TRANSFORMATION OF APPROACHES TO THE FORMATION OF REGIONAL INNOVATION POLICY

Olga VLADIMIROVA,
Professor of Plekhanov Russian University of Economics
Svetlana ILIYASHENKO
Associate Professor of Plekhanov Russian University of Economics

Abstract

Innovative development is considered as one of the directions providing a high level of competitiveness. Creating conditions for such a format of economic functioning is carried out within the framework of innovation policy. Its formation and implementation at the regional level are defined by the framework of the federal level, as well as by external and internal factors. The need for a timely response to the changing environment, the definition of relevant priorities determined the purpose of the study - to show the difference in approaches to the formation of innovation policy in modern conditions, taking into account the experience of its construction and implementation. The materials of the article, based on the analysis of different periods, show what normative-legal acts establish goals, objectives, tools, program activities and other parameters that correspond to the current situation. On the example of Krasnoyarsk Krai the transformational processes of innovation policy formation are illustrated, reflecting the correlation of the regional process with federal priorities and taking into account the subject specificity.

Key words: innovation policy, region, strategy, concept, technological sovereignty.

Regulation of innovative development is carried out through the implementation of innovation policy, the main provisions of which are formulated in the following types of documents:

– strategies and concepts of innovative development;

– laws on innovation activities;

– targeted programs for the development and support of innovation activities;

– regulations on specialized bodies responsible for the implementation of regional innovation policy and other normative acts.

The formation of innovation policy is determined by various factors, including the level of socio-economic development, the state of the scientific sphere, competitiveness and others. The purpose of the study is to identify the specifics of approaches to innovation policy formation at the sub-federal level, taking into account the changing external and internal environment. To achieve this goal, it is necessary to consider the experience of formation and implementation of innovation policy of the past period and to characterize the current state.

The Strategy for Innovative Development of the Russian Federation for the period until 2020 [1] was adopted in 2011 and developed on the basis of the provisions of the Concept of long-term development of the Russian Federation for the period until 2020 in accordance with the Federal Law 'On Science and State Science and Technology Policy' [2].

The Strategy defined the goals, priorities and instruments of the state innovation policy. The goal of the Strategy was to transfer the Russian economy to the innovation path of development by 2020 and was defined by a number of target indicators. Both organizational, methodological, financial and other components were included in the List of main directions of implementation of the Strategy for Innovative Development of the Russian Federation for the period until 2020. Implementation of the Strategy included 2 stages. The first stage of the Strategy implementation (2011–2013) was to address the task of increasing the receptivity of business and economy to innovations. The second stage (2014–2020) was to increase the share of innovation expenditures in the national budget. Achievement of the Strategy goals was based on the state programs of

the Russian Federation 'Development of Education', 'Development of Science and Technology', 'Economic Development and Innovation Economy', 'Information Society (2011–2020)', as well as measures aimed at stimulating innovation activity within the framework of other state programs.

This document has now expired. However, consideration of statistical data shows that the stated objectives have not been fulfilled. As the main factors and reasons most analysts and scientists (Zeldner A.G., Osipov V.S., etc.) point out the following:

instability of financing. The 'Concept of long-term socio-economic development of the Russian Federation for the period up to 2020', which preceded the Strategy, states that the share of budget expenditures on fundamental research and promotion of scientific and technological progress should be not less than 0.7% of GDP. An analysis of the data characterizing the actual volume of budget funds allocated shows that this government target has not been fulfilled: thus, the allocations for civil science in 2011 were 0.53%; in 2013 - 0.6% of GDP; in 2015 - 0.53% of GDP; in 2016 - 0.47% of GDP; in 2017 - 0.41% of GDP; in 2018 - 0,39%;

financing of internal costs. In the target indicators of implementation of the Strategy for Innovative Development of the Russian Federation for the period until 2020, it was noted that domestic expenditures on research and development should amount to 1.5% of GDP already in 2013, and from 2016 to 2020 they should grow from 1.9% to 3% of GDP. In reality, in 2013 the share of domestic expenditures amounted to 1.03% of GDP, in 2016 - 1.1%, in 2018 - 1% of GDP. It should be noted that on average in the EU domestic costs are 1.95% of GDP, and in the OECD - 2.38% of GDP;

investment component due to limited own sources and high interest rates on credit resources. Thus, the average annual interest rates on loans in 2018 in China were 4.35%, in the USA 3.9% (2017), in Japan 0.99%, in Russia – 8.8%;

patent component. The decline in patent activity leads to an increase in imports of patents for inventions. The analysis shows a significant excess of patent imports over their exports. Among the Russian reasons: lack of demand for innovations, weak tax incentives and financial support, reduction in the number of researchers. The number of researchers per 1 million inhabitants in 2010 was 3094 people, in 2015–2921 people, in 2018 – 2764 people;

the impact of taxation. The tax system acts as a stimulating factor in attracting investment in the innovation process, which in the current period of time is becoming a global trend. In 2018, Ernst & Young published a report on tax incentives for R&D investments. Thus, Austria increased its tax subsidies by 2% – up to 14%. China increased its tax deduction from 50% to 75% of R&D expenditure. In Denmark, 100% of expenses are deducted from the tax base of companies. In Russia, tax incentives are of a point character [3].

The new macroeconomic context shaped by the COVID-19 pandemic in 2020-21, geopolitical conflicts in 2022-24, sanctions measures, etc., has created conditions for revising approaches to the formation and implementation of a new format of innovation policy in Russia. The general trend of the last thirty years has been the globalization of the economy and the integration of Russian enterprises into international technology chains. The processes of integration into the world markets ensured the growth of exports and the inflow of investments, supply of equipment and technologies. The above phenomena significantly limited the creation and the economy's need for domestic scientific knowledge and advanced technological solutions, forming dependence on foreign technical solutions, equipment, software.

Currently, the priorities of innovation and technological development, goals and main directions of modernization and innovative development of the Russian economy are defined in the following documents:

– decree of the President of the Russian Federation No. 474, dated 21 July 2020, 'On the national development goals of the Russian Federation for the period until 2030' [4];

– strategy for Scientific and Technological Development of the Russian Federation, approved by the Decree of the President of the Russian Federation No. 642, dated 1 December 2016 [5];

– concept of technological development for the period until 2030, approved by the Order of the Government of the Russian Federation No. 1315-r, dated 20 May 2023 [6];

– federal Law No. 478-FZ, dated 4 August 2023, 'On the Development of Technological Companies in the Russian Federation' [7] and a number of others.

In order to ensure technological development and achieve technological independence, a fundamental strategic document covering the entire space of technological development - the Concept of Technological Development until 2030 - has been developed. The purpose of technological development is to create technological conditions for socio-economic development of the country in accordance with the national development goals of the Russian Federation until 2030.

Three main tasks are aimed at achieving the goal of technological development:

– to ensure national control over the reproduction of critical and cross-cutting technologies;

– to transition to innovation-oriented economic growth, strengthening the role of technology as a factor of economic and social development;

– to provide technological support of sustainable functioning and development of production systems.

In order to achieve the task of forming sustainable technological sovereignty, ensured by its own lines of technology development and implementation of projects in priority sectors of the economy, it is necessary to fulfil two key conditions:

– in the field of critical technologies – to establish and maintain technological parity with leading countries;

– in the field of cross-cutting technologies – to achieve technological leadership through the creation of scientific and technological reserves and the potential for their commercialization [8].

At the federal level, the work to update the Strategy for Scientific and Technological Development of the Russian Federation began in 2023. Within the framework of the Concept of Technological Development of Russia, new tasks of technological development have been formulated for the constituent entities of the Russian Federation, including: formation of scientific and production clusters, deployment of the necessary infrastructure, support for small and medium-sized technology companies, support for the development of various forms of combining scientific and technological and production activities, implementation of their own regional scientific and technological programs, creation of innovative scientific and technological centers and other forms of preferential treatment, as well as the development of regional innovation policy.

Regional innovation policy, as well as the state science and technology policy in general, is closely connected with structural, industrial, investment and other types of policy of the state and its bodies, called in accordance with their main economic functions to take care of the creation of the structure of economic systems and institutional conditions for their functioning and development.

The formation of regional innovation policy corresponds to the main vector of the national state policy. In the Russian Federation the formation of regional innovation policy as an element of the national innovation system is based on the principles of the state regional policy:

– in the economy of any country there is a specificity of conditions and, consequently, mechanisms of formation and development of regional economic complexes;

– the process of regions' entry into the market in its content and mechanisms of implementation is not similar to the process of economic entities (enterprises and organizations) entering it.

In the first decades of the current century, the regions actively developed normative acts, which reflected the goals and objectives of innovative development, taking into account their specifics. The level of development of the legal field on the example of the subjects of the Siberian Federal District as of 2015 is illustrated in Table 1.

Table 1

Innovation legislation of the Russian Federation and the subjects of the Siberian Federal District as of 01.01.2015

Region	Legislation in the field of socio-economic development		Law regulating the innovation sphere	By-laws regulating the innovation sphere		
	Strategy	Program	Law	Concept	Program	Strategy
Russian Federation	+	+	–	–	+	+
Siberian Federal District	+	+	–	–	–	–
Republic of Altai	+	+	–	–	–	–
Republic of Buryatia	+	+	+	–	+	–
Republic of Tyva	+	+	+	+	+	+
Republic of Khakassia	+	+	+	+	+	–
Altai Krai	+	+	+	–	–	+
Trans-Baikal Krai	+	+	+	–	+	–
Krasnoyarsk Krai	+	+	+	–	+	+
Irkutsk Region	+	+	+	+	–	–
Kemerovo Region	+	+	+	+	+	–
Novosibirsk Region	+	+	+	+	+	–
Omsk Region	+	+	+	+	–	–
Tomsk Region	+	+	+	+	+	+

By now, the documents have expired, and, within the framework of the orientation of national interests and priorities to ensure scientific and technological sovereignty, the normative-legal field is being transformed in accordance with the current tasks. However, it should be emphasized that innovation remains the basis for ensuring sovereignty.

The federal authorities exert their influence through specialized structures, the list of which is regularly changed to reflect current circumstances (e.g. the Government Commission on High Technology and Innovation established in 2008 was abolished in 2012, the Commission on Modernization and Technological Development, the Commission on Scientific and Technological Development of the Russian Federation, etc.). They are endowed with special powers to increase the efficiency of interaction between innovation actors. Various relevant ministries within the structure of the Government of the Russian Federation are directly involved in boosting innovation activity: the Ministry of Economic Development, the Ministry of Finance, etc. The role of public organizations is significant.

A significant role is played by public organizations created at the federal level (Chamber of Commerce and Industry, All-Russian Public Organization of Small and Medium Business 'Opora Rossii', etc.). At the regional level, innovation activity is regulated by the regional administration, the Legislative Assembly or Duma of the region, and regional public organizations.

The implementation of management functions at the present stage involves the use of a wide range of management methods and tools. The list of tools provided for in federal legislative acts (in particular, federal target and departmental programs, tax incentives, public-private partnership) is actively used in the regions and is supplemented by others - regional target programs, technoparks, etc.). In this block, a clear hierarchy of strategic planning documents defining the state policy in the sphere of science and innovation is a mandatory condition. Regional documents of innovative development should be interconnected with state programs and strategic documents.

The specifics of innovation activity predetermine the presence of modern innovation infrastructure institutions, the scale of which largely depends on the area of their functioning: in particular, many development institutions open branches in the constituent entities of the Russian Federation.

Regions realize their advantages by opening special economic zones of technology innovation type, industrial and production and others, logistics parks and technoparks, business incubators, technology transfer centers, etc. The task of management bodies in this area should be to create a balanced infrastructure covering all areas of innovation activity, sufficient in terms of quantitative and high level in terms of qualitative parameters.

The most important element of the mechanism of formation and implementation of innovation policy in the regions is integrated institutional forms that unite subjects of different spheres of activity. As an illustration: in Krasnoyarsk Krai, an example of integration of interests of the public, business, government, and science is the Council for Innovative Development under the Governor of the Krai.

The regional legal and regulatory framework governing the issues of scientific and technological development and innovation is correlated with the region's development goals. The Strategy for Socio-Economic Development of the Krasnoyarsk Krai until 2030 sets the goal of transforming the Krasnoyarsk Krai into a global competitive center of industrial innovation with a high share of high-tech industries and the economy of a new technological mode [9].

The Law of Krasnoyarsk Krai № 13-6629, dated 1 December 2011, 'On scientific, scientific-technical and innovation activities in Krasnoyarsk Krai' [10] is aimed at stimulating economic growth and competitiveness of the Krai's economy on the basis of development and effective use of specialization and cooperation of subjects of scientific, scientific-technical and innovation activity, coordination and regulation of innovation activity by the public authorities of the Krai, local authorities with the active participation of professional, public and other organizations and their associations.

Actualization of the goals and objectives of innovative development formulated in the completed Strategy for Innovative Development of the Krasnoyarsk Krai for the period until 2020 'Innovative Krai - 2020' (2011) [11] is proposed in the draft Concept of scientific and technological development of the Krasnoyarsk Krai for the period until 2035. The project defines the creation of conditions for the concentration of the region's science and technology sector in areas that provide solutions to the challenges of socio-economic development and technological sovereignty significant for the Krasnoyarsk Krai and Russia as the main goal.

The formulated provisions are based on the sectoral technological needs of the region's economy (and correspond to the priorities of the Strategy for Scientific and Technological Development of the Russian Federation reflecting the needs of the region's economy), including:

– transition to intensive development of the region's industry;

– increasing the share of high-tech industries and sectors that provide breakthrough and pulling effects for the regional economy, accelerating the introduction of new equipment and technologies into production;

– increasing food security in the region;

– overcoming demographic and other social problems in the region;

– increasing transport connectivity of the region;

– technological support of socio-economic development of the Krai [12].

The model for achieving the main goal and the set objectives is to build cooperation between the participants of scientific and technological development processes around individual 'points of growth': from meeting the needs for technological modernization of basic industries and social sphere to creating conditions for entering new technological markets that exceed the scale of the region's economy, relying on the competences of universities and scientific organizations of the region with the participation of external partners.

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