduces a new approach to identify unfair behavior in public procurement. In the third section, for the first time on Russian data, an assessment of the prevalence of the practice of deliberate selection of suppliers in public procurement is given. The fourth section presents the types of suppliers depending on the degree of involvement in the practice of predetermining the choice of suppliers. In the fifth section, an empirical analysis is carried out to identify the characteristics of suppliers adhering to the selected types of behavior.

The *third chapter* is devoted to the analysis of mechanisms for resolving conflicts between suppliers and customers in public procurement as one of the characteristics of the behavior of suppliers in public procurement. The first section analyzes the advantages and disadvantages of various mechanisms for resolving conflicts in contractual relations, the specifics of the sphere of public procurement, and the results of previous studies devoted to resolving conflicts in contractual relations in various industries. The second section briefly describes the methodology for identifying and evaluating hybrid conflict resolution mechanisms in public procurement. In the third section, the combined mechanisms of conflict resolution are identified, and their quantitative assessment is given. The fourth section is devoted to identifying the characteristics of suppliers who adhere to different mechanisms of behavior in resolving conflicts in public procurement.

The *fourth chapter* is devoted to the assessment of the costs of suppliers for public procurement as one of the characteristics of the strategy of suppliers' behavior in public procurement. The presented analysis is complementary, since supplier cost accounting is an important element in choosing the type of supplier behavior and a mechanism for resolving conflicts. The first section defines and classifies public procurement costs as transaction costs in the framework of Russian public

procurement procedures. The second section presents the basic theoretical (ordinal ("sequential") and cardinal ("quantitative")) and empirical approaches to the assessment of transaction costs of participants in the procurement process. The third section describes the methodology for estimating the costs of suppliers for public procurement. In the fourth section, the average labor costs (in man-hours) for the implementation of each type of procedure, the average and total costs for the implementation of each procedure in monetary terms, and the share of procurement costs in its total cost were calculated. In the fifth section, the factors influencing the estimates by suppliers of the costs of public procurement were identified.

Research methodology. The general methodology for all stages of the study of supplier behavior strategies in public procurement is the use of a unified survey database described earlier, econometric analysis and experimental methodology, which is new for Russian studies. For more details on the survey methodology, data and sample description, see section 1.2.

To assess the effectiveness of the existing public procurement regulation system from the position of suppliers we analyzed the responses of suppliers to the questionnaire regarding the main problems of public procurement regulation in Russia, their changes in time after the adoption of 44-FZ, as well as a number of special topics, including the assessment of the effectiveness of measures to support small and medium-sized businesses and domestic producers.

To highlight the various types of suppliers' behavior, including potentially unfair, a new approach was proposed based on the comparison of answers to similar questions in the questionnaire, which are sensitive for respondents. In the supplier questionnaire, such sensitive questions were used to assess the scope of the practice of choosing predetermined suppliers, the reasons for procurers' choice of this practice, and informal connections in the field of public procurement. To check the significance of the differences between the selected groups of respondents, their estimates of the prevalence of the practice of contracting predetermined suppliers and informal relationships, as well as the results of a "survey experiment" ("list

experiment”) aimed at identifying the significance of corruption as a problem for the public procurement system were additionally analyzed. To determine the characteristics of suppliers who adhere to the selected types of behavior, a set of binary choice probit models was evaluated. As a dependent variable, a binary variable was taken, reflecting the fact that the respondent falls into a group with a “justifying” type of behavior or with a “accusatory” type of behavior in comparison with a “realistic” type of behavior.

To determine the mechanisms for resolving conflict situations in the questionnaire the respondents were asked to estimate how often, on average, per year in the period 2014-15 they had to go to court and resort to negotiations with the customer during the execution of the contract. To characterize the identified mechanisms for resolving conflicts, the respondents' answers to questions about the occurrence of problem situations, and the practice of informal relations in public procurement were additionally used. To identifying the characteristics of suppliers who adhere to different mechanisms of behavior in resolving conflicts in public procurement probit models were evaluated, in which the dependent variables were (1) the fact of appeals to the court and (2) the fact of negotiations with the customer in the post-contracting period. To check the sustainability of the results obtained, the following combined mechanisms for resolving conflicts were considered: a "conflict-free" mechanism, as well as a "negotiation", "judicial" and "hybrid" mechanism for resolving conflicts. Since in this case the dependent variable is not dichotomous, as in binary regression, multinomial logistic regression (multiple choice model) was used for the analysis.

To estimate the average labor costs (in man-hours) for the implementation of each type of procedure, the respondents' answers about the approximate labor intensity of various procurement procedures were used. To calculate the average and total costs of each procedure in monetary terms and the share of procurement costs in its total cost (in%), information on the average monthly wages of customers and suppliers was additionally used, taking into account the amount of insurance premiums for compulsory insurance of employees. To determine the factors

influencing the suppliers' estimates of the costs of public procurement, linear models were evaluated linear models of labor costs were formed for suppliers for competitive and non-competitive procedures. The dependent variables were the labor costs of suppliers (in man-hours) for the corresponding procedure. Because the dependent variables were continuous, the analysis used linear regression models estimated using the least-squares method.

The main findings. In accordance with the above tasks, generalized research results are proposed below:

1. The results of the survey of suppliers provided a real picture of the vision of the Russian public procurement system by its direct participants. The main result of the survey is that changes in legislation from the point of view of survey participants did not lead to an improvement in the situation in the public procurement regulation system in Russia. The problems specific to the previous regulation remain relevant in the conditions of the 44-FZ, and their severity practically did not decrease with the transition to the new regulation. In particular, it was shown that respondents who had work experience before the reform of public procurement legislation, in general, assessed the main parameters of the existing regulatory system worse than those who worked only under 44-FZ.
2. Although the practice of concluding contracts with predetermined suppliers directly contradicts the current procurement legislation, both sides of the procurement process recognized its widespread occurrence. The average share of procurers practicing predetermined suppliers contracting in 2014–2016, as assessed by suppliers, was 53%, and in procurers' estimates, it was 40%.
3. The main types of supplier behavior were identified in relation to the practice of concluding contracts with predetermined suppliers (“justifying”, “accusatory” and “realistic” behavior). Thus, one third of suppliers explains the practice of predetermining the choice of suppliers solely by the customer's desire for guaranteed and high-quality performance of the contract and denies

the presence of any corruption motives. Another group of suppliers (35%) provides only “accusatory” explanations for the practice. Such suppliers are more critical of the entire public procurement system, but they are much less likely to admit violations on the side of the suppliers themselves. The estimates of the third group of suppliers (29%), which combine “exculpatory” and “accusatory” explanations, seem to be the most realistic.

4. Suppliers with a large volume of public contracts (over 1 million rubles) were inclined to justify the non-competitive practice of selecting contractors. However, the respondent's experience before the reform of public procurement legislation in 2014 turned out to be an insignificant factor in choosing a supplier's behavior type. In addition, the econometric analysis showed that older respondents were more inclined to choose an "accusatory" type in relation to the other two, while male respondents were inclined to choose a "realistic" type.
5. About a third of respondents (32%) do not resort to any conflict resolution mechanisms. These suppliers do not encounter conflicts in their practice or do but prefer not to report them. At the same time, 37% of respondents prefer resolving public procurement conflicts exclusively by negotiations with a customer, 27% use a mixed mechanism for resolving conflicts that includes both methods of resolving conflicts in public procurement, and 4% of suppliers resort only to legal proceedings.
6. A clear preference by suppliers of out-of-court methods of conflict resolution indicates the need to form a regulatory and organizational framework for the use of negotiations, mediation, arbitration (or arbitration) as alternative ways of resolving conflicts in public procurement. In particular, the first step could be to secure in a state or municipal contract for the supply of goods, performance of work, provision of services, a legal justification for the possibility of using alternative methods of pre-trial settlement of conflicts.
7. Suppliers who justify the informal practice of contracting predetermined suppliers are less likely to go to court as a formal instance and less often use

negotiations with the customer to resolve conflicts in public procurement. Most likely, these suppliers have fewer reasons for the conflict, as well as less incentive to public disclosure. The existence of sustainable informal practices deprives their participants of formal grounds for applying to the court, and the detection of malpractices can result in formal charges being brought against them for a violation of effective regulations.

8. The most labor-intensive types of procurement procedures for suppliers were tender procedures (two-stage, open tender, and restricted tender), as well as an electronic auction. The total average cost of one procurement procedure (excluding small-volume purchases) amounted to 21 thousand rubles, while the supplier's costs (taking into account the costs of all bidders) accounted for 67% of the total procurement costs.
9. The more experienced respondents gave lower estimates of the costs of simpler procurement procedures. In particular, the cost of electronic auctions was on average 2.7 man-hours lower, for low-volume purchases by 3.4 man-hours, for suppliers who had experience with complex procedures compared to those who did not such an experience.

Contribution. The scientific novelty of the research is as follows:

1. Within the framework of the dissertation research, a new approach, previously not used in the scientific literature, which allows using data from enterprise surveys using interrelated questions characterizing the informal aspects of their activities, identify differences in the types of suppliers in public procurement, was proposed and tested.
2. The main types of supplier behavior were identified in relation to the practice of concluding contracts with predetermined suppliers ("exculpatory", "accusatory" and "realistic" behavior types) were first identified and factors influencing the choice of these behaviors were shown.
3. For the first time on Russian data, a quantitative assessment of the scale of the practice of concluding contracts with predetermined suppliers has been given and its wide distribution has been confirmed.

4. In the dissertation research, the mechanisms for resolving conflicts between suppliers and customers after the conclusion of the contract were analyzed, for the first time a quantitative assessment of their prevalence in the field of public procurement was given and factors influencing the choice of a conflict resolution mechanism were identified.
5. For the first time, using the example of Russian companies, the average costs of suppliers for public procurement were estimated, including the average cost of performing each type of procurement procedure.

The theoretical implication of the research. The dissertation research contributes to the scientific literature devoted to the mechanisms of the principal's revealing of unfair behavior of agents within the framework of the agency theory, the search for an effective mechanism for resolving conflicts, and the analysis of costs arising in accordance with the institutional theory at all stages of interaction between suppliers and customers. In particular, the proposed approach makes it possible to identify potentially opportunistic agents in conditions of contradictory and imperfect regulation (when the rules are not clear for agents, and the principal, on the basis of available information, cannot control and identify dishonest agents).

Practical implications of the research. The developed approach to identifying supplier behavior types (including identifying potentially unfair counterparties) and estimating procurement costs can be used by departments subordinate to government organizations that procure for their needs using budget funds, or by large state corporations that include autonomous purchasing enterprises/divisions.

The results of the study can be used as a justification for the development of a regulatory and organizational framework for the use of negotiations, mediation, arbitration, and other alternative methods of resolving conflicts in public procurement, reducing the costs of participants in the procurement process and speeding up procedures for resolving disputes in public procurement. In turn, the results of the dissertation research, testifying to the heterogeneity of suppliers and

the presence of incentives for them to informally interact with customers, can be used by legislative and supervisory authorities to improve the regulation of the public procurement system in Russia.

List of author's publications. The main results of the dissertation are published in 4 articles with a total volume of 5.4 pp; the personal contribution of the author is 3.2 pp:

1. Yakovlev A. A., Tkachenko A., Rodionova Y. Who Is Inclined to Hide the Truth: Evidence from Public Procurement // International Journal of Public Administration. 2020. Vol. 43. No. 13. P. 1109-1120. - 1.3 pp. (personal contribution - 0.7 pp.)
2. Rodionova Yu. D. Conflict resolution practice in public procurement: an empirical study // Journal of Institutional Research. 2020. No. 1. P. 160-176. - 1.3 pp. [In Russian].
3. Balaeva O., Yakovlev A. A., Rodionova Y., Esaulov D. Evaluation of public procurement costs: Macrolevel assessment based on microdata // Public Money & Management. 2020. (in press). - 1.6 pp. (personal contribution - 0.6 pp.)
4. Yakovlev A., Tkachenko A., Balaeva O., Rodionova Yu. The Russian system of public procurement: the law is changing, problems remain // ECO. 2018. No. 9. P. 17-38. - 1.2 pp. (personal contribution - 0.6 pp.) [In Russian].

Other publications on the topic of the dissertation:

1. Yakovlev A. A., Tkachenko A., Rodionova Y. Opportunistic Behavior in Public Procurement, in: Global Encyclopedia of Public Administration, Public Policy, and Governance. Springer, 2020. P. 1-5.
2. Yakovlev A. A., Tkachenko A. V., Rodionova Yu. D. Reasons for contracting predetermined suppliers: Results of an empirical study // Voprosy Ekonomiki. 2018. No. 10. P. 90-105. [In Russian].
3. Balaeva O. N., Yakovlev A. A., Rodionova Yu. D., Esaulov D. M. Transaction Costs in the Public Procurement in Russia: Macrolevel

Assessment Based on microdata // Journal of Institutional Studies. 2018. No. 3. P. 58-84. [In Russian].

4. Yakovlev A. A., Tkachenko A. V., Rodionova Yu. D. Contracts with predetermined suppliers: Corruption or quality guarantee? // State order: management, placement, maintenance. 2018. No 53. P. 18-25. [In Russian].
5. Rodionova Y. Conflict Resolution in Russian Public Procurement: Understanding Supplier Strategies in a State Dominated System / NRU HSE. Series WP BRP Series "Public and Social Policy". 2020. No. 28.

Approbation of research results. The dissertation results were presented at the following conferences and seminars:

1. XIX April International Academic Conference on Economic and Social Development (Moscow, Russia, NRU HSE, 11.04.2018). Topic: “Reasons for concluding contracts with pre-defined suppliers: results of an empirical study”;
2. Joint seminar of the Institute for Industrial and Market Studies and the Institute for Public Administration and Governance HSE (Moscow, Russia, NRU HSE, 05.30.2018). Topic: “Reasons for Concluding Contracts with Predefined Suppliers: An Empirical Study”;
3. Analytics for Management and Economics Conference (AMEC) (St. Petersburg, Russia, HSE Campus in St. Petersburg, 21-22.09. 2018). Topic: “Identification of Supplier Potential Opportunism in Public Procurement: Results of an Empirical Study”;
4. XX April International Academic Conference on Economic and Social development (Moscow, Russia, NRU HSE, 10.04.2019). Topic: “Identifying Potential Opportunism in Public Procurement: Results of an Empirical Study”;
5. The 18th session of the Institutional and Organizational Economics Academy (Corsica, France, 20-24.05.2019). Topic: “Detecting Opportunism in Contractual Relations: Evidence from Public Procurement”;
6. The 23rd Annual Conference of the Society for Institutional & Organizational

- Economics (Stockholm, Sweden, 27-29.06.2019). Topic: "Potential Opportunism in Public Procurement: Results of an Empirical Study";
7. Analytics for Management and Economics Conference (AMEC) (St. Petersburg, Russia, HSE Campus in St. Petersburg, 25-26.09.2019). PhD Workshop in Applied Economics. Topic: "Opportunistic Behavior and Conflict Resolution: Evidence from Public Procurement";
 8. XXI April International Academic Conference on Economic and Social development (Moscow, Russia, NRU HSE, 29.05.2020). Topic: "Conflict Resolution Practice in Public Procurement: Results of Empirical Research".

The results of the dissertation research were also discussed during a research internship at the University of Padova (Italy) during the period from 01.10.2019 - 11.30.2019.

The main results of the dissertation research were included in the IIMS reports on research projects supported by the HSE Program of Basic Research: "Factors affecting the efficiency of public procurement and state-owned enterprises" (2018), "Effective public procurement and investments: incentives and risks" (2019), "Behavior of Economic Agents in Public Procurement Markets and Enterprise Development in Transition Economies" (2020).

Some of the results of the dissertation research were presented in the report "Regulated procurement in Russia: how to increase the stimulating role of spending by budgets and regulated companies" [Avdasheva et al., 2020]. The materials of the dissertation research were used in the teaching activities of the author in the framework of the courses "Public Procurement: Theory and Practice" (course of the magistracy of the Department of Applied Economics of the National Research University Higher School of Economics), "Project Seminar" (Master's degree at the Faculty of Social Sciences of the National Research University Higher School of Economics), "How Russia Is Governed : Public Policy and Administration "(minor, Faculty of Social Sciences, National Research University Higher School of Economics).

Dissertation structure. The dissertation consists of an introduction, four chapters, a conclusion, a list of references, and applications. The total amount of work is 131 pages of the main text and a bibliography of 161 titles, as well as 18 pages of appendices.