Andrienko R.V.**The role of an industrial cluster in increasing economic competitiveness of Rostov Region***FSAEI of HE Southern Federal University
(Russia, Rostov-on-Don)**doi: 10.18411/lj-06-2020-135**idsp: ljjournal-06-2020-135***Abstract**

The article considers an industrial cluster entity as an innovative platform for a national innovation system development; emphasizes the importance of creating an innovative industrial territorial cluster; analyzes its role in the sustainable regional economic development; emphasizes the necessity to adapt Federal State Programs to the specifics of the regional level in order to effectively plan and develop innovative cluster formations.

Keywords: innovative industrial territorial cluster, cluster policy, cluster potential, regional economy, cluster development.

Аннотация

В статье рассматривается индустриальное кластерное образование как инновационная платформа для создания базиса национальной инновационной системы; подчеркивается важность создания инновационно-промышленного территориального кластера; анализируется роль данного кластера в устойчивом экономическом развитии региона; акцентируется необходимость адаптации федеральных государственных программ к специфике регионального уровня в целях эффективного планирования и развития инновационных кластерных образований.

Ключевые слова: инновационно-промышленный территориальный кластер, кластерная политика, кластерный потенциал, региональная экономика, кластерное развитие.

Currently, the concept of “cluster policy” is being adapted in the Russian Federation to the specific Russian conditions in the sphere of the state power, science, education, business, and society. Creation and development of innovative territorial industrial clusters are aimed at intensifying the enterprises’ mechanisms of economic growth at the federal, regional and municipal levels.

The main features of modern cluster formations are: the increase of the innovative activity of small businesses in the field of education and entrepreneurship; interaction of cluster components with each other; the usage of individual partnership tools; the cluster functioning as a part of a single market mechanism at macroeconomic, microeconomic and mesoeconomic levels, the self-independent right to adapt and denote new strategies of development.

Based on the analysis of government Strategies and Regulations that determines the socio-economic development of the Russian Federation [3], it can be concluded that the State needs to take significant measures to reorient the national economy from resource-based to manufacturing-based. Therefore, there are financial contributions planned to be made from extrabudgetary funds for the development of the infrastructure of the future innovation system, which will serve as the basis for the economy reorientation to reach the world level of innovative development [7]. In this regard, an important task of strategic planning is the adaptation of Federal Programs at the regional level in order to effectively plan and implement innovative activities, in particular, the development of innovative cluster formations aimed at sustainable development of regional economies.

Like any other attractive methodology for innovative development, clusters can bring the results only when they are included in the wider context of regional development

strategies. From the market entity point of view, the performance of a sectoral regional cluster can be assessed by such cluster indicators as profitability, innovative focus, financial flows, etc. [3, 4, 8]

So, in the Rostov region, the main directions of innovative activity are contained in the “Fundamentals of the state policy of regional development of the Russian Federation for the period until 2025” [3], the Decree “On the approval of the Strategy for the socio-economic development of the Rostov region for the period until 2030” [6] and in the “Strategy for the socio-economic development of the Rostov region for the period until 2030” [6]. The main goal of implementing the cluster policy of the Rostov Region is to ensure high rates of economic growth and diversification of the regional economy by increasing the competitiveness of enterprises, equipment suppliers, specialized production and services, research and educational organizations that form territorial clusters [2, 5].

In Russia clusters are most likely to be allocated within the administrative territorial units and managed by the local authorities. The cluster approach was initially used to solve the problems of competitiveness of groups of enterprises, but over time it began to be applied to a wider range of approaches to organize cluster formations, including the monitoring of competitiveness of the state, region, or industry; the development of a national and regional industrial policy strategy; the formation of regional economic development programs; stimulation of innovation; and improving the interaction of large and small businesses.

Today, cluster formations in industry are analyzed from the perspective of the world level of innovation and competitiveness development, the world dynamics of growth in production volumes and high scientific and technical potential of research and educational organizations.

In the Southern Federal District there are 8 currently operating clusters and 2 cluster initiatives being implemented [2]. One of the innovative technological clusters is the Southern Constellation, which includes PAO Taganrog Scientific and Technical Complex named after G.M. Beriev, OAO Granite, OAO Azov Optical Mechanical Plant, OAO Almaz, Southern Federal University, OAO Regional Development Corporation [2].

The predominance of clusters in the economy of any state, rather than isolated firms and industries, reveals the importance of understanding the nature of competition and the role of the territorial location of production for competitive advantage. As a manufacturing-based cluster has been formed in the region, it begins to attract other market players to this territory, including the best educational and other services as well as the best human resources in the field of innovation. Such clusters help to improve the region's image which promotes the brands of cluster members. Thus, clustering optimally combines the interests of the territory and the interests of enterprises. The territorial binding of the cluster does not mean the isolation of the industry in the territory within which the cluster-forming enterprises are located. Clustering mobilizes the resources to enhance the competitiveness of national industries at the international level. Western experience shows that better and faster results can be obtained if the cluster formation does not depend on the market and other circumstances, but becomes the subject of a focused activity of all interested parties. In this regard, the state planning for the cluster development, including the innovative component, is very important.

There is a sufficient base for sustainable development of the innovative industrial territorial cluster in the Rostov region: the industrial enterprises of the manufacturing and mining sectors, production of electricity, gas and water, educational and research organizations, a number of higher educational institutions, including Southern Federal University, Don State Technical University, Rostov State Medical University, Rostov State University of Economics, Rostov State Transport University and others [2].

The strategy of innovative regional development should be based on a clear plan for the development of specific industries, attracting investments, achieving specific quantitative indicators, and also on a systematic planning approach that allows taking into account the

macroeconomic indicators of the country. In order to enhance the industrial development of the region and the formation of cluster policy, it is necessary to simplify access to energy resources. Rostov Region has a large volume of energy generating capacities that exceed the needs of the regional economy. However, due to organizational and economic reasons, it is hard for industrial consumers to access them. This is a serious barrier to economic growth and, in fact, a kind of monopoly tax for the region's industry.

The critical depreciation of fixed assets, the use of outdated technologies, and the established infrastructure support system limit the ability to manufacture products that are competitive in price and quality. In general, the manufacturing enterprises usually have unused production facilities and engineering infrastructure and this inhibits the intensification of investment activity in the region. Thus, enterprises need to develop a plan to modernize the main assets and implement the advanced technologies within a single territorial cluster using the transfer tools for new developments and technologies.

In order to develop innovative territorial industrial clusters in such industries as engineering and metalworking in the studied region, it is necessary to create the development programs of not only regional level, but also the district level, using the scientific planning methods: the systemic approach and program-oriented management. In this regard, O. Chernova aptly notes that "consideration of the region's innovative potential as an independent object of research does not mean its separation from the aggregate (integrated) potential of the region. Moreover, it involves consideration of the relationship with the capabilities of scientific, technical, industrial, technological, human, financial and economic potentials" [1, 157].

The development of innovative cluster formations actualizes the creation of innovation support programs not only for individual enterprises and industries, but also for the system of relationships between suppliers and consumers, between end consumers and manufacturers, between manufacturers themselves and government institutions, between business entities and the scientific and educational spheres.

1. Chernova, O.A. (2008). The content of innovative processes in the context of regional development, Bulletin of Tomsk State University. No. 316, Pp. 155-160 (in the Russian language).
2. Cluster registry of the Rostov region: Retrieved from: <http://old.donland.ru/economy/Klastery/Reestr/?pageid=128999>.
3. Fundamentals of the state policy of regional development of the Russian Federation for the period until 2025: Retrieved from: <http://static.kremlin.ru/media/acts/files/0001201701160039.pdf>.
4. Markova O.V. (2014). The managerial paradigm of the innovative development of meso-economic systems: a monograph. Publishing House "Creative Economy", Moscow, 192 p. (in the Russian language).
5. Official portal of the government of the Rostov region: Retrieved from: <http://old.donland.ru/Donland/Pages/View.aspx?pageid=75189&mid=128186&itemId=296>.
6. The documents of social-economic development of the Rostov Region. Retrieved from: <http://old.donland.ru/documents/Ob-utverzhdanii-Strategii-socialno-ehkonomicheskogo-razvitiya-Rostovskoj-oblasti-na-period-do-2030-goda?pageid=128483&mid=134977&itemId=28439#pril417>.
7. UNESCO Institute for Statistics: Research and Development Expenditure 2017: <https://gtmarket.ru/ratings/research-and-development-expenditure/info>.
8. Yakusheva G.A. (200). Cluster policy in improving the competitiveness of the national economy: formation method. Public Administration. Electronic bulletin. No. 11. (in the Russian language).