

CLUSTERING IS THE BASIS FOR INCREASING THE COMPETITIVENESS OF COMPANIES AND REGIONS

The article presents a brief analysis of the possibilities for increasing competitiveness and growth of financial and economic sustainability, that are laid down in the clustering of economic entities on the basis of expanding the productive potential of the integrated structure.

INTRODUCTION

The open nature of national markets requires that any organizational and economic structure maximize the return to competitiveness and strategic stability. This is effectively achieved on the basis of innovative technologies and the development of internal reserves of reduction the cost of production and services.

Since the 90s of the last century, clusters have been playing an important role in the formation of efficient production and economic systems (PES). Clusters are a form of integration of business entities, sectoral institutional structures, regional institutional organizations, based on mutually beneficial cooperation, technology exchange, qualification, which creates competitive advantages for the whole structure and its parts, contributes to the development of production, competitiveness, the reduction of transaction costs and effective access to foreign markets.

M. Porter stressed that clusters are successfully formed in those spheres of the economy, where all the necessary conditions and resources are concentrated, which determine the stable advantage of this structure due to higher productivity of the conditions for the development of innovations and new types of business [1].

To increase the economic efficiency, M. Porter considers it is necessary to pay great attention to activities in related industries. This allows to retain competitive advantages of enterprises for a long time on the basis of cooperation and integration. Porter and the experts on clustering emphasize that cooperation and integration are the basis for forming the efficiency of clusters.

1. SOURCES OF GROWTH OF COMPETITIVENESS AND FINANCIAL AND ECONOMIC STABILITY IN THE CLUSTERING OF ECONOMIC ENTITIES

The industrial cluster represents the community of industry and related companies on the basis of cooperation and competitive links. This community is capable of mutually reinforcing competitive advantages based on synergy. Sectoral clusters are inseparably linked with territorial clusters. This is due to the fact that business entities entering into an industry cluster should have territorial proximity, because the territorial cluster must act as an autonomous structure, which includes production, circulation, various relationships determined by consumption and marketing.

Cluster, as a stable network of interrelated economic entities, has a production potential higher than the sum of the potentials of its participants. This is achieved as a result of network cooperation and

within the network competition. Thus, the industrial cluster represents a set of economic entities functioning as a unified cooperative market structure with increased opportunities for self-development of an innovative nature.

From the viewpoint of the system approach, the cluster represents a set of business entities of interconnected different industries, united in a single organizational structure, the elements of which are interrelated and interdependent, and function jointly for a specific purpose.

The characteristic features of the cluster are the maximum geographic proximity, the relationship of technologies, the commonness of the raw material base, and the availability of an innovative component. Thus, in order to be a cluster, a group of geographically neighboring interrelated companies and related organizations should operate in a specific area, be characterized by commonality of activities and complement each other. [3]

Modern state support for the process of clustering is based on the fact that the advantages that arise in the territories in connection with the development of clusters. This is an increase in the regional gross product, an increase in tax revenues to the regional budget, an increase in the competitiveness of the region and national industries, development of cooperation within the region, which increases production efficiency, increased investment in the region's economy, creation of additional jobs, and the growth of innovative regional developments.

The development of industry clusters is provided by factors that determine the rhombus of Porter:

- Government policy;
- Interaction with related and supporting competitive industries;
- Frontier advantage;
- Ensuring production factors;
- Improving the structure of competition;
- International business activity;
- Conditions of demand for products;
- Chance or occasionality.

The cluster approach allows to effectively solve the problem of the competitiveness of various levels of economic entities in the national economy, to create an effective basis for implementing the state policy of economic growth, to increase the effectiveness of regional development problems, to stimulate the introduction of innovative solutions in industry practice, to strengthen cooperation and integration of large and small businesses, to accelerate solution of social problems of regions and the national economy as a whole.

2. SELECTION OF POTENTIAL ACTIVITIES FOR THE FORMATION OF CLUSTERS IN THE REGION

An actual problem for the practical implementation of effective clusters is the selection of potential economic activities for clustering in the region. A number of methods are known for identifying local production systems of industrial regions and local labor markets with sectorial and multisectorial interaction. A number of methods include the analysis of the general economic situation in the region and the industry, the study of the historical development of the industry, quantitative analysis of the market and networks of interaction between business entities, analysis of the level of competition in sectorial regional markets, the dynamics and volume of innovation, characteristics of funding sources, access to services, and leadership in the industry. In work [4] the algorithm of the express methodology allowing to allocate potentially expedient kinds of activity for formation of clusters in the region is given. This algorithm includes the following steps:

- 1) Assessment of the possibility of forming a cluster on the territory of the region;
- 2) The analysis of the environment and the conditions for the operation of potential clusters in the region is carried out;
- 3) The types of activities are ranked and the most promising activities for forming a cluster are determined;
- 4) Clarifying the directions for creating clusters. For this purpose, the structure of production and sales of products for all types of activities is analyzed and qualitative analysis of the conditions for the formation of potential clusters on the territory of the region is carried out.

The methodology for assessing the potential and directions of clusterization in the region is based on the application of quantitative and qualitative methods, expert assessments. Creating a cluster - an investment project requires consistent management decisions regarding specialization, cluster location and a number of other indicators, is a special task of managing the project for the formation and functioning of the cluster.

It is important to identify the participants in the cluster, which form its core and analyze the geographic location of the core of the cluster. From this depends the scheme of promotion of raw materials and finished products, the size of logistics costs, the possibility of sharing the infrastructure available in the cluster. These factors determine the cost of the final product of the cluster and its competitiveness. The increase of production efficiency at each stage of the technological chain from the producer to the final product is achieved by the development of rational internal and external links of the production and economic cluster association. The definition of the boundaries of the cluster is expedient on the basis of internal connections and geographical commonality of economic entities. This approach determines the tactics and strategy of cluster development based on the criteria of economic efficiency.

3. THE SOURCE OF INNOVATION ACTIVITY OF THE CLUSTER STRUCTURE

When forming a cluster, one of the most important criteria is the maximization of the potential of the cluster structure. It allows creating high innovative activity of the integrated structure and ensuring its competitive advantages in the industry markets. The system for integrated assessment of the cluster potential includes the production component, which includes the assessment of the resource intensity of cluster products, the innovative component, which reflects the share of innovative products in revenue and additional profit from it,

the labor component, including investments in human capital, financial, organizational and natural resource component.

The participation of regional institutional structures in the formation and management of cluster development make it possible to increase the effectiveness of regional programs of social and economic development and to strengthen support from regional and state authorities of economic activities of cluster members.

4. REQUIREMENTS FOR INTEGRATED STRUCTURES WITH INNOVATIVE DEVELOPMENT

Presentation of innovative ideas in the form of innovative projects and evaluation of their effectiveness are the central link in the process of forming strategies for innovative development. When forming an innovative portfolio, it is important to formulate requirements for indicators of innovative solutions and to identify the conditions for their implementation. In this regard, it is necessary to develop a model that allows quantifying the innovation project and solve such problems as:

- Formation of requirements to the project, which can be considered as innovative;
- The choice of the project among the available ones, which can be considered as innovative and best;
- The choice of the way to implement these requirements;
- Evaluation of the reaction of the external environment (the external environment is considered taking into account the transnationalization of the industrial market) for the implementation of the project that accompanies the change in the competitiveness of the company;

5. ASSESSMENT OF THE LEVEL AND DYNAMICS OF INCREASING COMPETITIVENESS.

In accordance with the tasks, it is proposed to assess each complex project, based on changes in the level of competitiveness of the company and the speed with which it is achieved when the project is implemented.

Innovation of the project is assessed not only on the basis of the availability of innovation, but also on the level of indicators characterizing the life cycle of the investment project, namely, the level and speed of increasing competitiveness. The value of the restriction on changing the level of competitiveness, corresponding to the innovative development option, can be defined and set as a requirement for the desired change in the share of the industry market on which the company operates.

If we assume that the market share is proportional to competitiveness, then the level of competitiveness and the rate of its change can be linked analytically with the level of indicators of phases of the life cycle of the project (Figure 1). This analytic dependence can be represented by a linear model.

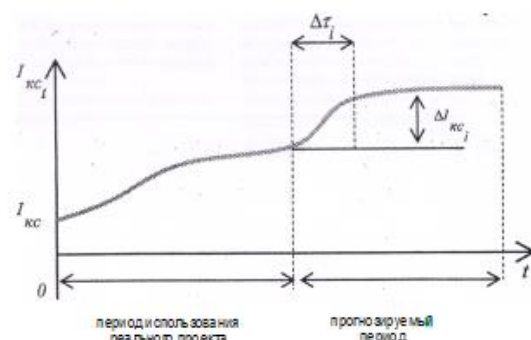


Fig. 1. Dynamics of project competitiveness [5]

We emphasize that the requirement of a dynamics of increasing competitiveness is not only very important, but also dominates, as it essentially determines the effectiveness of the implementation of the innovation project.

To assess the innovative level of the project, in addition to developing a methodology that is based on a model that adequately reflects the requirements for an innovative project, it is also necessary to evaluate the system of performance indicators of the company, which is presented through economic and financial indicators. In the conditions of market relations there is no rigidly unified system of indicators. Each investor independently determines this system, based on the features of the innovation project and the environment for its application. We emphasize only that the following set of requirements is presented to the system of indicators.

It should:

- to cover processes at all stages of the product life cycle;
- to be formed on prospect (a minimum from 3 to 5 years) on the basis of the retrospective analysis of activity of the organization and possible scenarios of development of environment;
- to rely on data on the competitiveness of specific goods in specific industry markets;
- key figures should be expressed by absolute, relative and specific values (for example, profit, profitability of goods and production);
- requirements must be coordinated with all sections of the plan and reflect all aspects of the organization's financial activities (income, expenses, insurance, liquidity of securities and funds, taxes, etc.).

Thus, the analysis of the innovative nature of the project is based on the following assessments:

- 1) In determining the innovative character of the process, it is necessary to assess whether a given socio-economic effect is achieved and what is the rate of achievement of the planned values of this effect. At the same time, we assess whether there is the possibility of obtaining it by known methods.
- 2) The innovation process is characterized by a faster increase in the result under the influence of the control action than was achieved in the previous period on the basis of the best decisions.
- 3) For Innovative process is more important not technological, but market novelty, which manifests itself not only in obtaining new consumer properties of the service (products), but also in raising the level of known consumer properties.
- 4) The innovation process increases the life cycle of the project compared to the most effective one currently known.
- 5) Innovation of the project can be determined not only by technological novelty, but also by the structure and level of the sources of funding for innovative projects, which can provide an innovative dynamic of the result.
- 6) The developed economic model allows to put forward demands to indicators of the project of innovative type on the basis of desirable rates of growth of level of competitiveness and restrictions on resources.
- 7) To solve the problem of quantifying the planned level of competitiveness increase, it is suggested to link the level of competitiveness analytically with the level of indicators of phases of the life cycle of the project.

The model corresponding to the listed requirements reflects the analytical dependence between the level of the company's competitiveness and the basic characteristics of the project, which includes integrated indicators of the project's effectiveness, which also determines the time of achievement of the result.

To assess the innovative level of the project, in addition to the methodology that is based on a model that is adequate to the requirements for an innovative project, a system of company performance

indicators presented through economic and financial indicators is also necessary.

The innovative way of development of PES is achieved by an effective depth of state regulation of economic and production processes, which is realized by the proportions between the public sector of the economy and the private and regulatory focus on certain mechanisms, in particular, the formation of cluster systems. [5]

CONCLUSIONS

1. The cluster structure of economic entities extends the productive potential of the integrated structure, making it larger than the sum of the potentials of the subjects forming the cluster;
2. Synergy as a result of integration and cooperation is a source of growth of competitiveness and financial and economic stability of the cluster and constituent entities;
3. The cluster has increased abilities for self-development of an innovative character due to synergy;
4. An essential feature of the cluster is the geographical proximity of the economic entities participating in it;
5. In the formation of clusters, the evaluation of potentially possible participants in this structure is relevant. The principal components of the express methodology [4] are enlarged for the identification of expedient activities in the formation of a sectoral cluster.
6. It is proposed to supplement the methodology [4] of the selection of cluster subjects by explicitly expressed criteria of innovative possibilities of potentially possible territorial integrated structure.

REFERENCES

1. Porter M.: *The economic performance of regions* // Regional Studies. Aug.-Oct. – 2003/ - Vol. 37. No. 6-7. – P. 559 [online resource]. URL: <http://www.isc.hbs.edu/econ-clusters.htm>
2. Kulakova L.I.: *Cluster approach is the basis for effective development of regions* // Russian Entrepreneurship. 2013. No. 22 (244), p. 121-130.
3. Konkin A.N.: *Formation of the mechanism of innovative development of a building complex* [Text]: the dissertation of Ph.D. in economics: 08.00.05: it is defended 15.03.12 / Konkin Alexander Nikolaevich. - Penza, 2012. - 200 p. - Bibliography: p. 141-157.
4. Pavlova A.V.: *Management of the processes of formation of cluster structures in the region* // Management in Russia and abroad. №1 / 2017.
5. Romanova A.T., Bakerkin Y.Y.: *Analysis of the effectiveness of innovation processes in integration structures* // Transport business of Russia №3, part 2, 2008

Klasterzy podstawą dla zwiększenia konkurencyjności przedsiębiorstw i regionów

W artykule przedstawiono krótką analizę możliwości zwiększenia konkurencyjności i wzrostu gospodarczego oraz stabilności finansowej przedsiębiorstw, na bazie organizacji klasterów podmiotów gospodarczych..

Authors:

Prof. Anton V. Abdurakhmanov, Prof. Alexander A. Vygnanov, Prof. Valentin V. Ilyin, Prof. Alina T. Romanova – Moscow State University of Railway Engineering (MIIT), Russian Federation