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Regional Clusters are in Strategy of Achievement of Technological Leadership in Russian Economy

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Abstract

Based on the analysis of different conceptual approaches to the study of the problem of the collapse of the Soviet Union, of introducing into the scientific circulation of new sources, identifies the different factors that determined the events of 25 years ago. We conclude that the conditions of the unfolding scientific and technological revolution demanded the integration of science, education and production, overcoming the departmental barriers, creating a full-fledged innovation system on a national scale. The main areas was to be the development of a General strategy of modernization of the country, the production of modern high-quality products, the implementation of technical renovation of production, resource saving.
The article is devoted to the development of a strategy for achieving technological leadership of the regional Russian economy. The necessity of implementing cluster management as a combination of sectoral and territorial management is substantiated with the purpose of creating conditions for effective functioning of the region and the national economy as a whole, resolving the contradiction between resources and the needs of the development of society in the context of globalization. Cluster management is considered as a new form in the regional management system, due to the rapid intellectualization of business processes and the "knowledge" factor in modern business caused by this elevation.

Keywords: *analysis, problem, economy, development, high-quality products.*

1. Introduction

The framework of cluster policy in Russia is established by the Concept of the Long-Term Social and Economic Development of the Russian Federation for the Period to 2020 (approved by the Government of the Russian Federation on November 17, 2008 No. 1662-r) ("Strategy of innovation development until 2020", 2016). One of the key conditions for modernizing the economy and realizing the competitive potential of the regions is the formation of territorial clusters in urbanized regions focused on high-tech industries in priority sectors of the economy and on weakly developed territories oriented to deep processing of raw materials and energy production using Modern technologies.
According to the Strategy for Innovative Development of the Russian Federation for the period up to 2020 ("Strategy of innovation development until 2020", 2016), the formation and development of clusters in the constituent entities of the Russian Federation should lead to an increase in the competitiveness of business through effective interaction among cluster participants, due to their geographically close location, increased access to innovations, technologies, knowhow, specialized services and highly qualified personnel, reduction of transaction costs and implementation of cooperation projects. The increase in the speed and scale of global economic changes with the growth of turbulence (uncertainty, risk, chaos) and other threats to future development determine the urgency of solving the problems of spatial development of the national economy. Concentrating efforts on solving these problems in the conditions of the global crisis is the key to the survival of domestic enterprises in the real sector of the economy. In this aspect, it is of interest to develop and justify new development models oriented towards solving the problems of regional strategic management. This development involves the solution of problems at once in several areas: the creation of new information, software and technological support, the creation of new decisive rules for the development and support of the decision-making process based on a new management methodology both in the external environment and in the internal territorial and industrial environment. It is in this aspect that the role of clusters in the development of the economy should be considered (Pankov, 2015).
The cluster assumes a stable partnership of interrelated economic entities in order to obtain a synergistic effect as a result of effective interaction of the partners' opportunities on the basis of cooperation. Cluster management of the economy is a new institution, i.e. Formalization of a set of methods and methods that promote the use of new management approaches for the development of a particular territory. All clusters are constructed according to one principle scheme: on the basis of interaction of various types of activities, ensuring the continuity of production of the final product in a certain territory.

2. Theoretical Aspects

The idea of development of economic activity of a certain space formed the basis of the theory of growth poles, according to which the level of agglomeration of productive activities is the reason for the uneven development of the economy of certain spaces, which means the compact territorial distribution of settlements united by

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intensive economic, labor and cultural-household ties. In other words, the role of cooperation, or the fusion of similar industries, is emphasized, which can become a panacea for economic growth. The emphasis is not on exchange operations, which are important in the market economy, but on productive activity, as a result of which the return from production increases, a new (according to Marx) surplus value is created.

In the theory of poles of growth, the emphasis is on the role of the effect of combining production in the economic development of a certain space. In this regard, mutually operating industries that are located compactly in one territory generate an economic chain reaction, called "cluster", as a result of interaction between science and education, business, development institutions and authorities/

The formation of regional clusters is associated with the research of Michael Porter. In them, the cluster was regarded as an important factor in the economic development of the region. M. Porter defines the cluster as "geographically concentrated groups of interrelated companies, specialized suppliers, service providers, firms in relevant industries, as well as organizations associated with their activities (e.g. universities, standardization agencies, trade associations) in certain areas, competing, but at the same time they are leading the joint work" (Porter, 2003). In his view, clusters reflect the trend towards integration and socialization of the economy. This is the basis for the modern evolutionary theory of economic transformations associated with the transition from an industrial society to a global knowledge economy. The theory of M. Porter was developed in the writings of many Western and Russian economists.

In the region, "cluster forces" can unite and form long causal relationships. This will lead to a structural reorganization of the region, to the formation of so-called supercluster forces (or metafactors) in it. Based on this and taking into account modern concepts of chaos, it can be said that clusters are simultaneously an area in which a high degree of chaotic instability of the system is manifested, and an algorithm or rules by which factors (acting forces), forming long causal relationships. Transform the structure of the regional system and change the "reality" of its functioning.

The modern theory of poles of growth began to revive the studies revealing the interconnectedness of industry economic agents, regional space and innovations. The theory of growth poles with an emphasis on spatial development ultimately came to the formation and further development of the concept of a cluster management system.

3. Results

Taking into account the spatial aspect, the cluster management approach comes to replace the sectoral management method as a method of crossing the territorial and sectoral management of the development of economic entities. The introduction of the cluster method of economic management is objectively conditioned by the need to resolve the contradiction between the opportunities and the needs of the development of society in the context of globalization. Objectively, there is a need to develop new mechanisms for regional governance based on modern strategic planning of the country's spatial development.

The cluster system in the regional development economy contributes to:

- ensuring the continuity of the transition from basic research to innovation;
- development of an integrated, cross-cutting system and an institutional mechanism for state support of innovation activities;
- choice of priority directions for the development of science, technology and critical technologies as an element in solving strategic tasks of improving the technological structure of production;
- effective integration of Russian scientific and technical potential into the planetary system of innovation relations.

This formulation of the question gives the right to consider the appearance in the economic analysis of the ITPK category as an objective law that considers economic development taking into account the spatial component. In other words, the process of material production requires the equilibrium participation of all factors: human, material and spatial. In fact, the first place in modern economic development is a new resource (a factor of production), a new condition for improving the reproduction process – space or, according to modern interpretation, the region.

The region creates and transforms the structure of reproduction, launches an impetus to activate and improve efficiency in the activities of economic entities in a modern market economy. Knowledge penetrating all spheres of the regional market economy binds them together, contributing to the growth of the synergetic effect in economic development, which inevitably leads to a decrease in both transformational and transaction costs, profit maximization, sales growth and the country's GDP.

Cluster management is a combination of actions (joint, purposeful, documented) business, authorities, educational and research institutes, as well as other elements of the cluster to create favorable business environment for the development of clusters and increase the efficiency of all their elements. In this aspect, the cluster management system has the property of synergetic integrity and associated synergetic potential – the ability to confront cluster systems with challenges and conflicts in the external environment. By our definition, the synergistic potential of the cluster management system is what makes the system resistant to shocks and changes in the external environment. This is also what gives an additional synergistic effect – the effect of corporate interaction of active elements. Thus, cluster management is a method of management that ensures the coordination of the organization's goals and capabilities with the interests of all parties interested in its activities. It consists in forecasting scenarios of the vision of the future.

The construction of alternative directions and actions potentially possible in the future; The calculation of risk, economic hindrances and chaos for these areas; Assessment of the consequences of these decisions for the future.

In all areas of cluster management, the time factor must be taken into account, which makes it necessary to make decisions under conditions of uncertainty, risk and instability in the development of cluster diversification. Given the irreversibility of changes in reality, in which there is chaos and economic hindrances, the time factor becomes decisive. The timeliness of cluster management responses to these changes depends on it (Enright, 1993). On the agenda of the modern theory of optimal control, a new type of problem is posed – the problems of optimal programming and control of stochastic processes, in which the time factor and feedback are taken into account.

In the world practice, various forms of stimulating cluster initiatives have emerged, involving the use of institutional mechanisms that provide both direct support for the formation of clusters on the part of the state, so indirectly, i. Budgetary preferences, contributing to the development of new, strategically important technologies. The institutionalization of cluster processes allows ensuring timely access to necessary resources, overcoming the difficulties of entering the markets of future products, identifying real, promising ways and the necessary actions for entering and increasing their presence in the market.

Specificity of the methodological approach consists in the possibility of interaction and linking the interests of technology developers, industrial production, development institutions and authorities.

Despite the in-depth study of the patterns of development of the economic space in the Russian Federation, incl. On the basis of cluster principles, a single concept of spatial development of regions in modern conditions has not been created, which makes it possible to formulate and effectively use the competitive advantages of regions in the networked economy.

To methodological issues that require detailed study with respect to Russian regional characteristics, one can also include: the ra-

tionale for a strategy (conceptual vision) for the creation and development of a specific cluster; Building a mechanism for implementing a cluster initiative and a mechanism for organizing interaction between participants within the cluster; Substantiation of measures and mechanism of state support of cluster development (Nosova et. al., 2016).
The current list of priority directions and technologies currently in the process of forming ITK, according to the authors, is not adequately linked to the state priorities and the needs of innovative development of the economic system of Russia, which entails inefficient use of budgetary funds. This leads to a violation of the principle of effectiveness and effectiveness of the strategy based on the need to achieve the specified results with the least resource costs in accordance with the strategic planning documents developed in the planning and programming (Cheshire & Malecki, 2004).

4. Discussions

In the Strategy for Innovative Development of the Russian Federation until 2020, emphasis is placed on the formation of innovative territorial clusters ("Strategy of innovation development until 2020", 2016). The choice of ITC as a new tool for managing the economy required an in-depth study of cooperation between R & D, business areas, development institutions and government bodies. In this aspect, ITC should be seen as a driver that determines contemporary socio-economic development.
In Russia, in the current economic crisis, it is necessary to carefully prioritize the formation of clusters. Initially create clusters aimed at innovative development, leading to a faster transition to modern technological structures.
The revealed methods of clusters formation are different in their economic content, however, the algorithm of the sequence of actions for the formation of clusters is practically homogeneous.
An innovative territorial cluster should be considered as the so-called driver, which determines the movement of modern socio-economic development in Russia (Nosova et. al., 2016).
As part of the policy of cluster development, a number of critical tasks of strategic development are being solved, related to improving operational efficiency by building a system of cooperation of enterprises and accelerating the creation of innovative products and their entry into global markets. When solving problems for the future on the basis of strategic planning and targeted design, it is necessary to calculate optimal program trajectories of cluster growth factors in the regional economy. It is important to know the time allocated for the completion of each activity included in the target program of cluster policy.
The most important thing in modern economic development is to recreate and develop a "strategic management style" in the economic policy of industrial enterprises and firms through the building of hightechnology chains and diversified ties. This requires taking into account processes and associated changes, which means a gradual or step-by-step process of transferring the organization to a new level of management using existing ideas and concepts. An important role in this process is assigned to high-tech industries.
If traditionally a strategic change in management has previously been presented as a large-scale one-time systemic change, as a continuous evolutionary process in which one strategic change creates the need for other changes, then in cases of uncertainty in economic development and finding ways to overcome its consequences, it is desirable to pre-form a new portfolio of strategic Programs, carry out gradual changes in the activities of organizations, have an integrated information technology of strategic choice, ensuring the organization's leadership in the future. In these conditions, it is especially important to have a method and tool for forming a "portfolio of tasks" included in the "goal tree" of strategic management.
Achievement of the set tasks of Russia's innovative development implies the improvement of technological and management tools for the operation of high-tech industries. In this regard, methodological recommendations have been developed to improve the strategic planning of output in the management of enterprises of high-tech industries in the face of growing competition.
In the context of international sanctions, the ITC's export-oriented activity is an important factor in the growth of the competitiveness of the Russian economy.
In general terms, the achievement of technological leadership in its core implies the ability and ability of state authorities, on the one hand, to guide the ongoing innovation processes in a constructive direction, on the other, to adequately adjust to the projected challenges of the growth of innovative technologies.
Accordingly, it is necessary to concentrate on the ability of the ITC to create a competitive environment that arises on the basis of cooperation between science and education, business, development institutions and authorities that contribute to the growth of technological leadership of the national economy in the context of globalization.
Today Russia needs a new model of economic growth – a model of technological leadership. It is proposed to be called a cluster model based on high technologies and strategic planning, based on cluster or territorial-sectoral management. It is proposed to integrate the priorities of the new cluster management into the strategic planning programs of the Russian economy. The state of the Russian Federation should take on cluster risks, namely, become a provider of innovative development of the country on the basis of the formation and development of ITCs, which in the long term will ensure the growth of human capital, which is the core of the ITC. The adoption of ITC as a new tool for managing the economy corresponds to the best world models of a strategy for increasing the competitiveness of a regional and integral economy.
Promising recommendations for the growth of ITC, integrating large-scale high-tech production complexes with research and educational centers, development institutions and government bodies with a view to shifting to territorial-sectoral management that fosters the formation of a competitive modern economy based on the balance of five types of activity: innovative (scientific, educational), business (Business procedural), innovation-infrastructure, institutional and financial, taking into account state support (federal and regional authorities) is the only possible way to achieve technological leadership in the economic development of modern Russia.

5. Conclusion

1. Under the existing conditions, to study the processes of clusterization of the regional economy, it is necessary to make maximum use of general scientific methods of studying economic and social phenomena. Thus, the analysis of the concept of "poles of growth" allows us to emphasize the spatial development of the economy on the basis of clusters in which, with the development of market principles and business institutions, the interdependence of enterprises and organizations is achieved through the formation of stable vertical and horizontal links that determine the effectiveness of all its components, High level of competitiveness and stimulate innovative processes within the same territorial zone.
2. The cluster assumes a stable partnership of interrelated economic entities in order to obtain a synergistic effect as a result of effective interaction of the partners' opportunities on the basis of cooperation. Cluster management of the economy is a new institution, i.e. Formalization of a set of methods and methods that promote the use of new management approaches for the development of a particular territory. All clusters are constructed according to one principle scheme: on the basis of interaction of various types of activities, ensuring the continuity of production of the final product in a certain territory.

3. A cluster is simultaneously an area in which a high degree of chaotic instability of the system is manifested, and an algorithm or rules by which factors (acting forces), forming long causal relationships, transform the structure of the regional system and change the "reality" of its functioning. This means that the cluster forces can unite and almost instantly transfer the system from one state to another, and also act as strategic tools – forecasting and strategic choice.
4. Taking into account the spatial aspect, i.e. Fixing the activities of economic entities in a certain territory, the sectoral management method is restarted. It is replaced by cluster management as a method of crossing the sectoral and territorial management of the development of economic entities. Cluster management (in the broad sense of the word) is a set of actions (joint, purposeful, documented) business, authorities, educational and research institutions, as well as other elements of the cluster to create favorable business environment for cluster development and improve efficiency Activities of all their elements. The cluster management system has the property of synergetic integrity. This is what gives a synergistic effect – the effect of corporate interaction of active elements. A key role in the formation of cluster management belongs to regional authorities..

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