

Article

Institutional Governance of Innovations: Novel Insights of Leadership in Russian Public Procurement

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Abstract: In the modern conditions of the post-COVID world, the transformation of the world economy in the framework of the transition to the post-industrial paradigm, and the economy of “knowledge”, the national innovation system (NIS) plays a leading role in the formation of competitive sectors of any given country. Within this setting, the performance of the Russian innovation system significantly lags behind other countries and calls for modernisation based on the modern regulatory tools, policies, and world’s leading trends. The direct import of institutions of foreign innovation systems demonstrates its limited effectiveness due to the incompleteness of institutions and mechanisms for regulating the institutional environment of the Russian economy. One of the generally recognised, leading, and the most “universal” instruments for implementing innovation policy by government institutions is the public procurement of innovation. The analysis of international experience shows that the implementation of the innovation policy via innovative public procurement has a highly heterogeneous landscape even in such a “cohesive” jurisdiction as those represented by the European Union (EU) as far as different types of policy dominate in different countries of the world. There is no clear trend towards the only one mainstream regulatory approach. In this context, the Russian experience demonstrates de facto the absence of any centralised, transparent, and effective policy expressed in such pseudo-innovative procurement as refuelling cartridges or car repairs. This paper identifies the existing institutional failures of the Russian NIS on the example of the regulation of innovative domestic procurement. It proposes ways to modernise the current policy based on the institutional and narrative approaches in order to foster its leading position in the international competition. This article shows the gaps in the literature in institutional governance of innovations and innovation procurement in Russia and points at directions for future research based on narrative economics. Outlining the present knowledge as a foundation for future research in institutional governance of innovations, this article holds implications for both academics and practitioners in the field of the innovation policies and public procurement.

Keywords: innovation policy; public procurement; leadership; narrative economics; national innovation system; institutional economics; regulatory failure; Russia

JEL Classification: B52; H57; E61; O32



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1. Introduction

Innovative activity can be a leading driver for a country’s economic growth and development. Traditionally, in the research literature on leadership and innovations/innovators, the following key actors of the national innovation system are distinguished: the government, business, and academies (Marxt and Brunner 2013; Ehrenberger et al. 2015; Wu et al. 2017; Arranz et al. 2020; Roman et al. 2020). Therefore, the activities of the government directly affect the development of the country’s innovation system. The government can implement its innovation policy also using the mechanism of public procurement. Nowadays, innovative procurement is multifaceted and can include sustainable and green

procurement (see [Cheng et al. 2018](#); [Ma et al. 2021](#)). The use of public procurement for the development of the national innovation system has great potential due to the significant share of public procurement in the gross domestic product.

Just to give an example to illustrate the point above, globally, the share of public procurement is 12% of global GDP and is USD 11 trillion (2018) ([Bosio et al. 2020](#)). Developing countries spend about 25% of their GDP on government procurement, whereas in OECD countries, this share is about 29% ([Fazekas and Blum 2021](#)). In Russia, the percentage of public procurement at the moment is slightly less than 30% of GDP (24.07% in 2018, 29.43% in 2019, 27.3% in 2020) ([Shamrin et al. 2021](#)).

As a result, it is vital to determine the possible approaches of the government for the implementation of innovation policy through public procurement, determine its types and directions, and identify failures of government regulation of the public procurement system in the context of innovation policy ([Lisin et al. 2017](#); [Khoshnava et al. 2019](#)). The most relevant approaches from our point of view to the problem under study are the methodology of the original (old) institutional economic theory (original institutional economics), as well as narrative economics, since the institutional environment and its features have a direct impact on the development of the national innovation systems ([Malkina et al. 2014](#)), and constellations of narratives allow for a better understanding of ongoing economic phenomena ([Shiller 2018, 2020](#)). The application of a narrative approach to the analysis of the NIS and the institutional governance of innovations is extremely promising in contemporary conditions. As scientific evidence ([Ackert and Mazzotta 2021](#)) shows, a narrative economics approach can provide valuable information about economic processes. The researchers argue that recognising economists as “storytellers” will allow us to understand better what economic actors are doing. In addition, narratives can be direct causes of changes in economics and politics ([Bertsch et al. 2021](#)). Consolidation of narratives is strongly and positively associated with GDP growth throughout the business cycle. In the context of digital innovation and the ever-expanding data and innovation in computational algorithms and semantic search, economic narrative analysis is a promising approach to economic research. Using advanced computational algorithms, textual analysis of narrative data is a growing area in economics for future forecasting ([Hsu et al. 2021](#)).

This paper focuses on assessing the institutional failures of the Russian national innovation system on the example of the regulation of innovative domestic procurement and proposes tools and approaches for the modernisation of the existing policy.

In this context, the national innovation system is defined as a set of institutions and organizations that generate new knowledge and technologies and contribute to their implementation into production ([Volchik et al. 2021](#)). This article points out that Russia provides a quasi-innovative policy with institutional failure in the leading innovative public procurement regulation.

The paper is organised as follows: Section 2 describes the institutional directions for developing government innovation policy based on innovation procurement. Section 3 focuses on the main approaches to implementing government innovation policy in the public procurement market. Section 4 studies the world’s experience with public procurement as an element of national innovation policy. Section 5 presents the Russian government innovation policy in the public procurement market. Finally, Section 6 concludes with a summary of results and implications.

2. Government Innovation Policy Based on the Innovation Procurement

The “development of the innovation system” and “quality of governance” are among the capabilities in economic development ([Fagerberg and Srholec 2008](#)). Therefore, improving the governance of innovations plays a positive role in the formation of the NIS. Researching public procurement in the context of an innovation system is very important because innovation procurement (in comparison with public procurement in total) is less well known except for defence purposes ([Lember et al. 2013](#)).

Recently, there has been an increase in interest in using a public procurement instrument as a demand policy to stimulate innovation in the economy due to the lack of effectiveness of existing innovation policy on the supply side (OECD 2011).

In general terms, all innovative public policy is divided into two main groups (Saastamoinen et al. 2018). The first group is based on the supply policy and includes:

- Support for research institutes and universities, support for basic fundamental and applied scientific research within the existing scientific and technical infrastructure in the form of universities and research centres;
- R&D subsidies: subsidies, concessional financing instruments, and various tax deductions aimed at reducing the costs of companies that invest in R&D and research.

The second group is based on the demand policy and includes:

- Innovative public procurement: consists of standard procedures for the procurement of goods (works, services) and procedures aimed at purchasing exclusively new technologies (developments) and innovative products and services;
- Government regulation: the application of rules by government institutions to influence the behaviour of private actors in the economy (European Commission 2004). Regulations in this area can be divided into economic (antimonopoly policy), social (environmental), or administrative (OECD 2017b).

The usage of a public procurement tool to influence the economy and society has been reflected since at least 1840 (McCrudden 2004). With the development and evolution of economic science and the emergence, around the 1930s, a new paradigm of interaction between government and market institutions, Keynesianism, and a departure from *laissez-fair*, the use of the instrument of public procurement has become much more widespread as an economic policy of the government (Nureev et al. 2020).

Historically, many countries around the world since the 19th century have used public procurement as part of their national innovation policies to stimulate innovation. After World War II, this policy was most widespread in the United States, when innovative procurement was used to develop a wide range of new technologies, from semiconductors to the invention of the Internet in the late 1980s (Melander and Arvidsson 2020).

Various scientific studies and literature demonstrate the promise of building an innovation policy based on an innovative public procurement tool.

Thus, the study by Guerzoni and Raiteri (2015) shows that modern supply side policy is overestimated, whereas the possibility of using innovative public procurement in innovation policy is not a purely theoretical hypothesis. In their view, innovative public procurement not only in itself can positively influence the innovative behaviour of companies. Still, it can also be an effective way to enhance the potential positive effects of technology policy, stimulating additional private investment in R&D. Given the data that show that innovative public procurement has a robust impact on private expenses in innovation activities, this tool has high prospects of becoming a locomotive of demand-side innovation policy. This determines the relevance of a more detailed study of this approach to stimulating innovation considering the Russian experience.

Aschhoff and Sofka (2009) note that there are some limitations on how existing tendering procedures can be tailored to the specific characteristics of the firm. Their results show that public procurement has the most significant impact on innovation outcomes if small business participants are aware and can consistently participate with their limited resources. Czarnitzki et al. (2018) found a sustainable and significant impact of innovation-oriented public procurement on turnover and creating new products and services in the innovative sector of the economy.

Thus, the conducted review of selected scientific studies and empirical data shows that today, in some cases, public procurement is a more effective tool for implementing policies to stimulate innovation within the paradigm of government demand-side innovation policy than existing approaches, including grants and subsidies for the R&D.

This is an important regulatory failure for the Russian national innovation system, where the instrument of innovative procurement at the present stage is not institutionalized either within the framework of the contract system or other regulatory documents. The existing nominally separate rules and regulations governing preferences in the procurement of innovative products in Russia are difficult to characterize as a complete demand-side innovation policy.

World experience testifies to implementing the policy of using innovative public procurement either as a separate instrument or as part of the general innovative public policy.

It should be noted that the characteristic of the innovativeness of the subject of innovation is a problem (Korytsev 2015). In the scientific literature, there are two main methodological approaches to the definition of the concept of “innovative public procurement” (Dai et al. 2021):

- Narrow: procurement of goods (works, services) that do not yet exist but can be developed within a certain period;
- Broad: innovation can be a by-product of public procurement, regardless of whether public procurement was initially aimed at innovation (that is, functional expansion of the characteristics of already existing “ordinary” goods (works, services)).

The broad concept of public procurement of innovation policy includes creating innovation as a by-product of tendering, even if it was not originally intended. According to a number of studies (Rothwell 1984; Hommen and Rolfstam 2009; Uyarra and Flanagan 2010; Rolfstam Max 2012), different forms of innovative public procurement can have a differentiated impact on the results of innovation in terms of the creation of new products and processes.

According to the European Commission (2018), innovative public procurement refers to any type of procurement that includes one or both of the following:

- Purchase of innovative “process” research and development services, with the prospect of obtaining (partial) research results;
- Buying the results of innovations already created by someone.

Even though in most EU countries there is an institutional framework for innovative procurement in one form or another, in Europe, there is still no single, precise definition and concept of “innovative procurement” at the level of national legislation, even despite the formation of a framework concept by the European Commission.

The OECD definition of innovative public procurement (OECD 2017a) can be formulated as follows: “any type of public procurement practice (both pre-commercial and commercial) designed to stimulate innovation through new research and development, as well as market development of innovative products and procurement.” According to other studies (Yeow and Edler 2012), innovative public procurement can be defined as: “the commissioning and procurement of goods and services that are new to the procuring entity and provide new services to citizens or enable existing (public) services to be delivered more effectively or efficiently”. A more general definition includes the findings of Lenderink et al. (2019), who stated that the purchase of something new, which does not yet exist, to solve a specific need or social problem.

Traditionally used procurement procedures based on the principle of “value for money” cannot potentially describe goods (works, services) that do not yet exist within the framework of a descriptive technical part (technical assignment). Given this fundamental limitation, the European Union began to transform its own public procurement of innovation policy based on the 2014 (European Commission 2014) revised directives to simplify the relevant procedures. Highlights of the new EU policy include:

- Tenders that include functionalities and specifications to stimulate innovation;
- Consideration of innovative aspects and the cost of the life cycle of new innovative solutions;
- Implementation of appropriate criteria to ensure that innovative products and services have a better chance of being selected at auctions

However, some data (Melander and Arvidsson 2020) show that despite the normative-positive nature of the policy of government regulation and stimulation of innovation through innovative public procurement, this instrument can be a de facto obstacle to the creation of innovations, due to poorly designed policies. Strong “overregulation”, the use of the “traditional” model (narrative) “value for money”, and caution of procuring entities in terms of taking risks to such purchases impede the successful implementation of the innovation support policy within the NIS through this instrument.

3. Main Approaches to the Innovation Policy in the Public Procurement Market

The systems-innovation approach is one of the dominant ones in modern conditions, which underlies research and practice of innovation policy; it conceptualises innovation as an iterative process (entailing “feedback loops”) that unfolds between interdependent producers and users of knowledge (Selviaridis 2020).

There are four most common types of policies pursued by government institutions regarding innovative public procurement (Lember et al. 2014):

- Innovative public procurement as part of the country’s technological (industrial) development policy;
- Innovative public procurement as part of R&D support policy;
- General approach to creating a public procurement of innovation policy (policy for all time);
- “No special policy” (a lack of any policy whatsoever).

The general approach to creating an innovative public procurement policy (policy for all time) is to include an innovative principle in the institutional regulation of public procurement as a key component of the national innovation system (NIS). As a rule, such a policy is of a “soft” regulatory nature and is aimed at changing the value paradigm of public procurement and not at changing the systemic institutional failures of the national innovation policy (Strielkowski et al. 2020).

“No policy” policy: A “no policy” policy means that there are no provisions or laws in the national legislation of the selected country that would separately regulate the process of stimulating innovation through the public procurement instrument. In such cases, the regulatory framework for national procurement regulation is built around the universal standardised value for money principle. It is aimed at generally stimulating competition as a factor in the emergence of innovations. Countries with such legislative regulation include Greece, Hong Kong, or Estonia.

Innovative public procurement as one of the demand policies instruments to stimulate the development of innovations within the framework of national NIS, in the scientific literature is classified using several main approaches; let us dwell on the OECD approach (OECD 2011).

The first classification is “regular” purchases (Common Public Procurement), in which government agencies buy “ready-made” innovative solutions and goods (services). In this case, regulation is carried out through a change in the functional characteristics of the technical task. The second approach is Strategic Public Procurement, within which fundamentally new technologies and approaches should be created to address current federal and municipal needs.

Nevertheless, this classification seems to us too “framework”; therefore, we will focus on a more detailed classification of the types of policies for the use of innovative procurement within the framework of the NIS (see Figure 1).

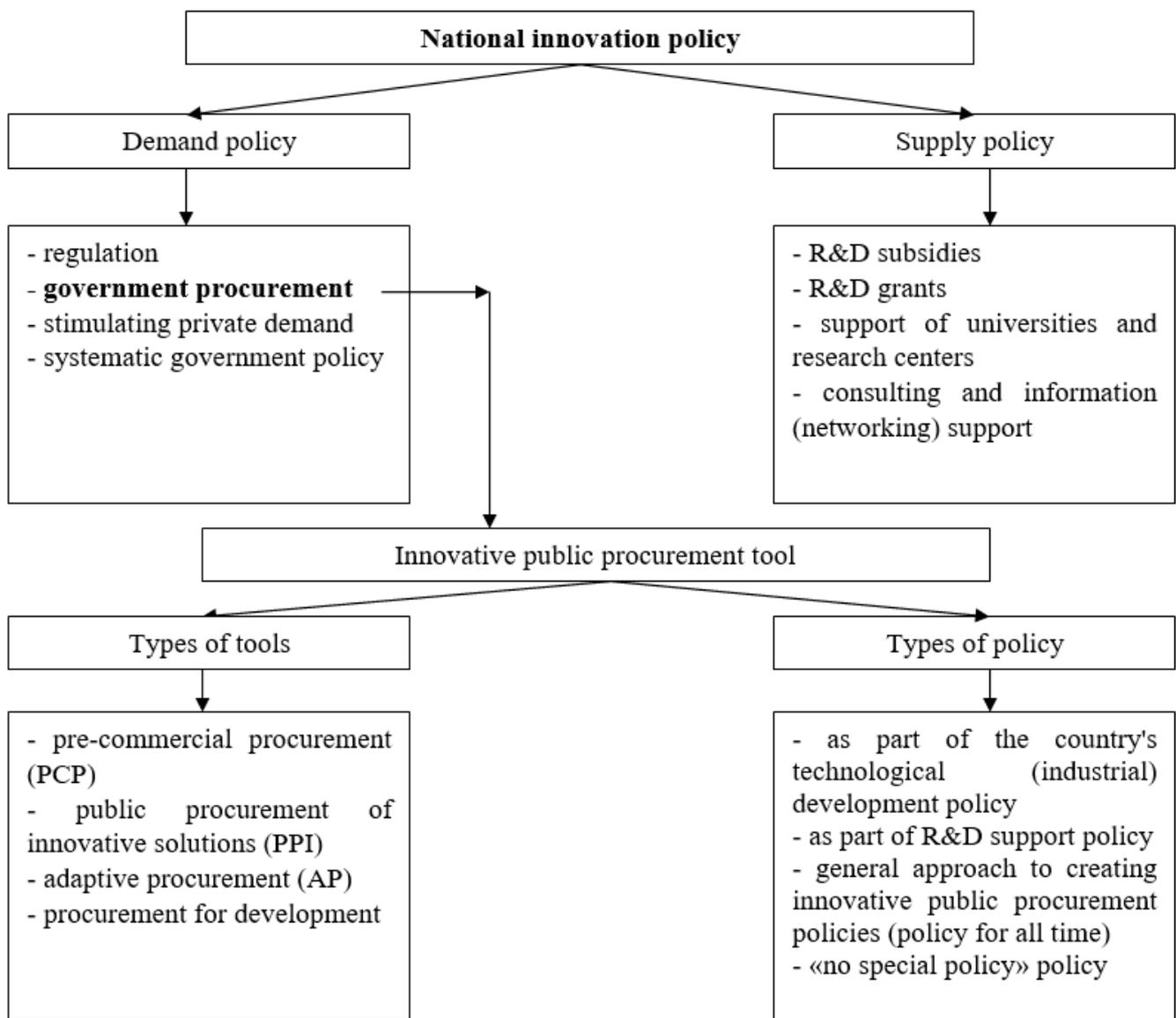


Figure 1. The institutional framework for innovation policy based on the innovative public procurement tool. Source: Own results.

Based on a number of studies (see e.g., [Pihlajamaa and Merisalo 2021](#); [Edquist and Zabala-Iturriagoitia 2012](#); [Sirotkina 2017](#)), there are several basic policies for the implementation of innovative public procurement (see Figure 1 above):

- Pre-commercial (pre-commercial) procurement (PCP, Pre-commercial procurement): procuring new innovative solutions and research before they are commercialised. In the pre-purchase process, different suppliers compete with each other at several stages of development. The first stage includes developing an innovative conceptual solution (innovative technology). The second stage is the development of a prototype that implements this innovative solution. The third stage is producing a limited series of the final product and its testing in natural conditions. At all stages of this process, there is a parallel “sifting” (reduction) of the number of participants;
- Public procurement of innovative solutions (PPI, Public procurement of innovation) ([European Commission 2015](#)): procurement in which government agencies act as the primary purchaser of innovative goods and services that are not yet widely commercially available in the market, and may include the need for verification and licensing;

- Adaptive procurement (AP, Adaptive procurement): purchases aimed at the procurement of goods (works, services) that are innovative only for a specific country or region are used to adapt products or technologies to national or regional conditions;
- Procurement development (procurement for development) (World Bank 2020)—the result of the procurement process is the creation of fundamentally new goods, works, as well as services.

4. Public Procurement and the National Innovation Policy

The policy of innovative procurement is institutionalised in the legislation of most developed and developing countries; the experience of the EU, the UK, and the United States can be the most significant reference point in the analysis of this policy.

In the United States, the main innovation support program for small businesses is the SBIR (U.S. Small Business Administration 2021), encouraging small national companies to participate in federal research and development (R&D) with the potential for future commercialisation.

The most famous pre-commercial (pre-commercial) procurement program, SBIR, was created in 1982 in the United States to stimulate business participation in U.S. federal research and development activities and commercialise innovation.

In turn, in the European Union, there are now two main types of programs in the framework of the pre-commercial procurement policy: (i) Dutch SBIR, or (ii) Flemish innovation procurement scheme, and one in the UK: British SBIR. The EU has also long recognised the potential for leveraging demand-side innovation policies to improve the competitiveness of European industries, enhance public service delivery and address major social challenges (Commission of the European Communities 2003). For example, in 2011, the EU defined its new research and innovation framework, Horizon 2020, which now also provides funding for several types of innovative procurement: (PPI) and (PCP) (European Commission 2015).

In 2016, the European Union (European Institute of Public Administration 2019), within the framework of changing its policy based on Directive 2014/24/EU (49), began to provide a new type of innovative public procurement—an innovative partnership.

The new type of innovative procurement in the form of an innovative partnership takes into account the traditional elements of the procurement process concerning the use of the principles of equality of all participants and the transparency of the winning selection procedure with the need to solve the problem of stimulating the development of innovations within the procurement process.

Support for innovation in Canada relies heavily on supply side policies in the form of direct research funding, tax incentives and other R&D subsidies with limited use of innovation demand policies, including government procurement (Edler 2019).

The Government of Canada conducted a comprehensive assessment of its policies to support businesses and commercially oriented R&D companies in 2010 (Government of Canada 2011). The evaluation noted the modest use of innovative public procurement in Canada compared with other developed countries and highlighted a number of regulatory and institutional issues in existing policies:

- Innovation is not the primary goal of existing policy;
- The problem of using too detailed technical specifications;
- Lack of targets for the conclusion of external contracts for R&D;
- Weak cooperation between federal, provincial, and municipal governments in terms of sharing best practices and developing joint strategies for the effective use of public procurement to promote innovation.

In China, public procurement is actively used as an innovation policy tool to promote innovation (Dai et al. 2021). A special strategy was developed in 2006 (with a deadline for implementation until 2020) within the National Medium- and Long-Term Science and Technology Development Program (MLP) framework. Implementation policy is built on three key tools:

- Catalogue of innovations (innovative solutions for preferential treatment in the procurement process);
- Catalogues of innovative “needs”;
- Support programs for innovative strategic industries (production of electric vehicles ([The National Program for Science and Technology Development 2006](#))).

In Armenia ([UNECE 2020](#)), to date, no mechanisms have been developed for unified coordination of innovation policy in Armenia, and the institutional structure remains fragmented. Central and regional authorities do not interact with each other, subnational authorities also do not have innovation strategies or plans that complement the national innovation policy framework; thus, the institutional environment for using innovation support policy through public procurement is characterised by:

- Gaps in national legislation;
- Public procurement is not considered by government institutions as a tool to support innovation;
- Contradictions between national, regional and subnational policies;
- There is no regulatory framework for innovative procurement.

In Azerbaijan, an institutional framework for the regulation of innovative public procurement does not include support for innovation within existing policies ([Institute for Development of Freedom of Information 2020](#)), although government procurement accounts for over 30% of GDP (2019).

In Georgia, the 2017 Procurement Law ([Lomtadze and Kevkeshvili 2017](#)) introduced the principle of equal opportunity for public tenders, which allowed businesses to become more actively involved in developing innovative solutions. In addition, the current institutional structure of regulation and policy is characterised by:

- Public procurement regulation policy does not provide support for innovation;
- The prospects for using the policy of demand for innovation through public procurement have not been studied.

In Ukraine, the current public procurement law does not provide specific measures to support demand or create platforms for innovation. Thus, Ukraine does not use public procurement as a mechanism to support innovation. In addition to regulatory gaps and inconsistencies, there are some examples of excessive regulation and unnecessary bureaucratisation, which is also associated with the peculiarities of the functioning of the national platform for placing an order ProZorro (analogue of the domestic EIS).

Post-Soviet countries, especially with a large share of the primary sector in the economy, often face various challenges in their development process. From this point of view, Russia’s problems are not unique. For example, Kazakhstan and Azerbaijan suffer from Dutch disease ([Niftiyev 2020, 2021](#); [Sadik-Zada 2021](#); [Sadik-Zada et al. 2021](#)), which negatively affects the economic development of these countries.

Thus, the tangential experience of post-Soviet countries, which are institutionally closer to Russia, data from many studies ([UNECE 2020](#)) point to three of the most recurring challenges in designing and implementing innovative public procurement policies (Table 1):

- The policy is not applied centrally or systematically;
- The policy faces the challenge of implementation and control;
- The institutional framework is unclear or contradictory.

An important constraint on the use of public procurement to spur innovation, according to a number of studies ([Crisan 2020](#)), is the legislative framework, including the free trade agreements signed by the country. Since the purpose of free trade agreements is to encourage the free movement of goods and services, they often include provisions restricting government agencies from using a preferential treatment for their companies.

Table 1. Examples of the use of different types of policies in relation to the implementation of innovative public procurement in the world.

Country	Part of a Policy of Technological (Industrial) Development	Part of R&D Support Policy	General Approach to Policy Making	“No Special Policy”
Group of developed countries				
Australia	+	+	+	-
Canada	+	-	+	-
Denmark	+	-	+	-
Estonia	-	+	-	Prevailing policy
Greece	-	-	-	Prevailing policy
Hong Kong	-	+	-	Prevailing policy
Norway	+	+	+	-
Poland	-	+	+	-
Portugal	-	-	-	-
Sweden	+	+	+	-
Great Britain	+	+	+	-
USA	+	+	-	-
Group of developing countries				
Brazil	+	+	+	-
China	+	-	-	-
South Korea	+	+	-	-
Group of post-Soviet countries				
Armenia	-	-	-	+
Azerbaijan	+	-	-	-
Georgia	-	-	-	+
Ukraine	-	-	-	-
Russia	-	-	-	+

Source: Own results based on [Lember et al. \(2014\)](#).

5. Russian Government Innovation Policy in the Public Procurement Market

The importance of public procurement for the functioning of the domestic innovation system in the context of government policy was recorded back to the Strategy for Innovative Development of the Russian Federation for the period until 2020. It emphasised that the public procurement system that existed at that time “rather impedes the access of innovative products to government order market.

With the transition to a contract system of relations in the field of procurement in 2014, it was assumed that the innovation policy would be based on the principle of stimulating innovation. It meant that procuring entities, in the framework of their procurement activities, should prefer the procurement of high-tech and innovative products. As part of the implementation of this policy, the Government of the Russian Federation has identified products (goods, works, and services) that are “technically, technologically complex” and also “have an innovative, high-tech or specialised nature”. At present, it is referred to as:

- Design, construction and decommissioning of nuclear facilities;
- Work on handling nuclear materials, spent nuclear fuel, radioactive substances and radioactive waste;
- Design and manufacture of equipment used at nuclear facilities;
- Repair of weapons and military equipment of the nuclear weapons complex;

- Construction and reconstruction of hazardous, technically complex, unique capital construction facilities, as well as artificial road structures (if the initial price is over RUB 100 million);
- Catering services, as well as the supply of food products for medical, educational organisations, organisations for the recreation of children and their recovery (if the initial price is over RUB 500 thousand);
- Determination of the cadastral value during the government cadastral valuation;
- Obligatory public technological and price audit of large investment projects with government participation.

Thus, this list is not aimed at the formation of innovative products since it contains, for example, food products, and, therefore, in terms of its content, in contrast to the form, it is not used to conduct an innovative policy in the field of public procurement. At its core, the formation of this list in the national contract system currently pursues a single goal: to enable procuring entities to conduct restricted tenders in electronic form instead of electronic auctions. Furthermore, there is no other document defining the criteria for product innovation at the federal level in the contract system.

The contract system also allows procuring entities to purchase innovative and high-tech products in a two-stage tender. Still, the condition must also be met that it is necessary to discuss the procurement object to clarify its characteristics with the bidders in such a tender. However, the number of two-stage tenders held in the country is so insignificant that the Ministry of Finance of Russia did not include them in the statistics on the share of each procurement method in its analytical report for 2020. Analysis of information in the UIS showed that in 2020 there were only four two-stage tenders, one of which was cancelled (published an invitation for tender the period from 1 January 2020 to 31 December 2020) throughout the country, whereas two purchases were associated with the development (adjustment) of project documentation, and the subject of another was the organisation of the exhibition (UIS 2021), it means that two-stage tenders are not applied for implementation the government's innovation policy.

Accordingly, despite the government's innovation policy being formally institutionalised and enshrined in the contract system, this approach to its implementation is restrictive.

The government applies a different approach to implementing innovation policy within the framework of Federal Law No. 223-FZ. This law regulates purchases of companies with a controlling stake in the government, autonomous institutions, unitary enterprises, etc. The largest procuring entities under this law are (JSC "RT Finance" (belongs to the Government Corporation "Rostec"), JSC "Russian Railways", PJSC "NK Rosneft" (with the total volume of concluded contracts RUB 2856, 1022, and 827 billion, respectively). The amount of money spent by all procuring entities for the purchase of goods, works and services is more than twice the volume of purchases under Federal Law No. 223-FZ (Figure 2).

Regardless of the volume of their procurement activities, all procuring entities are required to publish a procurement plan for innovative products for a five to seven-year period. The authorities of Russia determine the criteria for classifying products as innovative (high-tech) Government Corporations "Roskosmos" and "Rosatom"; that is, there is no single approach (which naturally negatively affects the efficiency of spending funds for purchasing innovative and high-tech products (see Tsygankova 2018) and 11 different documents were adopted, which are based on priority areas of science and the list of critical technologies (Table 2).

Under the analysis of publicly available information in the EIS in procurement, it is possible to analyse such purchases of those mentioned above the top three procuring entities (Table 3).

Table 2. Analysis of approaches to the definition of innovative and high-tech products in Russia.

No.	Legislation	Product Innovation Criterion	High-Tech Product Criterion	General Criterion
1	- Order of the Ministry of Energy of Russia dated by 11 March 2020 No. 175 - Order of the Government Corporation "Roscosmos" dated by 7 November 2019 No. 368	Scientific and technical novelty	- The product is manufactured by organizations of knowledge-intensive industries. - The product is manufactured using the latest equipment, processes and technologies. - The product is manufactured with the participation of highly qualified employees. And some other different criteria	Economic efficiency
2	Order of the Ministry of Industry and Trade of Russia dated by 17 February 2020 No. 521		Use of complex technologies in the manufacture of goods, performance of work, provision of services	-
3	Order of the Minister of Defense of the Russian Federation dated by 31 January 2020 No. 35		More than seven different criteria	Economic efficiency of product use
4	Ministry of Health of the Russian Federation. Order of 31 July 2013 N 514n	- Scientific and technical novelty. - Introduction of goods, works, services. - The economic effect of the sale of goods, works, services. - Science intensity of goods, works, services.	- The product is manufactured using technologies that correspond to the priority areas of development of science and (or) the list of critical technologies of the Russian Federation. - The product is manufactured by organizations of knowledge-intensive industries. - The product is manufactured using the latest equipment, processes and technologies. - The product is manufactured with the participation of highly qualified employees.	-
5	Order of the Government Corporation "Rosatom" dated by 22 October 2019 No. N 1/23-HIIA	Product novelty	- The product is manufactured with the participation of highly qualified employees.	Economic efficiency
6	Order of the Ministry of Transport of Russia dated by 25 August 2015 No. 261 Order of the Ministry of Agriculture of Russia dated by 18 August 2014 No. 323	- Compliance with the priority areas of development of science, technology and technology of the Russian Federation. - Scientific and technical novelty. - Introduction of goods, works, services. - The economic effect of the sale of goods, works, services. - Science intensity of goods, works, services.	- Are manufactured by enterprises of knowledge-intensive sectors of the economy. - Are manufactured using the latest technological equipment, processes and technologies. - Are produced with the participation of highly qualified employees.	-
7	Order of the Russian Emergencies Ministry dated by 14 December 2012 No. 768	High-tech products, works, services		-
8	Order of the Ministry of Telecom and Mass Communications of Russia dated by 10 October 2013 No. 286	- Scientific and technical novelty. - The economic effect of the sale of goods, works, services. - Availability of patent protection (if applicable).	Matches product innovation criterion	-
9	Order of the Ministry of Education and Science of Russia dated by 1 November 2012 No. 881	- Scientific and technical novelty. - Introduction of goods, works, services. - The economic effect of the sale of goods, works, services. - Science intensity of goods, works, services.	- Compliance with the priority directions of the development of science in the Russian Federation. - High-tech products, works, services.	-

Source: Own results.

Thence, the largest procuring entity in 2019, JSC RT Finance, does not purchase innovative products in principle, which may be due to the specifics of the activities of this organisation.

It should be especially noted that among the innovative procurement of JSC Russian Railways, there are services for the repair of an official car, refuelling and repair of printer cartridges, repair of printers and MFPs, provision of information services related to the use of the Consultant-Plus system (UIS 2021), services that are extremely difficult to classify as innovative.

Rosneft’s innovative procurement, in turn, mainly includes research and development work, as an example: “the development of a technology for spatial interpretation of logging while drilling” or “the development of an integrated technology for the disposal of oil sludge with an increased content of natural radionuclides” (UIS 2021).

Table 3. The number of innovative purchases of the largest procuring entities under Federal Law No. 223-FZ of Russian Federation.

Procuring Entity	Purchase Plan Period	Planned Purchases, Pcs.
JSC “RT Finance”	2021–2025	0
JSC “Russian Railways”	2015–2021	5878
PJSC “NK Rosneft”	2018–2022	111

Source: Own results.

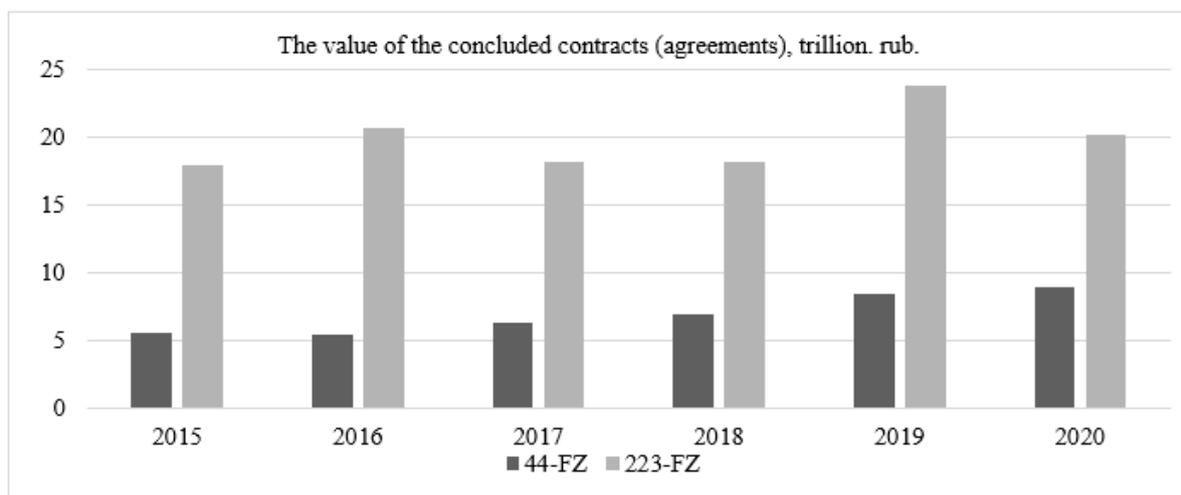


Figure 2. The cost of contracts (agreements) concluded under Federal Laws No. 44-FZ and No. 223-FZ. Source: Own results based on (Shamrin et al. 2021).

In addition, there is a list of procuring entities who are subject to additional requirements for the procurement of innovative products; currently, it includes 92 procuring entities, they are obliged to annually publish a report on the purchases made of innovative (high-tech) products. Still, it only provides general information (for example, on the number and value of contracts concluded) without specifying purchases, which does not allow a detailed analysis of the innovative activities of procuring entities in a particular year.

6. Conclusions

Thus, our analysis of the usage and application of the instrument of innovative public procurement as a leading element within the framework of Russian innovation policy preliminarily indicates the presence of many serious institutional failures that require the transformation of the current legislation that might hinder its leadership qualities and provisions.

It appears that within the framework of existing approaches, the type of policy used in Russia to regulate innovative public procurement is closest to the policy of “no special policy,” that is, in the current institutional framework, there are no separate provisions or laws that would, in a separate order, regulate the process of stimulating innovation exclusively through a public procurement instrument. This finding sends a clear signal to the policymakers who need to improve their strategy on the public procurement and to adapt some concrete pathway to follow.

Furthermore, an important institutional failure in the regulation of the leading innovative public procurement is the lack of a unified methodological framework defining

such an important concept as “innovative public procurement” and the absence of uniform criteria for classifying products as innovative (high-tech) for all government bodies.

Therefore, the institutional analysis conducted in this paper clearly showed that the current policy has a quasi-innovative orientation, mainly expressed in “innovative” purchases. These public procurement purchases are not both functional characteristics (quantitative indicators) and qualitative characteristics, but the narrative analysis also showed significant failures in government regulation. This is quite an important finding that might be informative for the policy makers and the stakeholders working in this area. As for the pathways for further research, we think that a closer look at some specific industries (e.g., energy or agriculture) might yield more interesting results using additional data and methods.

Thence, we deduce that there is a possible solution to the existing contradictions which lies in changing the institutional structure of regulation of innovation policy in the field of public procurement in Russia in the two directions related to the following types of policies that regulate innovation procurement: (i) the creation of a separate law for innovative procurement (as part of the country’s technological (industrial) development policy and as part of the R&D support policy), and the (ii) transforming the existing regulatory environment (general approach to creating a public procurement of innovation policy (policy for all time)).

The research aim was to identify the existing institutional failures of the Russian NIS on the example of the regulation of innovative domestic procurement.

The main question of the article is how to propose ways to modernise the current policy based on the institutional and narrative approaches to foster its leading position in the international competition.

The findings of this study must be seen in the light of some limitations. There are two major limitations in this study that could be addressed in future research. First, the study is related to the scientific topic of innovative procurement, which is insufficiently studied in relation to the Russian experience, which leads to the presence of an insufficient number of articles and scientific studies on this topic. The second limitation of the study is associated with an insufficient amount of empirical and statistical data on the real volumes and qualitative characteristics of innovative public procurement in Russia at the current stage.

Future directions of research will be aimed at developing the application of a narrative economics approach to analyse the problems of the NIS, the institutional governance of innovations, and public procurement.

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