

Methods of State Regulation of Innovation in the Modern Economy of Russia

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Abstract

It is innovations that create a competitive advantage and provide economic growth. This article studies methods of regulating innovations in Russia. Comparative indicators of regulating innovations in Russia, the USA, Europe, China, and also Japan are given. To achieve this goal, statistical data were used, and Russian legislation in this area was also monitored. As a result, the characteristics of the methods for regulating Russia's innovations and its main differences from other countries are given. It is stated that the business climate needs to be improved in Russia, since at this stage mainly the state invests in the innovation sphere.

Key words: innovation, state, investment, business, economic.

Métodos de regulación estatal de la innovación en la economía moderna de Rusia

Resumen

Son las innovaciones las que crean una ventaja competitiva y brindan crecimiento económico. Este artículo estudia los métodos de regulación de las innovaciones en Rusia. Se dan indicadores comparativos de innovaciones reguladoras en Rusia, Estados Unidos, Europa, China y Japón. Para lograr este objetivo, se utilizaron datos estadísticos y también se monitoreó la legislación rusa en esta área. Como resultado, se dan las características de los métodos para regular las innovaciones de Rusia y sus principales diferencias con respecto a otros países. Se afirma que es necesario mejorar el clima de negocios en Rusia, ya que en esta etapa, principalmente el estado invierte en la esfera de la innovación.

Palabras clave: innovación, estado, inversión, negocios, economía.

1. INTRODUCTION

The necessity and inevitability of the transition to an innovative development path in the leading sectors of the Russian economy was and remains central to the Government of the Russian Federation in the context of the 4th industrial revolution in the leading countries of the world. Historically, Russia has always had a tendency of innovative development in industries, but it has had a point nature and developed with different success - in the sectors of the military-industrial complex with the largest share, in trade and services with the least. Innovation activity becomes the main factor of economic development, as goods, services and technologies provide the significant increase in the gross domestic product in developed countries (Etzkowitz and Ranga, 2015; Fabrizio et al., 2017). There are direct and indirect regulation methods by the state of innovation activity (Tukker et al., 2017). The direct regulation includes, first of all, budgetary financing, and also covers the substantive aspect of innovation activity (Georghiou et al., 2014; Foray, 2014). Indirect methods of the state regulation are embedded in the market mechanism, which itself has the ability to identify and meet the requirements for research and development (Foray, 2014; Kivimaa and Kern, 2016). The main point of the indirect regulation is the creation of generally favorable investment climate, encouragement of organizations that are more action oriented toward innovation, however, the state does not control innovative industry projects (Locke and Wellhausen, 2014; Atkinson et al., 2015). This article considers methods of regulating innovations in Russia, also compares the development of innovation activity in Russia with the leading countries of the world.

2. METHODOLOGY

The information base of the study was taken from the official data of the Service for State Statistics. The economic-statistical method as a special method was used, as well as comparative analysis and a method of economic groupings. In addition, the federal law of the Russian Federation "On Innovation in the Russian Federation" was monitored.



Figure 1. World centers of scientific progress (Expenditures on research and development). (Tables and diagrams list, 2018).

The management of the innovation process in Russia functions based on four-level management system is:

1) The highest state, federal;

2) Medium state, sectoral;

3) State regional;

4) The lower state, institutional.

At each level, the management of the innovation process includes:

• An organizational management structure, i.e. specific government bodies, the distribution of power and responsibility between them, the correlation of rights and duties;

• A system for collecting, analyzing, and processing the necessary information;

• A mechanism for making decisions and monitoring their implementation;

• A system of selection and personnel appointments (Innovation and technological management, 2012).

According to the federal law of the Russian Federation "On Innovation in the Russian Federation" dated July 21, 2011, the state innovation policy is based on the following principles:

• Favorable conditions are created for the implementation of innovation in the Russian Federation;

• Publicity of a choice of priorities for the direction of innovation;

• Competitiveness of goods is increasing in the Russian Federation;

• Priority of development of energy efficiency, space technologies of telecommunications, strategic, and information technologies, nuclear technologies;

• providing innovation activities with integrated support measures, regardless of the organizational and legal form and form of ownership;

• Favorable conditions are created for the modern technological level in the industries of the Russian Federation (Data from the Grant legal information portal);

The organization of the state regulation of innovations should ensure that the opinions of all directly or indirectly engaged structures are taken into account and at the same time create conditions for the concerted adoption of measures to stimulate innovation.



Figure 2. Regulation in science and innovation. (Mukhamedyarov, 2004)

In the period 2006-2011 in Russia, nine state funds were established to support innovation, the total volume of assets at the end of 2011 amounted to about 600 billion rubles. However, the efficiency of state-owned venture companies can not be estimated highly enough. There are still problems of accessibility and insufficient volumes of investing resources. Let us consider, for example, RVC (Russian Venture Company), for 2011 the total volume of the company's investment amounted to 2.3 billion rubles (for comparison in 2010 - 2.9 billion rubles, in 2009 - 2.1 billion rubles.) Considering that the assets of the fund in 2011 amounted to a value of 34.5 billion rubles (Russian venture company), it turns out that RVC holds 32.2 billion rubles as non-working assets.



Figure 3. Ratio of public and private sector expenditures on research and development. (Tables and diagrams list).

When analyzing the above data, we can conclude that in Russia, unlike the foremost foreign economies, innovative developments are financed more by the state. The reasons that large state venture funds in Russia show low activity in financing innovative projects in the early stages are high costs for the project's expertise, since in the conditions of weak development of information and consulting institutes of the innovation infrastructure, the cost of this expertise in our country is much higher than in developed countries. The second reason is trivial: unwillingness to take high risks associated with financing innovative projects. And, in addition, the number of truly innovative projects, due to the underdevelopment of the industrial and technological institutions, remains very limited (Shkuta, 2012; Shashkova, 2018). In spite of the fact that the state is active in financing fundamental and applied research with help of various institutions, the activity of the private sector in financing innovation in Russia is not increasing. Meanwhile, the world practice proves that it is the business structures that play a key role in the development and implementation of innovations. The share of corporate expenses on research and development in national research and development expenditures exceeds 65%, and on the average in the countries of the Organization for Economic Cooperation and Development (OECD) approaches 70%. Structure analysis of investment sources in innovation activities in Russia revealed that in the last 10 years share of the budget funds in the structure of expenditures on research and development averaged 60%. About 2.5% of the funds were the state off-budget funds. As a result, public funding is 2/3 of all sources. The

private sector accounted for from 28% in 1995 to 21.4% in 2010 (Data from the Federal Service for State Statistics (Rosstat).

This situation is explained by a number of factors. Firstly, it is a lack of own funds, which is typical for the majority of domestic enterprises implementing innovative projects. Currently, in Russia, only large companies with billions of turnover can afford to invest in research, which is done according to the company's main business profile: oil extraction, metallurgy, etc. However, their share is also low, the total volume of all private investments is estimated by experts to be about 10% of Gazprom's profit. In this regard, small and medium-sized innovative business attempts to attract external financing, which in Russia is rather difficult, even for a highly profitable innovative project.

Secondly, low activity of the business sector in financing research and development in Russia substantially depends on the weak development of the public-private partnership system in implementation of innovative projects by business: share of companies that receive the budget financing for these purposes in Russia is only 0.8% (Data from the Federal Service for State Statistics (Rosstat). Insufficient support is provided for building a small innovative business. The volume of the Small Business Innovation Research (SBIR) Program and the Small Business Technology Transfer (STTR) Program in the United States is \$ 2 billion (Data from the US small business administration), in Russia the "innovative" component of the federal program for supporting a small innovative business is equivalent to about \$ 67 million. The size of the Foundation for Assistance to Small Innovative Enterprises in Science and Technology is approximately \$ 200 million. Analysis of the experience of developed and developing countries in building national innovation systems allowed us to conclude that the state innovation policy in Russia should be based on the following fundamental principles, in particular: the principle of regional clustering of the Russian economy and the principle of creating and developing an institutional innovation infrastructure.

4. DISCUSSION

A key to developing regional innovative clusters is the use of a reproductive approach to the construction of a clustered institutional regional innovation infrastructure. This approach consists in selecting regional growth points by the state and providing stable regional institutional innovation environment for their development; that is, the consistent formation of institutions system, including financial, personnel, marketing, engineering and manufacturing, informative and consulting. However, in spite of the fact that the state announced the line of innovative development, the state innovation policy in Russia remains imperfect. In the structure of expenses for 2012-2014 significant increase in spending on national defense was planned. In 2012, their value amounted to 1 trillion 853 billion rubles or 3.3% of

GDP; these costs will increase by 26% and 17.5% respectively in 2014. In total, until 2020, 20 trillion rubles are planned for national defense; while it is planned to send a half the money to finance science and innovations by the state (Shkuta, 2012; Shashkova, 2018). Thus, the task of increasing military power and the arms race, and not the race of innovative technologies, which has long been practiced by developed countries, remains a priority for modern Russia. However, the experience of the USSR already proved that the policy of building military power is a drag, not a catalyst for economic development of the country. Therefore, it is necessary to carry out demilitarization, first, reduction of power structures and the decrease of their pressure on business.

5. CONCLUSION

Thus, the main financing of investment in Russia comes from the state regulation. While in Western countries, the emphasis is on business. Currently, the business makes a relatively small contribution to investment because of the risks of profit loss, as well as in view of sanctions imposed on Russia. To overcome this situation, it is proposed to reduce armament expenditures and to allocate the received finance to the development of the investment climate, which will give a boost to the development of innovations by business.

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