
The role of innovation clusters in Russia for investment attractiveness development and activation of foreign economic integration

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Abstract: The actual problem of creating the most effective system of financing innovation activities at the current stage of cluster policy implementation in Russia is of particular importance and requires close attention. Foreign direct investment contributes to the activation of the investment process in the national economy, which indirectly leads to this process quality and sustainability increase. Besides, under certain conditions, foreign direct investment can contribute to the economy diversification. The competitive pressure created by foreign firms contributes to increased productivity, improved product quality, and the introduction of new management practices. It is worth noting that in times of crisis and political instability, innovation clusters are the main link of communication with foreign investors. Mainly, regional investment strategies based on the cluster approach have a positive impact on investment attraction from large investors. However, investments in individual large enterprises were not as constructive as expected. It is quite logical to assume that the consequences of the current shortage of innovation financing will be uneven. The year 2020 was quite difficult for business not only in Russia, but also around the world. Innovative business was no exception, although the development and implementation of new technologies did not stop, and in some areas even accelerated. The analysis and generalization of the specialized literature on the subject under consideration allows us to come to the conclusion that it is necessary to assess in more detail the problems of Russian cluster policy and the investment attractiveness of innovative clusters.

Keywords: innovation, cluster, investment attractiveness, foreign economic integration, cluster approach, innovative development, cluster structure, investment.

INTRODUCTION

Today it is impossible to imagine the integral development of any state without a national innovation system development, which is an integral part of the economy continuous development provision. Since the world market for high technology products is growing 2.5 times faster than the world economy, one can state the effectiveness of the current innovation system and its inherent processes of innovation creation and their distribution.

One of the tools for an effective innovation system development is innovation clusters, which are characterized by dynamic self-development and successfully perform the function of a growth point for the economy of the region in which they are located. Besides, the creation and development of innovative territorial clusters is undoubtedly a fairly effective mechanism for attracting foreign direct investment and enhancing foreign economic integration.

Thus, we can confidently talk about a direct relationship between the number of clusters (industrial and innovative) in the country and the opportunities during the creation and promotion of innovations. This trend is confirmed by the relationship between the number of clusters and the country innovative development index.

Innovation clusters represent an effective means of rapid development of modern technologies in certain directions. This result is achieved through a comprehensive combination of theoretical and scientific and practical developments in the diversified production of the latest goods and services within a relatively small geographic region. Moreover, the concentration of efforts in backward sectors guarantees progress and economic effect, provided that there is a positive result of “point” successes. In other words, a real breakthrough takes place in certain areas.

The purpose of this article was to study the role of innovation clusters in Russia during the formation of investment attractiveness and activation of foreign economic integration.

Understanding the relevance of the problem of an effective system development for innovative activity financing at the present stage of cluster policy implementation in Russia prompted us to study the problem in more detail.

RESEARCH METHODOLOGY

The theoretical and methodological foundations of this study are based on the general scientific methodology of the institutional theory main provisions, the achievements of leading foreign and Russian scholars in the development of innovative cluster formations.

To achieve this goal, the study used a systemic and interdisciplinary approach to the processes under study, the method of logical, structural, system-functional and comparative analysis unity, as well as general scientific methods such as analysis and synthesis, deduction and induction, comparison, generalization.

STUDY RESULTS

Today, Russia is the 43rd one out of 141 countries in the ranking by innovation and global competitiveness index, which clearly demonstrates the weakness of its innovation system. This is explained by the fact that innovation clusters have been the object of state economic policy in Russia relatively recently, for about 10 years, but they have been developing most actively only in recent years.

In 2012, the Ministry of Economic Development of the Russian Federation, in accordance with the instructions from the President and the Government of the Russian Federation, launched the program to support innovative territorial clusters (ITC). According to the competition results, 25 clusters were selected out of 94 applications, which were assigned the appropriate status by the Order of the Government of the Russian Federation No. DM-P8-5060 (August 28, 2012). In subsequent years, this list was expanded to 27 clusters, and nowadays, only 11 pilot innovative territorial clusters have been identified. These clusters are characterized by various forms of territorial organization, and also have different proportions of scientific, technical and production activity ratio in the structure of their employment. In fact, there was no significant reduction in the number of clusters, since individual clusters have been united into consortia [1, 4, 8, 21-23].

All clusters suggest a synergistic effect. That is, the potential of one cluster significantly exceeds the sum of the potentials of its individual components. This is a natural result of effective cooperation between various cluster members, which allows using the capabilities of a partner, proximity of the manufacturer and the consumer, etc. Thus, the cluster combines intelligently two processes: competition and cooperation (Figure 1).

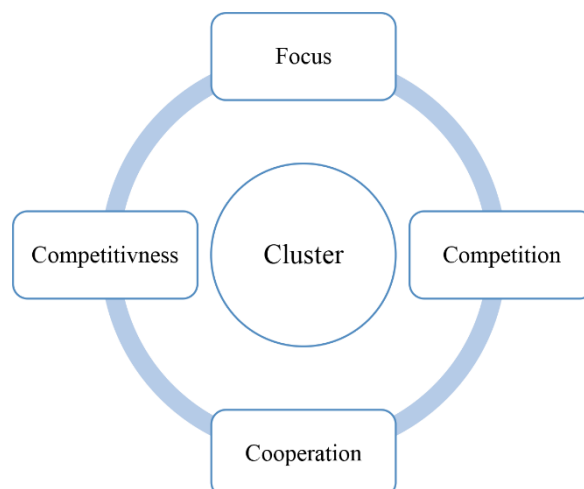


Figure 1 Cluster as a set of transformations

Thanks to the systematic exchange of ideas, information, experts, technologies, the joint use of common resources and opportunities, cluster members gain significant benefits, and hence development. Today, there is a

widespread point of view that the regions on the territory of which clusters are formed become the undoubted leaders of economic development, and these regions determine the competitiveness of national economies [2, 5, 19, 24]. Accordingly, the competitiveness of different countries should not be viewed from the competitiveness of individual firms, but only through the competitiveness of clusters.

The functions of clusters in almost all areas support the functions of the regional system. So, successfully functioning clusters increase the competitive position of the region, both in all-Russian and in the international arena, thereby contributing to the economic security provision of the region. Due to their innovative component, clusters promote the region in the national course of the economy post-industrial transformations. The network nature of cluster interactions also contributes to regional management efficiency increase. Competitive and strong clusters undoubtedly create advanced development zones for the regional economy.

The mechanisms supporting the development of clusters in Russia provide for the use of mainly financial measures. The main part of public funds, aimed at cluster support, is used for the development of innovative, educational infrastructure and to support the activities of specialized cluster organizations (especially in the field of staff training and participating organization product promotion to domestic and foreign markets). However, at the same time, the direction of support remained completely unclaimed, which allows consulting cluster members on the development of investment projects in the innovation sphere. Innovations appear regularly and at different levels in clusters, but it is the formation of innovative clusters that makes a significant contribution to the capitalization of territories [3, 7, 10-11, 16].

An innovation cluster is a group of related specialized companies in various industries, scientific and government organizations, carrying out joint activities despite competition (Figure 2). Moreover, they are concentrated in one geographic area.

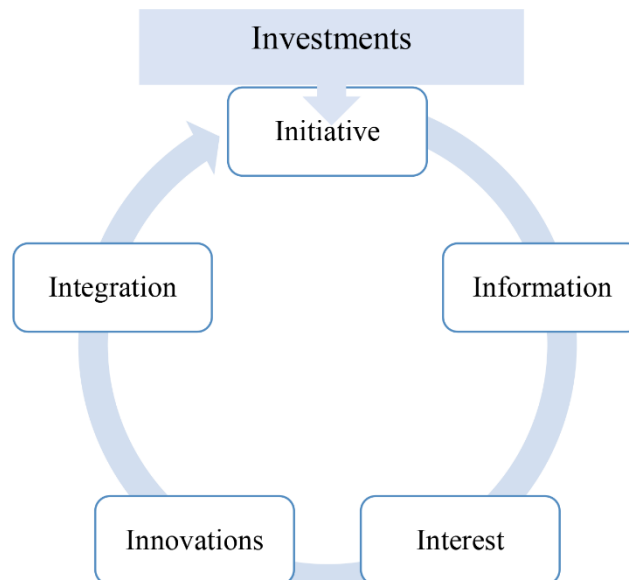


Figure 2 Innovation cluster structure

The creation of such innovative associations is necessary for the continuous development and implementation of innovative technologies and solutions, which undoubtedly leads to continuous improvement of products and services. The formation of innovation clusters depends entirely on the initiative of the state and private enterprises. The presence of a powerful research core (scientific centers of the Russian Academy of Sciences, universities, research institutes, research centers) is a fundamentally important factor for the sustainable development of an innovation cluster, which covers a fairly wide range of fundamental and applied research that can ensure the development of innovative products.

Today, innovation clusters in Russia are formed primarily in the environment of already established large scientific and research and production centers by their embedding in the context of the modern innovative development of the Russian economy.

Such a meaningful concept as innovation is often difficult to analyze in a positive way directly. It is not enough just to say about the number of companies or to discuss government initiatives in order to get a general idea of the current situation, and to predict further actions to stimulate innovative activity [6, 12, 18]. To do this, it is necessary to identify the strengths and weaknesses of each region, consider all the factors that contribute to the development of innovative potential, or vice versa, restrain it. Correct information support will be the key to an adequate assessment of the state certain effort effectiveness.

Let us consider the main tasks of various types of innovative territorial cluster development in Russia and the priorities of their state support. So, the tasks of clusters formed on the basis of "anchor" high-tech enterprises are the development of innovative, transport, production and energy infrastructure. The next task is to overcome dependence on government orders, technological backwardness and implementation of the "open innovation" model. Besides, it is important to search for new areas of existing competence application, as well as to stop focusing on traditional sales markets with low growth rates [9, 17].

The clusters formed on the basis of leading research institutes and educational centers set their tasks to form a stream of projects created by the graduates of universities participating in the cluster. The most important areas are both the access to the world level of competitiveness in the field of education and science, and the development of innovative entrepreneurship for youth. Another challenge is to increase the share of world-class breakthrough research and development.

Today, a variety of mechanisms are used to stimulate innovation [20, 26]. One of the most effective is a well-thought-out innovation cluster policy, which considers the use of the following tools:

- strategies and programs for innovative development of the regional, interregional and interdepartmental levels;
- obligatory state support of scientific research and applied developments result commercialization;
- active stimulation of demand for cluster products;
- ensuring a favorable business climate for comfortable activities of innovative-active industrial enterprises. For this, it is proposed to reduce the tax burden, financial support for ongoing cluster projects; decrease in the degree of public administration, etc.;
- close observation and regular monitoring of innovative activity development;
- unification of scientific, educational institutions and organizations of innovation infrastructure, as well as industrial structures;
- development of strong partnerships between government, business and science;
- complex development of infrastructure and communications;
- assistance in competent human potential development, expressed in the system of training and retraining of personnel, assistance in the social development of personnel.

It should be noted that the introduction of innovative clusters in Russia encounters many different problems on its way, both general and specific for the country economy. Quite predictably, common problems include a significant shortage of financial resources, a lack of experienced qualified personnel in all areas, a low production culture, and a weak material base. In this regard, it is quite often possible to observe a situation when regional authorities call absolutely any association of enterprises a cluster in order to report on the creation of a new cluster on their territory.

According to the experts, more specific problems in the formation of innovation clusters are the following: the lack of objective market monitoring, its scale, commodity, territorial and corporate structure. Separately, one should dwell on such problems as inconsistency in the actions of the authorities of different constituent federation entities and the unacceptability of limiting its borders to the borders of a constituent entity for certain clusters. Situations are not uncommon when the need to develop competition between supplier companies is completely ignored, as well as the importance of cooperation between consumers and suppliers within the same technological chain [10, 14, 15, 25].

The innovation cluster is seen as the optimal environment for investment and is able to take on the solution of some important government tasks, such as the creation of new jobs and improvement of socio-economic indicators.

The indicators characterizing the investment attractiveness of the cluster and the territory of its base are the assessment of the cluster infrastructure readiness to make additional investments, the availability of mechanisms for attracting and supporting investments in the region where the cluster is located. At the same time, according to this document, one of the cluster development results is the strengthening of the cluster competitiveness, including those associated with the possibilities of completing the chain of the cluster added value development by attracting foreign direct investment.

Appealing with the actual data for 2020, when there was an unprecedented recession in the global economy, we have every reason to say that the current crisis has dealt a tangible blow to the innovation sphere. In 2018, spending on scientific research and various kinds of development increased by 5.2%, which significantly exceeded the growth rate of world GDP, and the use of intellectual property objects reached the highest level. It should be noted that this has been facilitated by the strong political will to encourage innovation that has emerged in recent years. And this, in turn, is a promising trend for the diffusion of innovations outside the limited circle of leading economies and clusters.

Today, the main focus is primarily on business support (mainly through loan guarantees). That is, these measures are not specifically aimed at financing innovation and the government has not yet prioritized innovation as the part of new measures to stimulate the economy. The only exception is healthcare. Lots of funds are directed in this sector, as in many other countries. Please note that investments are attracted not only for ready-made products, but also for their development.

In addition to the healthcare sector, 2020 had a real investment activity boom in online educational services and logistics, which cannot be imagined today beyond digitalization processes.

CONCLUSIONS AND OFFERS

The formation of the cluster system in Russia as a whole, its main focus on economic efficiency and innovative specialization, starts to have a significant impact on the development of Russia development strategy. However, it should be understood that the system of Russian innovation clusters will be most effective and in full demand only if large development projects are implemented on a national scale. And, first of all, there should be an opportunity for this to use the country own scientific, industrial and human resources.

It is necessary to strive to launch the introduction of those technologies that are already being created, to scale them throughout the country rapidly and enter the international market with these products. Investors create a better version of the future for themselves and for the country as a whole.

Large-scale implementation of the set goals in the innovation sphere is possible if the formation of an "innovative person" takes place who is able to use the achievements of science and technology fully, who is focused on creating innovations and their introduction into all spheres of public life. In other words, innovativeness should be in thinking, and then even the most daring ideas based on technological modernization of key sectors will be implemented and will determine the role and place of Russia in the world economy.

Conflict of interest

The authors declare that they have no conflicts of interest.

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