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ROLE OF A STATE IN IMPLEMENTING THE INNOVATIVE POTENTIAL OF INDUSTRIAL ENTERPRISES

N. N. Belanova (a)*
*Corresponding author

(a) Samara State University of Economics, 443090, Soviet Army Str., 141, Samara, Russia, Belanova.nata@yandex.ru

Abstract

The implementation of technological innovative transformations in the industrial production requires a concentration of material and financial resources and their reallocation to key development areas. To do this, the state should form a development trajectory based on making balanced, reasoned and agreed decisions at all levels of the state regulation. Realization of the innovation potential of industrial enterprises and its capacity is based on the implementation of transformations, breakthrough technical solutions, technical and technological modernization of production. The author considers directions and targets of the innovative development, defines the role of the state in the implementation of the innovative potential of Russian enterprises, analyzes intermediate results of three subprograms of the state program Economic development and innovative economy. It is determined that the state actively encourages innovative development of the Russian economy, but the key indicators remain relatively low. It is revealed that the main problem is the prevalence and spread of inertial development of a simulation type. The development of industrial enterprises is mainly based on borrowing foreign technologies and forms of organization to the detriment of the development and implementation of Russian scientific and technical achievements. The consequences are low demand for innovations, low susceptibility of industrial enterprises to innovation, low returns on innovation potential, and low R&D costs of organizations.

Keywords: Innovation potential, innovations in industry, state support for innovations.

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1. Introduction

Realization of the innovation potential of industrial enterprises and its capacity is based on the implementation of transformations, breakthrough technical solutions, technical and technological modernization of production. The formation of a competitive, stable and structurally balanced industry (capable of self-development and integration into the global technological space) requires significant efforts, and the accumulation of technical and innovative potential to ensure a breakthrough development type. The state should play a key role here. In conditions of a "catch-up" development type, an active state policy is necessary to form a competitive, stable and structurally balanced industry. Development planning and setting of target indicators are based on the development of state programs. Analysis of planned and actual development indicators, evaluation of the effectiveness of state programs implementation will allow developing tactical actions, if necessary, adjusting the direction of the state industrial policy.

2. Problem Statement

The concept of "innovative potential" was first proposed by (Friedman, 1971) in the mid-1970s. In his work, he noted that the basis of innovations is the production-economic and social-organizational potential. Potential means opportunities, funds, and reserves that can be used to solve a problem. The scientific category "innovative potential" is often considered as a set of resources (material, labor, financial, etc.) that an enterprise uses to implement innovative activities (Abramov, 2012; Bazhenov & Kislitsyna, 2009; Carrera, Brugué, Casademont, & Serra, 2019). However, this approach does not reveal the economic content of the considered category. It is not enough to create an innovative potential and attract the necessary resources: if the process is properly organized and managed, it must be developed and implemented in the future launching innovative activities and creating an innovative product, that is, the innovative potential will be realized. Therefore, it is important to identify mechanisms and factors that influence the innovative development. In the economic theory, potential is interpreted as the maximum possible property or result (Carrera et al., 2019). Therefore, there is not only a problem of implementing the innovative potential, but also a problem of innovative development with the maximum efficiency and the ability to increase the innovative potential. Micro-and macro-environment factors influence the formation, implementation and development of the innovative potential. At the level of an individual enterprise (micro-level), the formation of the innovative potential is taking place, but its effective implementation and expansion is possible only under favorable macroeconomic conditions, by the direct participation and control of the state over innovative processes.

3. Research Questions

The question that this study was supposed to answer was formulated as follows: what are the main mechanisms of the state influence on the processes of building and implementing the innovative potential of industrial enterprises. Should the state limit itself to create favourable macroeconomic conditions for the innovative development, or should it intervene directly in reproduction processes for their optimal development?

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4. Purpose of the Study

The purpose of the study is to determine the role of the state in building and implementing the innovative potential of industrial enterprises, systematizing its main influence tools. Based on this goal, the following research objectives were formulated:

- Learn theoretical aspects and generalize the practice of the state regulation of innovative processes;
- Consider control events and target indicators of the Russian state program in the field of innovations, and evaluate results of its implementation;
- Justify the necessity of the state influence on the reproduction of innovative processes.

5. Research Methods

The methodological basis of the study is a systematic approach that allows us to consider the innovative development of industrial enterprises as a holistic process, which is influenced by many factors, and to study mechanisms for implementing and building the innovative potential. The author also used the following methods: formal-logical (deduction, induction, justification, argumentation); abstract-logical. Methods of grouping, average values, and graphical methods of presenting the research results were used as statistical tools.

6. Findings

For sustainable progressive development of the economy, a system of the state regulation of innovation processes is required. In Russia, significant steps have been taken to activate the innovative development and to form and implement the innovative potential of enterprises. The infrastructure for supporting the innovative development has been formed: special economic zones that provide significant benefits to innovative organizations, business incubators, technology parks, technology transfer centers, and prototyping centers etc. The following support forms for the innovative development of industrial enterprises can be identified (Cai, Liu, Huang, & Liang, 2019; Camison-Haba, Clemente-Almendros, & Gonzalez-Cruz, 2019):

- Development of national development programs to support innovative enterprises;
- Provision of benefits and preferences (including preferential taxation and tax deductions) that promote the interaction between industrial enterprises, research institutes and universities;
- Direct lending (granting loans at reduced interest rates, interest-free lending, or free loans);
- Direct financing (targeted grants and subsidies);
- Creation of private innovation funds, venture funds; investment of budget funds in the capital of venture funds;
- Using the public-private partnership system;
- Implementation of the targeted public procurement of innovative products and services;
- Financing of business incubators, technology parks, and other innovative infrastructure objects.

Let's consider the state program "Economic development and innovative economy" (Government of the Russian Federation, 2014). The goal of the program is to create a favorable business climate and

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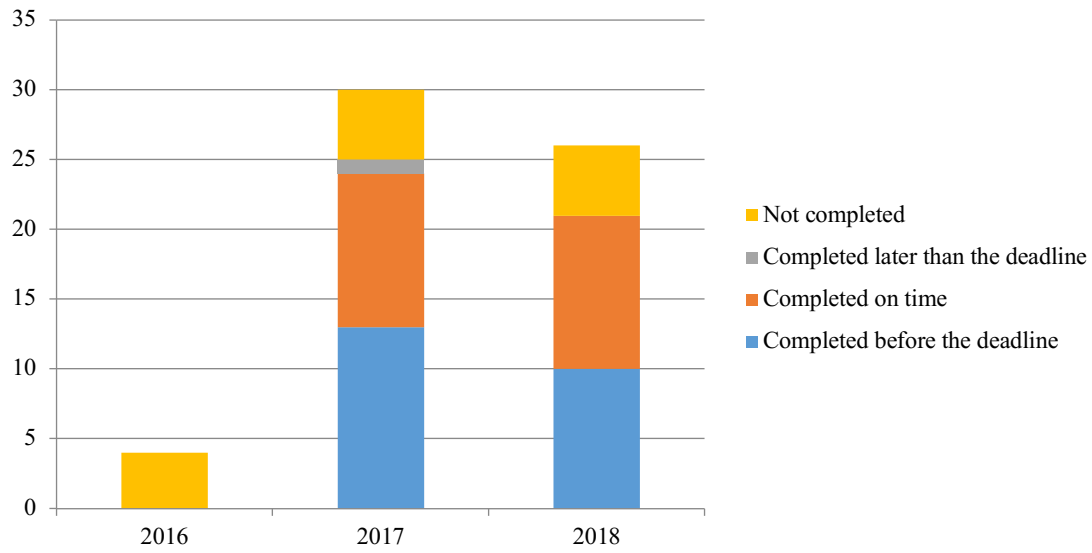
conditions for doing business, increase the innovative activity and efficiency of the public administration. This program includes 9 sub-programs. In the framework of this research, three of them were analyzed that are directly related to the innovative development and implementation of the innovative potential in the industrial production.

Subprogram 1 is about creating an investment climate. Its main planned activities include creating favorable conditions for attracting investments, reducing administrative barriers, improving Russia's investment image, promoting foreign investments in the economy, creating favorable tax conditions for increasing investments in fixed assets, monitoring the law enforcement for business support mechanisms, improving the corporate governance, developing special economic zones, and creating a favorable competitive environment.

Subprogram 2 is aimed at the development of small and medium-sized enterprises. Its main activities are financial support, formation of a national system of guarantee organizations, acceleration of small and medium-sized business, and improvement of its legal regulation.

Sub-program 5 is the promotion of innovations. It includes the following activities: stimulating innovations, supporting small innovative companies, developing mechanisms for the legal protection of the intellectual property, building up innovation infrastructure, providing personal training and retraining on competencies needed in the digital economy, and supporting the productivity growth at enterprises.

Below, we consider the execution of control activities for these subprograms for three years (Figure 01).



Source: author based on (State Programs of the Russian Federation, 2019).

Figure 01. Execution of control activities for subprograms

In general, we can note a positive trend: during the studied period, the number of planned control activities and the percentage of their implementation increased. Mainly, control activities reflect tools and ways that the state has to implement in order to achieve the program goals. The analysis of the main development indicators or planned development indicators is more representative in terms of the effectiveness of the state programs. For subprogram 1: 7 from 23 indicators were not achieved in 2018. For

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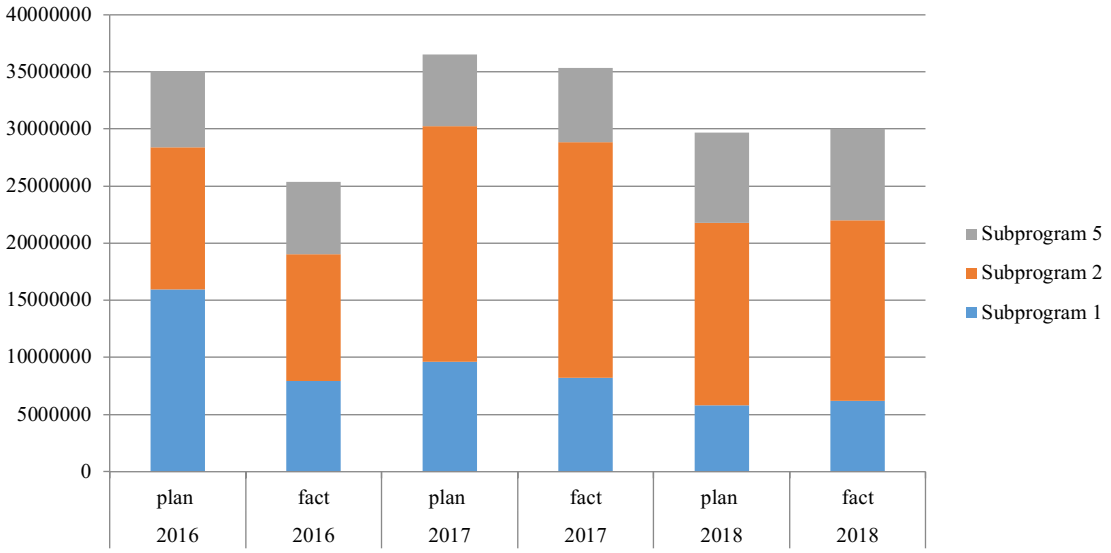
subprogram 2: one of seven indicators has not been achieved. It is related to the total number of organizations created by entrepreneurs. For subprogram 5: one from 12 indicators has not been reached. It is determined by the share of applications for the state registration of intellectual property, which partly reflects the low innovative activity of enterprises.

In addition, the potential for creating small and medium-sized enterprises, making investments by residents of free economic zones, and developing public-private partnerships has not been realized too. The actual value of foreign direct investments is six times less than it was planned, and the volume of private investments in projects in the real sector of the economy is hundreds of times lower than the planned one. At the same time, we can note a significant over-fulfillment in certain indicators, such as the growth of output per employee, the number of newly created jobs, and the volume of investments in fixed assets.

The analysis of the amount of state funding shows that in 2016 -2017, the actual values did not reach the planned ones (especially for subprogram 1 in 2016). In 2018, there is a slight excess of the actual values over the planned ones. In general, there is a positive trend in the growth of budget allocations for the implementation of these sub-programs.

The volume of the financial support provided to entrepreneurs under the national guarantee system in 2018 exceeded by 35% compared to the planned values, the volume of issued guarantees and warranties – by 42% (Figure 02).



Source: author based on (State Programs of the Russian Federation, 2019).

Figure 02. Budget allocations for the implementation of subprograms

The Russian state is taking active steps to increase the innovative activity of enterprises, accelerate innovation processes and commercialize the results of innovations (Belanova, Chirkunova, & Kornilova, 2019). However, the processes of formation and implementation of the innovative potential of industrial enterprises are slow. According to official statistics, the share of innovative products, works and services in the total volume of goods shipped is 6.5%. For developed countries, this figure is in the range of 10-20% (Bergman & Varga, 2018). The share of organizations implementing technological innovations in 2018 was 19.8%. The share of expenses for technological innovations is only 2.1%. In our opinion, the main problem

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of the innovative development is the prevalence and spread of its imitation type, namely, the development of industrial enterprises by borrowing foreign technologies and organization forms to the detriment of the introduction of their own technologies and achievements. The consequences of this process are low demand for innovation, low susceptibility of industrial enterprises to innovations (Rathore, Jakhar, Bhattacharya, & Madhumitha, 2020), low returns on innovation potential, and low R&D costs of organizations (Kireeva, Belanova, Kornilova, & Chirkunova, 2017).

Budget funds has a large share of internal research and development expenditures. Thus, in 2018, the share of funds of the business sector in Russia as a whole was 29.5%, foreign sources – 2.3%, and state funds – 67% (1.2% – other financial sources). The cost structure for technological innovations in industrial production in 2017 amounted to 68.1% (the company's own funds), 9.3% (the federal budget, the budgets of the subjects of the Russian Federation and local budgets), 0.2% (funds for support of scientific and innovative activities).

The statistical analysis shows that financial state support for the industrial production is significantly lower compared to national indicators. The analysis conducted in 2015-2018 shows that this financial support from the state is clearly insufficient. Key factors that hinder the innovative development include:

- Lack of own funds (65% of industrial enterprises attributed it to the key factors ("main" or "significant");
- Insufficient funding from the state (31.6% of industrial enterprises attributed it to the key factors);

The high cost of innovations (42.8% of industrial enterprises attributed it to the main factor) (National Research University Higher School of Economics HSE, 2019).

7. Conclusion

Russia needs to choose the option of innovative and modernizing development: on the basis of a market breakthrough or an inertial development of an imitation type. The first way will allow the country to enter the international market of high technologies and innovations as a strong and competitive partner, the second way pushes the Russian economy to a weak position and involves the development of imitation innovations as a response to an external challenge from developed countries. In order to effectively implement and increase the innovative potential, the state should focus on promising and breakthrough areas, such as the production of industrial goods with a priority of import substitution, the industrial equipment and technology sector, and infrastructure. Development and implementation of state national projects and programs, financing of sustainable innovation and investment-active areas and industries that can become engines for the growth and progressive development of the entire economy are a necessary condition for the effective implementation and further improvement of the innovative industrial potential.

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