THEORETICAL ANALYSIS OF CLUSTER MANAGEMENT IN INNOVATIVE ECONOMY AND TRANSFORMATION

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ABSTRACT

The article analyzes clusters in the conditions of innovative economy and transformation, theoretical aspects of their management, including the increase in the economic efficiency of agro-clusters because of the organization of the agricultural sector on the basis of "production - service - production - storage - supply processing - sales", development of cluster services, an increase of production and diversification of export products because of improvement of the organizational mechanism.

KEYWORDS: *Cluster, Efficiency, Economic, Financial, Modern, Technology, Innovation, Export, Import, Product, Theory, Analysis.*

INTRODUCTION

We fully formed the theory of clusters in the 1980s by Michael Porter, a professor at Harvard Business School, who was later recognized as the founder of this theory. According to him, "a cluster is a group of companies and related organizations that are territorially (geographically) next to each other, interconnected, operating in a particular field, complementing each other in the pursuit of a common goal."

This definition is now considered the classic definition of a cluster. Porter's cluster theory quickly gained worldwide recognition, first in the United States and later in the Organization for Economic Co-operation and Development (OECD), as a conceptual framework for developing competitive regional strategies and recommended by the World Bank as a universal framework. S.Stern, M.Delgado, G.Lindqvist, A.Saxenian, T.Anderson, S.Schwaag, E.Bergman, E.Feser, Ch.Ketels and other economists have done a lot of research on the theory of cluster organization and management. went [1].

The researcher LS Markov is the scientist who best systematized the various definitions of the term "cluster" in the economic literature of foreign countries [2].

In this context, as a result of our analysis of the definitions encountered in cluster theory, we see that the views of world scientists are different, which are presented below.

An industrial cluster is an association of labor operating with a number of industries that interact as a buyer-supplier or a supplier-buyer, in particular, common technology, procurement, or distribution channels (Porter, 1990);

A cluster is a group of enterprises belonging to the same industry and operating in close proximity to each other (Schmitz, 1992);

Regional clusters geographically close firms within industrial clusters (Enrigh, 1996);

Clusters are a group of firms in the same industry located in the same geographical area (Swann and Prevezer, 1996);

A cluster is a concentration of firms capable of synergistic effects due to geographical proximity and interdependence, although the number of employees is not significant (Rosenfeld, 1997);

A cluster is a group of geographically interconnected companies (suppliers, manufacturers, etc.), relevant management organizations (educational institutions, government), and complementary infrastructure companies operating in a specific area (Porter, 1998);

Economic clusters not only connected and supporting industries and institutions but also interconnected and partner competitive institutions (Feser, 1998);

A cluster is a large group of firms in related industries in a particular region (Swann and Prevezer, 1998);

A cluster is a group of vertically and horizontally functionally linked firms whose functional approach is to ensure market-defined quality, such as relationships between existing enterprises and institutions and support (Elsner, 1998);

A cluster is a set of complementary (manufacturing or service) public, private, and semi-public firms. (Steiner and Hartmann, 1998);

Clusters can be described as a network of interconnected, interconnected firms (including specialized suppliers) in a value-added production chain (Roelandt and Den Hertag, 1999);

An innovation cluster is a group of many industrial and (or) service companies operating in the same market environment, with a high level of collaboration (Simmie and Sennett, 1999);

Industrial clusters can be described as a commercial group of nonprofits whose membership is an important element in enhancing the competitiveness of enterprises and individuals (Bergman and Feser, 1999);

Regional clusters are industrial clusters that are geographically dense (usually in the central region) and have a common labor market (Bergman and Feser, 1999);

Clusters are firms of a similar type of business, although the tendency to be close to each other is not particularly important (Crouch and Farrell, 2001);

The term "cluster" is closely related to the local or regional scope of the networks. Many definitions combine the concept of clusters as localized networks of specialized organizations in which someone closely linked commodity exchange to production processes (Van den Berg, Braun, and van Winden, 2001).

Regional clusters imply a geographically limited concentration of interconnected firms, and we can use industries as keywords for specialized concepts (OECD, 2002);

Clusters are the geographical concentration of firms that are like each other and engaged in related activities (Visser and Boshma, 2002);

We understand clustering as a process of co-location between firms and other entities in a geographical area. A functional place for clear strengthening around, and the establishment of close relationships and trade unions, is their collective competitiveness (Andersson et al., 2004).

As a result of our analysis, we believe that the cluster can be described as follows.

A cluster is a group of independent economic entities located in a specific region, competing with each other, cooperating and interacting, and creating products in a single value chain.

In addition to clusters that serve only the local market of the region, there may be clusters that export their products outside the region, ie to national and world markets. It should be noted that such export potential is, in our opinion, the most reliable indicator of the competitiveness of regional producers, as the conquest of national and global markets means recognizing their ability to successfully compete and win in the competitive struggle. Due to the strong competition in the world market, the cluster that determines its role in the economy is the export of goods and (or) services to national and world markets as a key indicator of the level of competitiveness.

Theoretically, any cluster structure includes three main levels.

The first tier, or "cluster core," is a manufacturing company that includes firms operating in the local market and leading firms that export their products (goods or services) outside the region. They are leading firms that export their products (services) to national and global markets, ensuring the economic success of the entire cluster and attracting financial flows to the region. Therefore, such leading companies dominate the cluster.

The second level is the groups around the core of the cluster, which includes relevant companies that produce components, process equipment, materials, raw materials, and so on. However, this group may also include large, medium and small enterprises. In many cases, the emergence of small and medium-sized businesses in clusters is associated with the outsourcing of business processes of leading firms. It is known that small production facilities will be flexible, and they will innovate faster, moreover, the cost of production here will be cheaper than in the base enterprise. The role of large businesses with the formation of the cluster is to organize the production of small businesses and medium enterprises on the basis of active cooperation and subcontracting.

This is why cooperative relationships that emerge in a cluster are important for the survival and growth of a small business. We can say that a cluster is a way to keep a small business afloat in the context of globalization.

The third level is the service companies that make up the economic infrastructure of the cluster - scientific and technical and service centers; financial and credit organizations; investment funds;

higher, secondary special and secondary technical education institutions; research organizations; public organizations; insurance and consulting companies, etc.

Thus, the cluster comprises three levels consisting of participants:

1) major companies

2) companies related to economic activity

3) companies servicing economic activity (economic infrastructure).

We should note here that the "face" of a cluster, cluster core companies formed its specialization and name only, and this is of fundamental importance. Companies that belong to one cluster core cannot enter the core of another cluster, but can take part in another cluster at another opportunity - at the second or third level of the cluster structure. As the companies in the cluster core produce the same type of products (goods, services), competition between them will continue. In this context, a key feature of the cluster core is competition between the companies that make it up, i.e., both competition and collaboration are observed in the cluster core. The companies that make up the cluster core compete with each other for market share, but at the same time, they can also collaborate with each other.

According to the laws of economics, the fact that companies in the cluster core compete with each other forces them to improve. Competition in the cluster is maintained because the companies in the cluster core produce the same type of product and the more enterprises in the cluster core, the stronger the competition between them. In order to win the competition, depending on the characteristics of the market, companies entering the core of the cluster can strive to gain an advantage by reducing costs and prices, improving quality, attracting new customers, and entering new markets. The cluster does not restrict or cancel the competition and does not prevent the entry of new participants, which helps to create new businesses. Competition is equally important both within clusters and between groups.

At the same time, the companies that form the basis of the cluster can collaborate with each other using their core competencies. By partnering with other businesses, they can also use resources and services that are not available to individual businesses. The main companies in the cluster can cooperate in such areas as, example, training and retraining of employees, support of their interests in government agencies, funding of research, and joint access to export markets.

Thus, on the one hand, if there is competition in the cluster, on the other hand, cooperation is possible.

Cluster second-and third-tier companies, even if they don't know it, are the "face" of the cluster because they are necessary components, without which cluster core companies can't function effectively. The interaction of companies in the cluster core with second-and third-tier companies is based on a value chain.

We cite R. Kaplinsky's definition of the concept of "value chain": the product of the various services of the manufacturer is the disposal before delivery to the final consumer and after use "[3].

In developing the theory of clusters, scientists mainly refer to industrial clusters, the core of which includes industrial companies that produce products that are exported outside the region.

Service sector clusters, on the other hand, are, of course, less studied and described than industrial clusters. In the future, we will pay special attention to them as well.

The most important feature of the cluster is also the wide range of participants. The companies that produce the final finished product are only a visible part of the existing structure. Along with them, the cluster includes suppliers of everything needed, including materials and equipment, as well as service companies. This should also include specialized banks, higher and secondary technical education institutions, including research centers. The most important participant of the cluster is the state, which is a representative of the regional government, which has the power to complicate life or, conversely, create favorable conditions for the development of the cluster.

Clusters contribute to the creation of new knowledge as in the IT clusters in Silicon Valley (USA) and Bangalore (India) and help stimulate technological innovation, as well as stimulate creative innovation as in the new fashion (fashion industry) industrial clusters in Paris and Mumbai.

One cluster often creates or reinforces other clusters through the activities of enterprises in the value chain. This can reduce risk, facilitate access to the industry, or better serve regional markets in particular. A good example of this dominant effect can be seen in the Arizona optical cluster, whose development has led to the formation of new clusters in areas such as plastics, aerospace, environmental technology, information technology and life sciences.

Clusters operating outside regional or national boundaries differ from groups within countries. For example, the McKinsey Global Institute found that more than 70% of exports from developing countries are concentrated in agriculture, mining, lighting, tourism, information and communication technology, and retail.

Research from Harvard Business School’s Institute for Strategy and Competitiveness (Harvard Business School) shows that geographical types of export-oriented clusters reflect the strength of interrelationships more than economic geography in general. On the other hand, local industrial clusters operate at the level of density of the whole economy, for local markets, and are competitive in the region. They affect the growth of employment in the region, but wages, labor productivity and the level of innovation in them are lower than the average in the regional economy. In contrast, businesses in export-oriented clusters choose where it is beneficial to locate production to serve an external market. Such clusters provide relatively less employment.

A cluster approach to economic development is a good tool for regional analysis. In the study of modern scientific literature on foreign countries (M.Porter, B.Feat, K.Ketels, etc.), the analysis of industrial clusters reveal a series of steps to determine which clusters are present in the regional economy, including the strength and regional clusters compared to the national economy. It can be said that it allows us to assess our weaknesses.

In particular, the analysis of industrial clusters allows:

• Comparison of the development of economic activity in the region;

• identification of economic growth trends;

• identification of new industries in the region;

• assessment of potential opportunities for cluster enterprises;

• developing and modifying a specific business development strategy;

• analysis of labor needs;

• Contribute to the establishment of stable business relationships;

• giving priority to enterprises with growth potential in the implementation of the regional industrial policy of the state;

• simplification of the investment decision-making process by investors based on the identification of underdeveloped value chain links;

• Determining which investments have the greatest potential for the region, ie the structure of investments that will ensure the sustainability of the region's development for many years.

Earlier, in our work, we presented our proposals to increase the efficiency of agro-clusters [4], [5], [6], [7]. The results of our research in the framework of this article showed the need to eliminate existing gaps in the mechanisms to increase the efficiency of agro clusters.

Therefore, we believe that the economic efficiency of agro-clusters will definitely increase if we organized the agricultural sector in our country because of "production - service - production - storage - delivery - processing - sales" systems. Because of the practical implementation of these proposals to improve the organizational mechanism of agro-clusters, it is possible to achieve the development of cluster services, increase production and diversify the composition of exported finished products.

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