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The role of reputation in cross-regional buyer-supplier cooperation in public procurement

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Relevance. The relevance of this study is determined by the growing trend of implementing approaches from the private sector in managing public procurement, such as suppliers' reputation assessment. Although the suppliers' reputation factor is a topic of current interest, both in research and in public procurement practice, there are ongoing discussions on the effects of the reputation criterion usage in public procurement, and some aspects have been insufficiently studied.

Purpose of the study. This study examines the role of suppliers' reputation factor in terms of interregional cooperation between public buyers and suppliers at the micro and regional levels.

Data and methods. The analysis is based on a survey of public buyers in Russia, revealing procurers' orientation on suppliers' reputation factor and their involvement in cross-regional cooperation for micro-level analysis. With the help of open data on public procurement contracts, a grouping of Russian regions by the share of suppliers from other regions is proposed. The combination of open data analysis and survey results is then used to explore the role of reputation in terms of interregional cooperation.

Results. The analysis shows that a suppliers' reputation factor is of particular importance when more than half of a buyers' suppliers are from other regions. Also, suppliers' reputation is of major significance for public buyers in regions that are more involved in contracting with suppliers from other regions. Thus, the importance of the suppliers' reputation factor, in terms of interregional cooperation, is confirmed both at the micro level of procurers' purchases and at the regional level.

Conclusion. For effective management of contractual relationships in public procurement, it is important to understand the effects and the role of considering the reputation of suppliers. The study focused on one of the insufficiently explored aspects of suppliers' reputation in public procurement. The results may be of interest both to regulators and direct procurement participants – public buyers and suppliers.

KEYWORDS

public procurement, suppliers' reputation, public procurement efficiency, interregional cooperation between procurers and suppliers, Russian regions

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Роль репутации в межрегиональном взаимодействии заказчиков и поставщиков в государственных закупках

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Национальный исследовательский университет «Высшая школа экономики», Москва, Россия; ✉ mobushcharova@hse.ru**АННОТАЦИЯ**

Актуальность. В управлении государственными закупками наблюдается рост тренда на использование инструментов управления из частного сектора, в частности учет репутации поставщиков, что определяет актуальность данного исследования. Интерес к фактору репутации поставщиков растет как у исследователей, так и у практиков госзакупок, в дискуссиях по этой теме нет однозначного мнения относительно эффектов учета репутации поставщиков в госзакупках, а отдельные аспекты изучены в недостаточной степени.

КЛЮЧЕВЫЕ СЛОВА

государственные закупки, репутация поставщиков, эффективность госзакупок, межрегиональное взаимодействие заказчиков и поставщиков, регионы России

Цель исследования. В статье рассматривается роль фактора репутации поставщиков в контексте межрегионального взаимодействия госзаказчиков и поставщиков на микроуровне и региональном уровне.

Данные и методы. В основу анализа положен опрос российских государственных заказчиков, с помощью которого выявляется ориентация заказчиков на фактор репутации поставщиков и вовлеченность заказчиков в межрегиональное взаимодействие. С помощью открытых данных о контрактах на госзакупки осуществлена группировка российских регионов по доле контрактов с поставщиками из других регионов. Комбинирование открытых и опросных данных позволяет определить роль фактора репутации в межрегиональном взаимодействии на уровне регионов.

Результаты. В результате анализа выявлено, что фактор репутации поставщиков особенно важен для госзаказчиков, когда более половины поставщиков являются представителями других регионов. Кроме того, наиболее ориентированы на репутацию поставщиков госзаказчики из регионов с высокой долей контрактов с поставщиками из других регионов. Таким образом, важность фактора репутации поставщиков в межрегиональном взаимодействии с госзаказчиками подтверждается как на микроуровне – закупки конкретного заказчика, так и на уровне регионов.

Выводы. Для эффективного управления контрактными взаимоотношениями в госзакупках важно понимать роль и эффекты учета репутации поставщиков. Статья посвящена малоизученному аспекту учета репутации поставщиков в госзакупках. Результаты исследования представляют интерес как для регуляторов, так и для непосредственных участников закупочного процесса – госзаказчиков и поставщиков.

БЛАГОДАРНОСТИ

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ДЛЯ ЦИТИРОВАНИЯ

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声誉在跨区域公共采购商与供应商互动中的作用

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摘要

现实性: 在公共采购管理中, 使用私营部门的管理工具, 特别是供应商声誉管理工具的趋势日益明显, 这也决定了本研究的相关性。公共采购研究人员和从业人员对供应商声誉因素的兴趣与日俱增, 但在有关这一主题的讨论中, 学界对于供应商声誉在公共采购中的影响并没有明确的观点, 而且对某些方面的研究也不够充分。

研究目标: 本文探讨了在微观和区域层面, 供应商声誉因素在区域间公共采购商与供应商互动中的作用。

数据与方法: 该分析基于对俄罗斯公共采购商的调查, 揭示了采购商对供应商声誉因素的取向以及客户参与地区间合作的情况。利用公共采购合同的公开数据, 我们按照其与其他地区供应商签订合同的比例对俄罗斯各地区进行了分组。结合公开数据和调查数据, 我们可以确定声誉因素在地区间互动中的作用。

研究结果: 分析表明, 当一半以上的供应商来自其他地区时, 供应商声誉因素对公共采购商尤为重要。此外, 与其他地区供应商签订合同比例高的地区的采购商最注重声誉。因此, 供应商声誉因素在与区域间公共采购商互动中的重要性在微观层面 (特定客户的采购) 和区域层面都得到了证实。

结论: 要有效管理公共采购中的合同关系, 就必须了解供应商声誉管理的作用和影响。本文专门讨论了供应商声誉管理, 这一鲜有研究因素在公共采购中的作用。研究结果对监管者和采购过程的直接参与者--公共采购商和供应商都有意义。

关键词

公共采购、供应商声誉、公共采购效率、客户与供应商的地区间合作、俄罗斯地区

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Introduction

Contractual relationships are associated with the principal-agent problem, which requires the principal to use various management tools. One of the ways to overcome the risks of uncertainty and opportunistic behaviour of the supplier (agent) is to

consider the supplier's reputation, as it signals the reliability of the counterparty, and allows procurers to form expectations of the supplier's conscientious contract performance (Khalfan et al., 2007).

In public procurement, buyers also face a principal-agent problem, but the management of

contractual relationships in this sphere is strictly regulated. In contrast to private procurement, the ability to consider suppliers' reputation at the selection stage in public procurement is limited by national regulations (Spagnolo, 2012). In Russia, reputation consideration is mandatory if the initial maximum contract price is equal or more than 20 million rubles¹, in other cases, it is at the discretion of the customer. Among the experience indicators, public buyers can consider the number and monetary volume of similar contracts executed², but not their performance indicators (for example, quality or delivery time). Procurement regulation for state-owned enterprises and natural monopolies provides more discretion in the choice of reputation indicators³.

In discussions, an argument against the reputation factor is about barriers to entry for new suppliers or small firms (Kachour et al., 2016). In favour of reputation consideration in public procurement, various studies demonstrate the positive effects of reputation-based supplier selection (Decarolis et al., 2016; Spagnolo, 2012).

Still, some aspects of supplier's reputation considerations in public procurement remain insufficiently studied. The article focuses on the supplier's reputation factor and the aspects of its relevance in public procurement. The study is aimed to reveal the role of reputation in cross-regional buyer-supplier cooperation in public procurement by solving several tasks:

- Review the research about the effects of reputational considerations in public procurement and the areas of particular reputation importance, including the considerations of the reputation factor in cross-regional cooperation;

- Analyse the importance of suppliers' reputation factors for public buyers at the micro level, depending on their involvement in interregional cooperation, based on survey results;

- Analyse the distribution of Russian regions, depending on the share of contracts with suppliers from other regions in quantitative and value terms;

¹ Article 31 of the Federal Law №44-FZ "On the contract system in the procurement of goods, works and services to meet state and municipal needs"

² Decree of the Government of the Russian Federation of 31.12.2021 №2604.

³ Article 3 of the Federal Law №223-FZ "On procurement of goods, works, services by certain types of legal entities".

- Combine regional analysis with survey data to infer the role of reputation in inter-regional cooperation between procurers and suppliers.

The article is structured as follows: Section 2 presents the theoretical overview of research focused on the reputation factor in public procurement. Section 3 describes the data used and the methodology of the study. Section 4 focuses on the results of the empirical analysis carried out. Section 5 summarises the key findings and identifies possible directions for further research.

Theoretical framework

Despite the similarities in many aspects of buyer-supplier interactions in private and public procurement, contract management in the public sector is associated with additional challenges (McCue et al., 2015). There are acute questions about the effectiveness of public procurement contracts (Karjalainen, 2011). Typically, the focus in public procurement has been on price criteria (Meehan et al., 2017), but now it is gradually shifting to quality assurance (Farr, 2016). In this regard, more attention is paid to the issue of considering the reputation of suppliers, which in private procurement is one of the key factors in interaction with customers (Manello & Calabrese, 2019).

Reputation makes it possible to infer the reliability of the supplier and form expectations about a supplier's future behaviour (Khalfan et al., 2007; Kramer, 1999). At the same time, reputation consideration mechanisms act as an informal tool for enforcing contracts (Banerjee & Duflo, 2000). Private procurement uses many reputation indicators (Yakimova, 2021). In public procurement, due to the need to ensure the measurability and objectivity of supplier evaluation criteria, the indicator of previous experience is most often used (Gomes et al., 2022; Mamavi et al., 2015; Spagnolo, 2012).

A number of studies show various positive effects of reputation considerations in public procurement. One of the key papers on this topic (Spagnolo, 2012) confirms the importance of suppliers' past performance measurement for improving public procurement management. Decarolis et al. (2016) have shown, through an experiment, how supplier reputation drives performance. Increasing the quality of supplied goods/services is one of the key effects of considering the reputation of suppliers (Koning & Van De Meerendonk, 2014; Spagnolo, 2012).

Bradshaw and Chang (2013), in their study, measured customer satisfaction based on the outcome of the contract execution. Consideration of previous experience has a positive effect on this indicator. Fiorino et al. (2018) highlight such positive effects of reputation consideration in public procurement as choosing the most qualified supplier, reducing the risks of opportunistic behaviour and cost overruns. Reputation measurement is an additional tool for monitoring supplier contract performance (Van Slyke, 2007).

In addition to the effects of reputation consideration described above, the reputation factor is the basis for building trust between buyers and suppliers (Lamothe & Lamothe, 2012; Dan et al., 2006; Zhao & Smith, 2006). Trust, in turn, also has a positive impact on supplier performance (Finne et al., 2015; Holma, 2012), reduces opportunism and improves the quality of deliveries (Gunawardane, 2012; Li & Choi, 2009).

The reputation factor plays a significant role in certain areas of procurement and in specific institutional settings. Thus, the factor of supplier reputation is of particular importance in areas with a high level of uncertainty (Chiou & Pate, 2018), for example, when concluding long-term contracts (Mamavi et al., 2015). Also, the reputation of suppliers is important in procurement, when many aspects of the supply are difficult to formalise (Board, 2011; Calzolari & Spagnolo, 2009). Beausoleil (2010) notes the importance of reputation in the procurements, which are characterised by performance issues, strict specifications and deadlines. In addition, reputation considerations are important when the judiciary is unable to verify certain aspects of a procurement outcome (Spagnolo, 2012).

Among the negative aspects of considering the reputation of suppliers in public procurement, the most frequently discussed risk is the formation of entry barriers for new players (Mamavi et al., 2015; Albano et al., 2006), which in turn, contradicts the principles of competition in public procurement (Kachour et al., 2016). Flynn (2017) also notes the advantage of large organisations due to their greater reputation resource, which small and medium-sized firms don't have. A recent study by Butler et al. (2020) focuses on this issue. The authors conclude that reputation can indeed be a barrier to entry, however, when certain reputation measurement mechanisms are formed, such an effect does not

occur, and even vice versa, the entry of new players is growing.

Another concern about the usage of reputation criteria by EU regulators is that reputation considerations will lead to preferences for local suppliers, which will negatively impact cross-border procurement (Spagnolo, 2014). However, the stated concern is not supported by empirical evidence and contradicts the results of private sector research on this topic. In private procurement, two studies of inter-regional relationships in Chinese (Chintagunta & Chu, 2021) and United States markets (Elfenbein et al., 2019) note the importance of supplier reputation in inter-regional purchases.

As noted above, reputation, as an indicator of reliability and integrity of a supplier, is important in the conditions of uncertainty. Geographic range implies a greater level of uncertainty (Blum & Goldfarb 2006). In this context, it can be assumed that reputation is especially important in the interregional context - when procurers contract with suppliers from other regions. The proposed assumption has no empirical support in existing studies of public procurement. To fulfill this gap, the empirical part of the article is devoted to the analysis of the role of reputation in interregional interaction between public buyers and suppliers.

Data and Methodology

The empirical part of the article is based on an online survey of Russian public buyers conducted in 2020. The survey covered a wide range of topics relevant to the public procurement system.

Qualitative analysis of the questions in the survey was carried out, prior to it being sent, with the involvement of experts from public procurement, to identify inappropriate or irrelevant questions. For the purposes of the study, it was important to focus on the opinions of experienced procurers. To form a sample, the email addresses of procurers who placed at least 5 applications between 2017-2019 were collected from the official public procurement website (www.zakupki.gov.ru). In total, there were more than 94,000 eligible public buyers. Overall, 611 responses were received.

Public buyers from a total of 74 different regions of Russia took part in the survey. The resulting distribution by federal districts as a whole reflects the distribution of budgetary organizations in Russia. Comparison of the sample and the general population is presented in Table 1.

Table 1

Comparison of the sample and general population by federal districts

| Federal district | General population, % | Sample, % |
|------------------|-----------------------|-----------|
| Far East | 7.7 | 7.4 |
| Volga | 18.6 | 18.5 |
| North-West | 13.7 | 13.6 |
| North Caucasus | 4.0 | 1.3 |
| Siberia | 14.8 | 8.1 |
| Urals | 8.5 | 9.2 |
| Central | 22.9 | 30.7 |
| South | 9.3 | 11.2 |

Source: author's calculations.

In order to assess the orientation of procurers on the supplier reputation factor, they were asked the following question: “Please rate the role of the good business reputation factor in the public procurement market for suppliers (in their relations with procurers).” The measurement was carried out on a 7-point Likert scale, where 1 is very insignificant and 7 is very significant. The survey also included a question about the degree of customer interaction with suppliers from other regions: “Please indicate the approximate share of suppliers from outside your region of the total number of suppliers of your organization between 2018-2019”. The procurer's region was then determined using a direct question with a drop-down list of the 85 official regions of the Russian Federation.

The survey data was supplemented by open data on public procurement in Russia between 2018-2019 (zakupki.gov.ru). By aggregating data on all concluded public procurement contracts, the index “share of contracts with suppliers from another region” was calculated in quantitative and cost terms for the official regions of the Russian Federation. The index, in quantitative terms, is calculated as the share of contracts concluded with suppliers from other regions out of the total number of contracts in the region. The index, in value terms, is calculated as the ratio of the monetary volume of contracts concluded with suppliers from other regions and the total monetary volume of contracts in the region.

The analysis was carried out for the regions whose customers responded to the survey - a

total of 74 (the Nenets Autonomous Okrug was merged with the Arkhangelsk Region). The analysis did not include regions that were not represented by the results of the survey (10 regions: the Republic of Adygea, the Republic of Altai, the Republic of Ingushetia, the Kabardino-Balkarian Republic, the Karachay-Cherkess Republic, the Republic of North Ossetia-Alania, the Chechen Republic, the Kostroma Region, the Tambov Region, and the Chukotsky autonomous region). Using the data obtained, 74 regions were grouped depending on the level of interregional interaction between procurers and suppliers. Comparison of survey and regional data made it possible to draw conclusions about the importance of the reputation factor, depending on how actively contracts were concluded with suppliers from other regions of the Russian Federation.

Results and Discussion

The survey results show that the supplier reputation factor is taken into account by the majority of public buyers. The average supplier reputation significance score is 5.1. A third of respondents rated the supplier reputation factor at 7 points (very significant).

To analyse the role of the supplier reputation factor, in the context of interregional interaction between customers and suppliers, the question about the share of suppliers from another region is used. Table 2 shows the distribution of procurers' responses to this question and the average scores for supplier reputation importance for different groups.

Table 2

Significance of supplier reputation for procurers with different shares of suppliers from another region

| Shares of suppliers from another region | N | % | Average supplier reputation importance assessment |
|-----------------------------------------|-----|------|---------------------------------------------------|
| No | 39 | 6.5 | 4.9 |
| Up to 10% | 232 | 38.9 | 5.13 |
| 11-20% | 132 | 22.1 | 4.97 |
| 21-50% | 118 | 19.8 | 4.92 |
| More than 50% | 76 | 12.7 | 5.55 |

Note: 14 procurers didn't mark the share of suppliers from another region.

Source: author's calculations.

Table 3

The relationship between the share of suppliers from another region and the assessment of suppliers' reputation importance (micro level analysis)

| Variables | Dependent variable: Significance of supplier reputation |
|---------------------------------------------|---------------------------------------------------------|
| 11-20% suppliers from another region | 0.065 (0.210) |
| 21-50% suppliers from another region | -0.040 (0.221) |
| More than 50% suppliers from another region | 0.686*** (0.260) |
| Personal characteristics | Yes |
| Organisational characteristics | Yes |
| Location fixed effects | Yes |
| N | 575 |
| R-squared | 0.126 |

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Selected category: 0-10% suppliers from another region.

Control variables: gender, position, category (federal, regional, municipal), number of employees, federal district.

Source: author's calculations.

As can be seen from Table 2, the share of procurers who work only with suppliers from their region is the smallest - 6.5%. Most respondents (38.9%) work with a relatively small number of suppliers from other regions - up to 10%. 12.7% of public buyers are distinguished by the fact that most of their suppliers are from another region. In the context of procurers' answers to the question about the significance of the reputation of suppliers, a category of procurers, in which more than 50% of suppliers were from another region, stands out. This category of procurers values the importance of suppliers' reputation significantly higher.

The regression presented in Table 3 confirms the significance of these differences. In the model, the dependent variable is an assessment of suppliers' reputation significance, and the explanatory variables are binary variables that reflect the share of suppliers from another region. The selected category is 0-10% of suppliers from another region. Here and below, several control variables are added to the regression - personal and organisational characteristics, as well as control on the federal district. Personal characteristics include the gender and position of the procurer, and organisational characteristics - the level of subordination of the

Table 4

Average estimates of the importance of suppliers' reputation by federal districts

| Federal district | Average supplier reputation significance score | Share of customers, most of whose suppliers are from another region*, % |
|-----------------------|------------------------------------------------|-------------------------------------------------------------------------|
| Far East | 5.30 | 11 |
| Volga | 5.11 | 13 |
| Northwest | 5.32 | 7 |
| North Caucasian | 4.88 | 13 |
| Siberian | 4.83 | 17 |
| Ural | 5.06 | 20 |
| Central | 5.08 | 10 |
| South | 4.95 | 16 |
| For the entire sample | 5.10 | 13 |

*More than 50%

Source: author's calculations

organisation (federal, regional, municipal) and the number of employees.

As can be seen from Table 3, in comparison with the selected category “0-10% of suppliers from another region”, only the category “more than 50% of suppliers from another region” gives a statistically significant increase in the orientation of procurers to the supplier reputation factor. The size of the coefficient can be interpreted as follows: procurers, most of whose suppliers are from another region, rate the reputation factor higher by 0.69 (on a 7-point scale). The result obtained allows us to conclude that the reputation factor is of particular importance in the interregional interaction of procurers and suppliers. The survey data confirm this conclusion at the micro level - the purchases of a specific customer.

Further analysis is devoted to this effect at the regional level. There are certain differences in the distribution of the average estimates of the importance of suppliers' reputation by federal districts (table 4).

For example, procurers from the Far East and Northwest districts rate the reputation of suppliers above average, and the lowest reputation rating is in the Siberian Federal District. As can be seen from the column with indicators of the share of procurers, most of whose suppliers are from another region, at the level of federal districts, the significance of suppliers' reputation is not explained by individual purchases of the respondent. Thus, in the Ural Federal District, there are 20% of respondents, more than 50% of whose suppliers are from other

regions, and the assessment of suppliers' reputation importance is at an average level. In the Northwest District, on the contrary, only 7% of respondents answered that more than half of their suppliers are from another region, and the reputation significance is the highest among all federal districts.

On the one hand, it was concluded that at the micro level (purchases of a specific public buyer), a high proportion of suppliers from another region leads to a higher assessment of reputation significance. On the other hand, the primary analysis shows that data on the importance of reputation, aggregated at the level of federal districts, are not explained by the peculiarities of the procurement of respondents. It can be assumed that the orientation of procurers to the reputation factor depends not only on their own interaction with suppliers from other regions, but also on the characteristics of the environment. Regions that are part of one federal district can differ greatly in certain aspects of public procurement. In this regard, further analysis was carried out at the level of regions (official regions of the Russian Federation).

The “Data and Methodology” section describes in detail the principle of calculating the regional index - the share of contracts with suppliers from other regions - in quantitative and cost terms. The lowest value for both indicators is in the Republic of Tatarstan - 12% of the number and 16% of the monetary volume of government contracts was concluded with suppliers from other regions. In the Leningrad region, the share of contracts with suppliers from other regions in quantitative terms

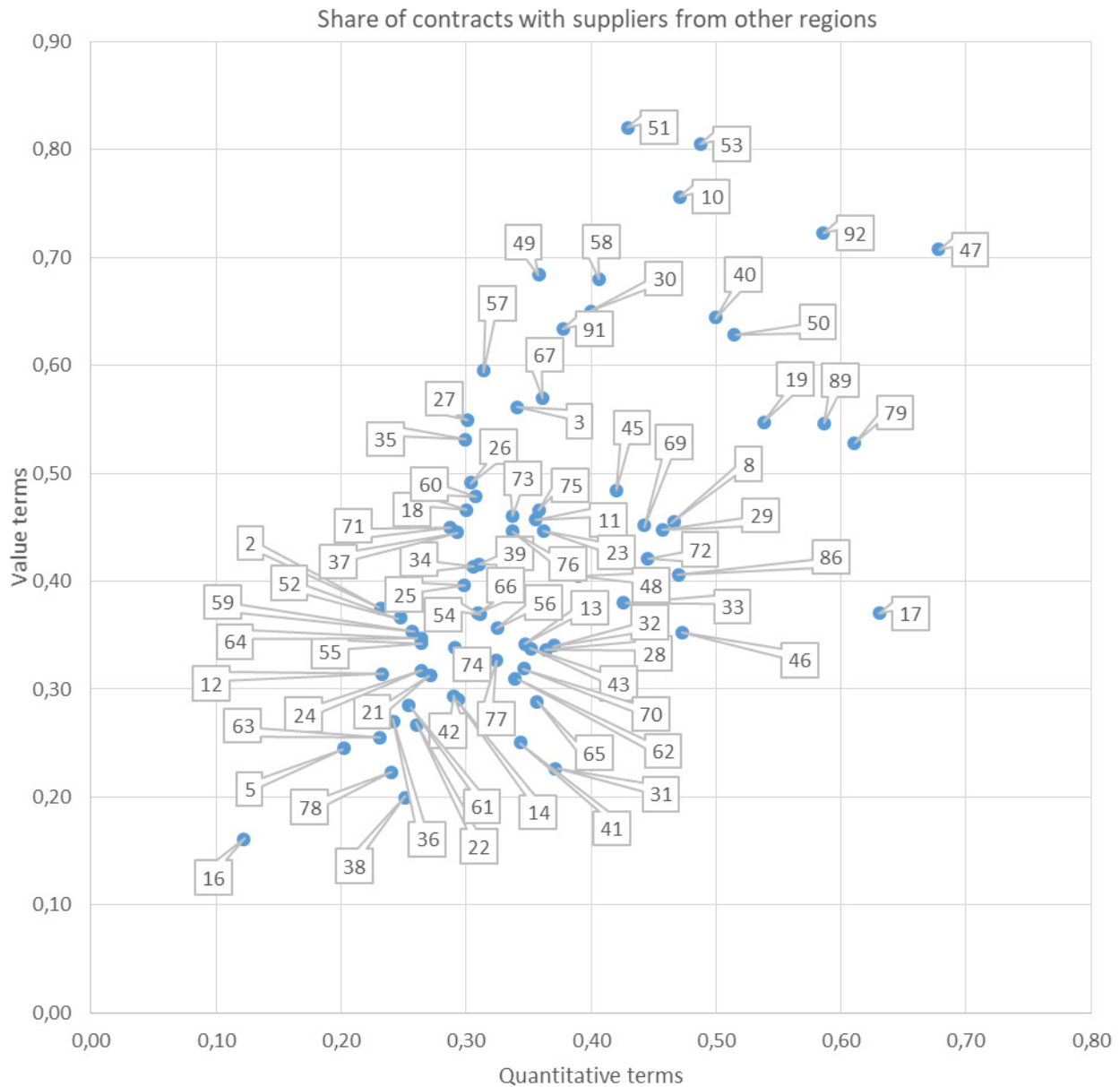


Figure 1. The distribution of Russian regions by the share of contracts with suppliers from other regions in quantitative and value terms
 Source: authors calculations using data from zakupki.gov.ru

is the largest (68%), and in value terms the leader is the Murmansk region - 81%. For the 74 regions included in the analysis, the average share of contracts with suppliers from other regions, in quantitative terms is 36%, and in value terms is 43%.

Figure 1 shows the distribution of 74 regions by the share of contracts with suppliers from other regions in quantitative and value terms. The figure shows region codes, a comparison of codes and names of regions is in the Appendix.

As can be seen from Figure 1, the regions are mainly located diagonally, i.e. with the increase in the share of contracts with suppliers from other regions in quantitative terms, the indicator in val-

ue terms also grows. However, there are regions where there are not so many contracts with suppliers from other regions, but these are large contracts, and in value terms, the share is significant. For example, in the Magadan region, 36% of the number of contracts is concluded with suppliers from other regions, and these contracts account for 68% in monetary terms of the total volume of contracts in the region. In several other regions, the situation is reversed - a large number of contracts that are not so big in monetary terms are concluded with suppliers from other regions. For instance, in the Republic of Tyva, 63% of state contracts fall on suppliers from other regions, but in

monetary terms, these contracts account for 37% of the total volume of state contracts in the region.

Further, the 74 regions were divided into 4 groups depending on the indicators for these two indices. The division took place according to the average value of the indices (36% for quantitative terms and 43% for value terms). The lower group included regions with an indicator up to and including the average, and the upper group included regions with an indicator above the average. The grouping of regions is presented in Table 5.

Most of the regions (34) are characterised by the fact that up to 36% of the number of contracts and up to 43% of the volume of contracts are concluded with suppliers from other regions. Such regions include, for example, the Republic of Bashkortostan, Altai Territory, Krasnoyarsk Territory, Voronezh Region, Moscow.

16 regions are distinguished by high values of the share of contracts with suppliers from another region, both in terms of value and quantity. Examples of regions in this group: Republic of Karelia, Republic of Khakassia, Astrakhan region, St. Petersburg, Moscow region.

8 regions conclude many contracts with suppliers from other regions, but these contracts are not so large in terms of volume. Such a situation is, for

example, in the Belgorod, Bryansk and Vladimir regions. 16 regions, on the contrary, do not conclude so many contracts with suppliers from other regions in quantitative terms, but the total volume of these contracts from the total volume of government contracts in the region is above average. This group includes, for example, the Republic of Buryatia, Krasnodar Territory, Khabarovsk Territory.

According to the average indicators of suppliers' reputation importance, it is noticeable that the highest ratings are in the regions with a high proportion of contracts with suppliers from other regions in quantitative terms. If we compare two groups for which the quantitative index is not higher than the average, the reputation score almost does not change from the indicator in value terms (5 vs 5.02). It can be assumed that the indicator of the share of suppliers from another region in value terms does not affect the orientation of procurers towards reputation, in contrast to the indicator in quantitative terms. To test this assumption, a regression model is presented in Table 6.

As can be seen from the table, estimates of suppliers' reputation importance are statistically significantly associated only with the share of contracts with suppliers from another region in quantitative terms. Thus, if a region has a large

Table 5

The distribution of regions by the shares of contracts with suppliers from other regions and average reputation importance

| Share of contracts with suppliers from other regions | | Value terms | |
|------------------------------------------------------|--------------------|-------------------------------|--------------------------------|
| | | Up to 43% included | More than 43% |
| Quantitative terms | Up to 36% included | 34 regions Reputation- 5.0 | 16 regions Reputation- 5.02 |
| | More than 36% | 8 regions Reputation- 5.21 | 16 regions Reputation- 5.35 |

Source: author's calculations

Table 6

Relationship between the share of suppliers from another region and the assessment of suppliers' reputation importance (regional level analysis)

| Variables: | Dependent variable: Significance of supplier reputation | |
|-----------------------------------------------------------------------------------------------|---------------------------------------------------------|------------------|
| | Quantitative terms | Value terms |
| The share of contracts with suppliers from another region is higher than the regional average | 0.402** (0.194) | 0.086 (0.170) |
| Personal characteristics | Yes | Yes |
| Organisational characteristics | Yes | Yes |
| Location fixed effects | No | No |
| N | 570 | 570 |
| R-squared | 0.078 | 0.071 |

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Control variables: gender, position, category (federal, regional, municipal), number of employees.

Note: Control for federal district is not included because the explanatory variable varies by region.

Source: author's calculations

number of contracts with suppliers from other regions of the Russian Federation, the supplier reputation factor becomes more important.

This result complements the analysis at the level of individual contracts of public buyers. Together they show that the supplier reputation factor plays the most important role when a significant share of contracts is concluded with suppliers from other regions. This conclusion is confirmed, both at the micro level - the purchases of a specific customer, and at the regional level. The findings are especially important for managing contractual relationships in public procurement in Russia and other countries which are also characterised by a heterogeneous spatial structure and economic differentiation of regions. The findings may be of interest to public procurement regulators in such countries, as well as to direct market players actively involved in interregional interaction.

The research contributes to the literature in the following aspects. First, this article summarises the literature about the effects of suppliers' reputation consideration in public procurement. Second, this study adds to the understanding of areas where reputation factor is of particular importance. The research on this topic stresses the importance of reputation in areas with a high level of uncertainty (Chiou & Pate, 2018), in procurements with precise formulation characteristics (Calzolari & Spagnolo, 2009) or characterised by performance issues (Beausoleil, 2010). This study reveals the role of reputation in the context of interregional public procurement. The result is in line with the literature on the topic of reputation in cross-regional purchasing (Chintagunta & Chu, 2021; Elfenbein et al. 2019). The latter studies focus on private procurement, while the results of this paper cover the topic in the context of public procurement.

Conclusion

Reputation is an important aspect of overcoming the principal-agent problem which is characteristic of contractual relationships. In public procurement, reputation considerations are limited by regulation. Emerging questions about the effectiveness of procurement operations management in the public sector (Karjalainen, 2011), as well as the growing role of the supply quality indicator (Farr, 2016), determine the relevance of research into the effects of reputation considerations in public procurement.

A review of studies showed that considering the reputation of suppliers by public buyers allows

for increased productivity and quality of contract execution. This is also important from the point of view of the timing of the execution of contracts, together with the risks of cost overruns. The reputation factor is the basis for building trust between procurers and suppliers. Lack of research on reputation, in terms of interregional cooperation in public procurement, is revealed.

Based on the analysis of the survey of Russian public buyers, it has been shown that the reputation of suppliers is especially important for procurers who mostly work with suppliers from other regions. By aggregating open data on government contracts in Russian regions, the grouping of Russian regions is presented. Further combination of open and survey data confirms the role of reputation in interregional interaction between procurers and suppliers at the regional level. In regions where the share of contracts with suppliers from other regions in quantitative terms is higher than average, public buyers are more focused on the suppliers' reputation factor. Thus, in addition to the positive effects of the supplier reputation factor in public procurement considered in the theoretical part of the article, the empirical part demonstrates another, not so widely studied aspect.

The conclusion about the role of supplier reputation factor, in the context of interregional buyer-supplier interaction, both at the micro level and at the regional level, adds to the research on suppliers' reputation factor in public procurement. The importance of reputation in inter-regional economic relations has been confirmed in private sector studies (Chintagunta & Chu, 2021; Elfenbein et al., 2019), but has not previously been disclosed in the context of public procurement. An important direction for further research is to identify other regional features that affect the different levels of customer orientation on the reputation factor of suppliers by region. In addition, an important topic for research is the analysis of the role of reputation in interregional relationships between public buyers and suppliers in specific areas of procurement.

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Comparison of codes and names of regions in the analysis

| Code | Region Name | Code | Region Name | Code | Region Name | Code | Region Name | Code | Region Name |
|------|-----------------------------|------|-----------------------|------|------------------------|------|--------------------|------|--------------------------------------|
| 2 | Republic of Bashkortostan | 23 | Krasnodar territory | 38 | Irkutsk region | 54 | Novosibirsk region | 70 | Tomsk region |
| 3 | Republic of Buryatia | 24 | Krasnoyarsk territory | 39 | Kaliningrad region | 55 | Omsk region | 71 | Tula region |
| 5 | Republic of Dagestan | 25 | Primorsky territory | 40 | Kaluga region | 56 | Orenburg region | 72 | Tyumen region |
| 8 | Republic of Kalmykia | 26 | Stavropol territory | 41 | Kamchatka territory | 57 | Oryol region | 73 | Ulyanovsk region |
| 10 | Republic of Karelia | 27 | Khabarovsk territory | 42 | Kemerovo region | 58 | Penza region | 74 | Chelyabinsk region |
| 11 | Republic of Komi | 28 | Amur region | 43 | Kirov region | 59 | Perm territory | 75 | Trans-Baikal Territory |
| 12 | Republic of Marij El | 29 | Arkhangelsk region | 45 | Kurgan region | 60 | Pskov region | 76 | Yaroslavl region |
| 13 | Republic of Mordovia | 30 | Astrakhan region | 46 | Kursk region | 61 | Rostov region | 77 | Moscow |
| 14 | Republic of Sakha (Yakutia) | 31 | Belgorod region | 47 | Leningrad region | 62 | Ryazan region | 78 | Sankt-Petersburg |
| 16 | Republic of Tatarstan | 32 | Bryansk region | 48 | Lipetzk region | 63 | Samara region | 79 | Jewish autonomous region |
| 17 | Republic of Tuva | 33 | Vladimir region | 49 | Magadan region | 64 | Saratov region | 86 | Khanty-Mansi Autonomous Area – Yugra |
| 18 | Udmurtian Republic | 34 | Volgograd region | 50 | Moscow region | 65 | Sakhalin region | 89 | Yamal-Nenets Autonomous Area |
| 19 | Republic of Khakasia | 35 | Vologda region | 51 | Murmansk region | 66 | Sverdlovsk region | 91 | Republic of Crimea |
| 21 | Chuvashi Republic | 36 | Voronezh region | 52 | Nizhni Novgorod region | 67 | Smolensk region | 92 | Sevastopol |
| 22 | Altai territory | 37 | Ivanovo region | 53 | Novgorod region | 69 | Tver region | | |

Source: compiled by the author using "Region codes" directory. Retrieved from: https://www.nalog.gov.ru/rn77/fl/pay_taxes/income/get_help/4329723/

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