

ПОДДЕРЖКА ИННОВАЦИОННОГО РАЗВИТИЯ С ПОМОЩЬЮ ИНСТРУМЕНТОВ СИСТЕМЫ ГОСУДАРСТВЕННЫХ ЗАКУПОК

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Аннотация: В статье рассматривается зарубежный опыт поддержки инновационного развития страны с помощью инструментов системы государственных закупок и возможность их применения в Российской Федерации. Подчеркивается важность создания условий, которые бы способствовали развитию науки и технологий, улучшению инфраструктуры и базовой научной активности. Обсуждаются успешные опыты Соединенных Штатов Америки и Европейского союза в этом направлении. В США была создана программа Small Business Innovation Research (SBIR) для поддержки малых компаний, занимающихся научными и технологическими исследованиями. Европейский союз внедрил программу Innovation Voucher Scheme для поддержки малых и средних предприятий в развитии инноваций и новых технологий. Выводы указывают на то, что внедрение зарубежных инструментов государственных закупок в Российской Федерации может стимулировать инновационное развитие, но необходимы комплексные меры для развития инновационной активности в экономике России.

Ключевые слова: инновации, экономическое развитие, система государственных закупок, программа Small Business Innovation Research (SBIR), программа Innovation Voucher Scheme, технологическое совершенствование, наука и технологии, офсетные контракты

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SUPPORTING INNOVATIVE DEVELOPMENT THROUGH THE TOOLS OF THE PUBLIC PROCUREMENT SYSTEM

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RESEARCH ARTICLE

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Abstract: The article discusses the possibility of applying public procurement system instruments to support innovative development in the Russian Federation and examines the experience in foreign countries in this area. The author stresses the significance of fostering the atmosphere that encourages the advancement of science and technology, as well as the enhancement of infrastructure and fundamental scientific research. The research addresses the successful experiences of the European Union and the United States of America in this area. To assist small companies conducting scientific and technological research, the US government established the Small Business Innovation Research (SBIR) program. To support small and medium-sized enterprises (SMEs) in promoting innovation and developing new technologies, the European Union launched the Innovation Voucher Scheme. The conclusion suggests that the Russian Federation's introduction of foreign public procurement instruments can foster innovative development; nonetheless, comprehensive measures are required to boost innovative activity in the Russian economy.

Keywords: innovation, economic development, government procurement system, Small Business Innovation Research (SBIR) program, Innovation Voucher Scheme program, technological improvement, science and technology, offset contracts

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Introduction

Economic development is inextricably linked to innovation. It is impossible to maintain the state's competitiveness in the global economy and achieve sustainable economic growth without technological advancement. Innovation fosters the creation of new products, technologies, and production methods as well as more cost-effective manufacturing and improved quality of life for people.

The government of every country hoping to succeed in the global economy must prioritize fostering the innovative development of the state. This requires creating conditions that would favor the development of science and technology, as well as improving infrastructure and basic scientific activity, developing the education sector, raising the qualifications of researchers, civil servants and specialists, and providing state support for innovators and graduates of higher education institutions of small and medium-sized businesses. In this sense, the country's public procurement system is an effective instrument for stimulating innovation. By acquiring advanced technologies, services, and materials required for the realization of scientific research and the development of modern forms of production, the state can promote innovative progress through such purchases.

Public procurement as stimulus for innovative development

One of the goals of the public procurement system is to encourage the incorporation of innovative developments into existing economic sectors. The government may make it easier for new technologies to enter large markets and integrate with established systems by offering a variety of incentives. These instruments include:

1. Provision of subsidies and grants for innovative companies. These subsidies can be provided to support new projects or the development of new technologies.
2. Providing more favorable public procurement terms for innovative products. This could imply that innovative companies can provide their services at a lower cost, which aids in their increase in market share.
3. Simplifying procurement procedures for innovative companies. This includes more simplified application procedures for public procurement, reduced requirements for bidders, and other measures to reduce barriers preventing innovative companies from participating in public procurement.
4. Introducing tax privileges and other financial incentives for innovative companies developing new technologies.

Every year, the contribution of innovative development to economic growth in many countries is growing. To assist the technological advancement of the state's national economy, countries all over the world turn to instruments of the public procurement system.

The American experience

The United States of America is one of the successful examples. To achieve the innovation development goals, the state uses the Small Business Innovation Research Program (SBIR) for the public procurement system. In 1982, this instrument was developed to support small businesses that conducted technological and scientific research. The SBIR program's main objective is to promote the commercialization of innovative technologies and the growth of small businesses involved in science and research in the United States. Under this program, small businesses can access technology, equipment, and scientific and technical personnel that they would not otherwise be able to obtain. They can also get significant and consistent funding to support their research and development efforts.

The SBIR program offers grants at various stages of research, ranging from initial studies to the first commercial prototype. The program is divided into three stages, with each covering specific tasks and periods. Namely:

1. Project stage. In this stage, a request is made by a government research agency (such as the National Institutes of Health, the Department of Defense, or NASA) to initiate a call for grant proposals under the SBIR program. Small businesses can submit their applications and projects describing their proposed research and innovations.

2. Project selection stage. The SBIR Program Office selects which projects will be funded after evaluating applications, usually within a few months after the previous stage ended. The scientific expertise of the team, the project's technical and commercial aspects, the possibility of commercialization, and the project's potential to have an impact on society are all possible selection criteria.

3. Funding. Once a company is chosen during the selection stage, grants are awarded and research is initiated. Every stage of development is funded by SBIR: a company can receive up to \$150,000 for a year of exploration in the first phase and up to \$1 million for two years in the second phase. The end of each phase is associated with a requirement to submit a report on the research results.

Numerous studies have demonstrated that significant outcomes have already been achieved since the program's implementation:

1. In its forty years of operation, the SBIR program has provided over \$50 billion in research and development funding to small enterprises¹. Without the existence of this instrument, the realized projects would have a ten times lower chance of existence.

2. According to the estimates, each SBIR grant results in the creation of two to three new jobs. Approximately one million jobs have been created or maintained in the US as a result of the program.

3. More than 70 % of companies participating in the SBIR program work with universities to receive scientific support and expertise in the development of their projects. Thus, a steady flow of qualified professionals is ensured for the future while also aiding in developing research and higher education.

4. In 2019, 70 % of the 519 companies that received the second phase grant in 2009 continued to operate. The average annual revenue of these companies increased by more than 320 % compared to the year of the grant.

These figures show how the SBIR program affects the small business sector; helps create jobs, facilitates growth, and accelerates innovative development in the US economy.

The EU experience

To assist small and medium-sized businesses in developing innovation and new technologies, the European Union launched the Innovation Voucher Scheme. The program's task is to facilitate small and medium-sized businesses' access to new technologies, knowledge, and skills by fostering collaboration with academic and scientific institutions.

Creating a link between small and medium-sized businesses and research organizations, the Innovation Voucher Scheme offers financial support in the form of "innovation vouchers". Small and medium-sized businesses can use these vouchers to pay for services related to innovation research and development that they are unable to complete internally for a predetermined amount².

The Innovation Voucher Scheme program is implemented in many EU member states. Ireland, Germany, Portugal, Great Britain, France, and other countries are among those that use it. Depending on the country and the company offering the program, this instrument may be funded by a variety of sources. Government innovation subscriptions, risk capital funds, philanthropic organizations, and

even private businesses are a few possible funding sources. Companies that receive funding through the Innovation Voucher Scheme may need to provide extra funds to cover a part of the expenses. Recipient companies may also occasionally be eligible for additional tax breaks or financial aid to help with the costs of research and development.

Supporting innovative small and medium-sized business initiatives that have the potential to significantly impact the EU's macroeconomy is part of the scope of the Innovation Voucher Scheme. In the course of the UK Government's investigation into how the program affects the country's economy, it is important to note:

1. More than 16,000 vouchers totaling more than £40 million have been granted under the Innovation Vouchers program since 2012.

2. In 2018, 85 % of companies participating in the program reported that the Innovation Voucher helped them develop new products or services.

3. Companies that participated in the Innovation Voucher program in 2018 reported that 95 % of them would recommend it to other businesses.

4. In 2018, 67 % of businesses that were part of the Innovation Voucher Scheme reported that the program increased their competitiveness in the market.

One of the core elements affecting an economy's success in the modern world is innovative growth. The Innovation Voucher program gives small businesses and individual entrepreneurs with limited budgets access to funds and knowledge to research and develop new and innovative products or services, allowing them to reach a completely different level of technological development, which in turn boosts the overall economy of the state.

Experience of the Russian Federation

The Federal Law of April 5, 2013, No. 44-FZ, "On the contract system in the sphere of procurement of goods, works, and services for state and municipal needs", states that one of the principles of the contract system in the sphere of procurement is the stimulation of innovation, affirms the desire to foster innovation in the country. This means that "customers in the planning and implementation of procurement should proceed from the priority of ensuring state and municipal needs"³. This law also includes a procedure for concluding a contract with counter-invest-

1 Small Business Innovation Research Program (SBIR). <https://www.epa.gov/sbir>

2 Innovation Voucher Scheme. <https://www.innovation-vouchers.com>

3 Federal Law of April 05, 2013, No. 44-FZ «On the contract system in the sphere of procurement of goods, works, and services for state and municipal needs». https://www.consultant.ru/document/cons_doc_LAW_144624/4dc138d32b6e1d6559d90ddae743e60ece825b2b

Foreign procurement systems feature	Application mechanism	Positive consequences	Implementation risks	Analogs in Russia	Difference with foreign instruments
<i>Stage-based financing (SBIR)</i>	Funding projects in three stages: research, development, and commercialization	- Risk Mitigation; - Support for successful projects; - Increased commercialization	- High competition; - Administrative complexities; - Possible delays in financing	Innovation Assistance Fund's "Start" program	Stage financing is also a part of the "Start" program, although at the commercialization stage, it is less integrated with private investment
<i>Attracting private capital (SBIR)</i>	At the commercialization stage (Phase III), companies can attract private investment	- Increased resources; - Increased investor confidence; - Accelerated time to market	- Risks of investment failure; - The need for strict controls; - Potential conflicts of interest	Innovation Assistance Fund's "Commercialization" program	The mechanism for attracting private investment is less structured and developed than that for SBIR, reducing the effectiveness of support
<i>Simplicity and speed of receipt (Innovation Vouchers)</i>	Minimal bureaucratic procedures to apply for and obtain funding	- Reducing administrative barriers; - Accelerating access to finance; - Support for SMEs	- Possible abuses; - Insufficient project design; - Limited funding	Regional innovation vouchers	The funding and application processes might be more simplified; they could be less effective
<i>Focus on business-science collaboration (Innovation Vouchers)</i>	Vouchers can be used to pay for research institutions and universities	- Fostering links between business and science; - Improving the research quality; - Support for applied projects	- Limited resources; - Risks of improper use; - Infrastructure development needs	Innovation vouchers (Passport of the National Project "Small and Medium Entrepreneurship and Support of Individual Entrepreneurial Initiative")	Although there is support for business and science collaboration, there is scope for improving the administration and funding
<i>Low cost of administration (Innovation Vouchers)</i>	The program requires minimal administration resources to be managed	- Cost reduction; - More efficient use of funding; - Increased availability of funding	- Risks of insufficient control; - Possible mistakes in administration; - Limited monitoring options	There are no direct analogs, but there are simplified regional support programs (Passport of the National Project "Small and Medium Entrepreneurship and Support of Individual Entrepreneurial Initiative")	To improve support effectiveness, it is necessary to develop and implement programs with low administrative costs

ment obligations (offset contract). "An offset contract is a state agreement that includes requirements for counterinvestment. It is signed by the state client on behalf of the region and includes a guaranteed long-term order (up to ten years) under which the supplier will produce this product in the region"⁴. This instrument was introduced in 2016, and 16 offsets have been concluded since then, 13 of which are related to medicines or medical devices⁵. One of the top prior-

ities in Russia right now is the import substitution policy. With the help of offset contracts that follow this policy, the country's production of foreign pharmaceuticals is becoming more efficient by creating modern domestic facilities, suggesting that the innovation component is growing. It is also worth noting that an organization within the "Avtodor" group of companies signed its first contract with a SME supplier. This contract requires the supplier to provide 10,000 holders and 100,000 transponders made in Russia to cover the cost of travel on toll road segments. To achieve this goal, the offset contract specifies steps for developing its production, which will undoubtedly include using new technologies, as this is the first organized production of transponders on Russian Federation territory.

The resolution of December 25, 2015, No. 1442 "On procurement of innovative products, high-tech

4 Offset contracts. Ministry of Finance of the Russian Federation. https://minfin.gov.ru/ru/press-center/?id_4=37971ofsetnye_kontrakty_stanut_dostupnyee

5 Participants at the «Goszakaz» forum and exhibition discussed the model of offset contracts in pharmaceuticals. *Farmatsevticheskii vestnik*. <https://pharmvestnik.ru/content/news/Uchastniki-foruma-vystavki-Goszakaz-obsudili-model-ofsetnyh-kontraktov-v-farme.html>

products by certain types of legal entities and amendments to certain acts of the Government of the Russian Federation”, is acknowledged as part of the framework for promoting innovative development in the Russian Federation. The resolution establishes the annual volume of innovative and high-tech products to be procured by state corporations as specified in the Russian Federation’s Government Order No. 475-r of March 21, 2016. It states that “the annual volume of procurement of innovative products, high-tech products, which customers are obliged to carry out, is determined as an increase by 10 percent of the aggregate annual value of contracts concluded by the customer as a result of the procurement of innovative products, high-tech products for the year preceding the reporting year, and is not more than 10 percent of the aggregate annual value of all contracts concluded by the customer as a result of the procurement of goods, works, services for the reporting calendar year”⁶. This allows for an increase in demand for innovative products year after year, implying an increase in the active participation of investors and manufacturers in developing the technological production sphere.

The role of foreign experience in Russian practice

Consideration of foreign expertise in public procurement is of significant importance for Russia, but it requires caution in implementation, as there are some factors that may impede it:

1. *Sociocultural differences.* Due to Russia’s distinct cultural, economic, and social traits, models that are effective in one country might not be suitable for Russia. For example, law enforcement and compliance with laws may differ greatly.

2. *Institutional barriers.* Institutional barriers in Russia may make it more challenging to adapt and implement foreign approaches.

3. *Economic conditions.* The economic conditions in Russia might not be the same as those in the nations whose experiences are under consideration. Consequently, an effective strategy in one economy might be detrimental or ineffectual in another.

4. *Geopolitical conditions.* Models for public procurement that are successful in stable countries might not be viable or effective in unstable geopolitical environments. Russia may have trouble putting

these models into practice because of its particular geopolitical issues.

5. *Historical background.* Russia’s long-standing traditions and management systems may contradict new approaches. This can make it more difficult to integrate foreign experience.

However, even with the justified risks, considering foreign public procurement experience could greatly enhance the process of identifying the most promising aspects of foreign procurement systems to be applied in Russian practice. Let us find these elements and compare them to the instruments available in the Russian Federation.

Conclusion

We could characterize the Russian Federation’s innovative development as ambiguous. Russia has considerable scientific and technological potential and is solid in specific scientific fields. However, compared to other developed countries, the Russian economy still has a low level of innovation. This can be attributed to several factors, including low levels of innovation culture, difficulties in commercializing scientific discoveries, low R&D investment, and restricted access to resources for SMEs to foster innovation.

Within this framework, the Russian Federation may encourage innovative development by introducing foreign public procurement instruments. The support for innovative companies in the Russian public procurement system can be greatly improved by incorporating elements of foreign procurement systems, particularly through streamlining administrative procedures, attracting private capital, and enhancing stage financing. Although some of these components are currently included in Russian programs, more development and optimization are required to reach optimal efficiency.

However, the Russian Federation must consider the unique features of its political and economic landscape, adhere to legal requirements, and guarantee that public procurement is conducted fairly and openly before implementing foreign public procurement instruments. Foreign instruments of public procurement can, in general, encourage innovative development in the Russian Federation, but they are not the only way to address issues in this field. To stimulate Russian economic innovation, a comprehensive set of measures is required, including introducing new instruments as well as enhancing already existing and unquestionably effective drivers for the country’s economic growth.

6 Resolution of the Government of the Russian Federation of December 25, 2015, No. 1442 «On the procedure for the state registration of legal entities and individual entrepreneurs». <https://base.garant.ru/71296076/>

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