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ПРОБЛЕМЫ РАЗВИТИЯ КЛАСТЕРОВ В АГРОПРОМЫШЛЕННОМ КОМПЛЕКСЕ РЕСПУБЛИКИ КАЗАХСТАН

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Исследованы теоретические аспекты кластеров, основы их формирования в Республике Казахстан, влияние кластеров на конкурентоспособность страны, а также сдерживающие факторы их развития. Представлен зарубежный опыт и отмечена важность и необходимость поддержки и законодательного регулирования со стороны государства.

Ключевые слова: кластеры; государственное регулирование; экономический рост; конкурентоспособность; инновационная активность; диверсификация; отрасль; стратегия предприятия.

КАЗАХСТАН РЕСПУБЛИКАСЫНЫН АГРОӨНӨР ЖАЙ КОМПЛЕКСИНДЕ КЛАСТЕРЛЕРДИ ӨНҮКТҮРҮҮ МАСЕЛЕЛЕРИ

Бұл мақалада кластерлердин теориялық аспектилери, Қазақстан Республикасында аларды түзүүнүн негиздери, кластерлердин өлкөнүн атаандаштыкка туруштук берүү жөндөмдүүлүгүнө тийгизген таасири, ошондой эле алардын өнүгүшүн кармап турган факторлор изилдөөгө алынган. Бул багыттагы чет өлкөлөрдүн тажрыйбасы көрсөтүлгөн жана мамлекет тарабынан колдоо көрсөтүүнүн жана аларды мыйзамдык жөнгө салуунун маанилүүлүгү жана зарылдыгы белгиленген.

Түйүндүү сөздөр: кластерлер; мамлекеттик жөнгө салуу; экономикалык өсүш; атаандаштыкка туруштук берүү жөндөмдүүлүгү; инновациялык жигердүүлүк; диверсификация; тармак; стратегия; ишкана.

PROBLEMS OF CLUSTER DEVELOPMENT IN THE AGRO-INDUSTRIAL COMPLEX OF THE REPUBLIC OF KAZAKHSTAN

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This article contains an overview of the theoretical aspects of clusters, the basis of their formation in the Republic of Kazakhstan, the impact of clusters on the competitiveness of the country, problems of their development. The foreign experience is presented and the importance and necessity of support and legislative regulation by the state is noted.

Keywords: clusters; state regulation; economic growth; competitiveness; innovation activity; diversification; industry; strategy of enterprises.

Kazakhstan has initiated the development of its economy on a cluster basis. If the XX century was the century of high technologies in industry, the XXI century will be the century of high innovative technologies aimed at the development of human capital. After all, currently the national wealth of developed countries is only 5 % of natural resources, 18 % – produced capital, and 77 % is about knowledge and the ability to effectively dispose them. With this in mind, President Nursultan Nazarbayev has set a strategic goal of Kazakhstan's joining the top 50 most competitive countries in the world.

In the economic literature, the concept of “cluster” was introduced by Michael Porter (in 1990). According to which the cluster is a geographically concentrated group of interrelated companies, specialized suppliers, service providers, firms in the relevant industries, as well as related organizations (for example, universities, standardization agencies, as well as trade associations), competing and leading joint work at the same time in certain areas [1, p. 80].

Today, clusters are a characteristic feature of any well-developed economy. Clusters provide a new perspective on the economy of agriculture and its development, new roles of agribusiness, government

and new ways to structure relationships such as “agri-business and government” or “business institutions”.

The main thing in the structure of the cluster is the diffusion of innovation in the whole value chain and solving social problems in territorial industrial cluster. World experience confirms that the level of labor productivity and wages in clusters are significantly higher than in the whole country. Moreover, according to the Harvard business school, the more developed clusters in a particular country are, the higher the standard of living of the population and the competitiveness of companies in this country. In this regard, M. Porter notes the need to move to a new process of integration in agriculture from vertically integrated structures into clusters.

The economic literature provides a large number of definitions of the word cluster. E. Limer analyzed clusters with a high level of correlation exports in the analysis of trade at the national level [2]. French economists Trenado I. and D. Soulier used the term “Spinneret” to describe groups of technological sectors [3, 4]. The formation of Spinneret was explained by the dependence of one sector on another at the technological level. Thus, spinners are a narrower interpretation of the cluster, as they are based on the need to create technological links between industries and sectors of the economy to realize their potential benefits.

The modern theory of competitiveness development on the basis of clusters is developed by V. Feldman. Its advantages are based on extensive empirical studies of diversification forms in different countries. The essence of V. Feldman's theory is that diversification is often followed by the matrix of the “input-output” or contacts between industries linked by relations of supply and acquisition. This is due to the mechanisms that lead to the formation of clusters; the most viable clusters of innovation activity are formed on the basis of diversification.

The most effective form of economic growth among the various and numerous theories of competitiveness is the theory of cluster mechanism of M. Porters.

A cluster allows a particular national industry to have an advantage. The presence of a cluster of industries accelerates the process of creating factors where there is a group of internal competitors. All firms in a cluster of interrelated industries invest specialized and related technologies, information, infrastructure, human resources; this leads to the massive emergence of new firms. Clusters are the basis of large investments and the government's close attention, something more than the sum of its parts. Economic resources from isolated industries that cannot use them productively begin to flow into the cluster as it develops.

Thus, national competitiveness is directly dependent on the level of development of individual clusters. This is important for the choice of government's policy and strategy of the company. The emergence of clusters is motivated by the transfer of high consumer-valued goods and other advantages of high competitiveness in technological chains from the firm of the cluster's founder to the enterprises-subcontractors.

Competitiveness is propagated up the processing chain. Cluster enterprises are forcing their suppliers to raise the quality of the supplied semi-finished products and thus also increase competitiveness.

Competitors of the leading cluster, struggling fiercely for the domestic market, have already gained experience of successful confrontation with the strongest company in the world and created competitive products that are not inferior in quality to its products. Tough competition of the cluster firms in the domestic market turns into joint expansion abroad. Cluster firms become carriers of the same “commercial ideology” and abroad win rivals.

The core of the cluster is most often represented by several powerful companies. Leading large firms are in a competitive relationship with each other, so the cluster is not a cartel and not a financial group. Specialized production (primarily servicing and supporting) are due to the cluster extremely favorable conditions for its development. Large companies and firms, leading in the world market, need a large number of adapted equipment, materials, etc. to their technology. This creates a large market for small firms with innovative orientation, which becomes a generator of competitive advantages in the future. The cluster provides work for many small firms (suppliers of simple components), i.e. in principle the cluster structure is a kind of copy of the structures of the entire national community of firms. However, the structure of the cluster has one fundamental feature—the cluster contains elite enterprises of the country, which determine the international competitiveness of the nation [5, p. 174].

Clusters in competitive industries that have achieved success can be represented as a vertical chain consisting of a large number of successive stages and those industries that provide equipment and other specialized resources. The acceleration of the process in individual sectors, leading to an increase of innovation and strengthening competitiveness in the global market, due to the formation of clusters [5, p. 186].

Thus, the considered characteristics of the cluster system are a necessary element of success in the world market. At the same time, M. porter considers the cluster vertical (buyer-supplier) or horizontal (common customers, technologies, intermediaries, etc.) relationships, and the framework for the formation of

the cluster; he limits the criterion of the value of exports. Nevertheless, the cluster theory of M. Porter's competitive advantages formation is recognized [5, p. 170].

Clustering on the basis of vertical integration contributes to the formation of a certain system of dissemination of new knowledge and technologies rather than a spontaneous concentration of various technological inventions. The most important condition for effective transformation of inventions into innovations, and innovations into competitive advantages is the formation of a network of stable relations between all participants of the cluster, effective interaction of industry enterprises.

The intra-firm links of the cluster are closer than those of the industry, so the production structure of the cluster is always more profitable. The cluster generates an effect of scale of production, the basis of which is the presence in the face of one of the firms of the core innovation cluster for the production of a certain type of product or service.

Theoretical analysis revealed a number of main advantages of clustering of agro-industrial complex. For administrations: the number of taxpayers and the tax base are increasing (small and medium-sized business management centers, as a rule, are located in the same territory as the business itself, unlike vertical corporations), a convenient tool for interaction with business appears, dependence on individual business groups decreases, there are grounds for diversification of economic development of the territory. For business: human resources infrastructure is improving; infrastructure for research and development is emerging; costs are falling; opportunities for more successful entry into international markets are emerging.

The limiting factors for the development of clusters include: low quality of the business climate, low level of development of Association structures (chambers of Commerce, agro-industrial associations), which do not cope with the task of developing and promoting the priorities and interests of regional and agro-industrial business; short-term planning horizon-the real benefits from the development of the cluster appear only in 5–7 years.

In addition, it should be taken into account that the successful implementation of projects for special stimulation of industry clusters can only be in the presence of a regional strategy. To develop a cluster in isolation from the development of the region as a whole is ineffective.

No wonder that one of the founders of the cluster approach M. Porter in his methodology as one of the most important factors for the successful development of the cluster calls the presence of a sustainable strategy [5]. For the successful implementation of

the regional strategy and the development strategy of the industry cluster should be mutually agreed. When developing a regional strategy, it is necessary to consider what key growth points exist in the region and what different interest groups can do to develop these key growth points.

The role of the regional administration may be to support and initiate cluster activation processes. There is also a highly effective way to stimulate clusters, which administrations have – targeted programs. They can have a significant impact on the development of the cluster. The administration can carry out active work in the formation of economic relations between the various subjects of cluster development, as well as deal with the settlement of various issues between the authorities and the management of the cluster.

Any region can stimulate the development of clusters. For business, the cluster is a real opportunity to ensure competitiveness in the future. However, it is important to understand that clusters, like any other attractive methodology, can yield results only when they are integrated into the broader context of regional development strategies.

The main principles of activity of territorial and branch clusters are:

- Voluntary establishment and cooperation relations in a group of geographically localized interconnected companies, equipment suppliers, components of specialized services, infrastructure, research institutes and Universities, etc., mutually reinforcing and enhancing the competitive advantages of individual companies and the cluster as a whole;
- Development and maintenance of fair competition between cluster members;
- Development of vertical and horizontal integration;
- State support for the acceleration and development of the cluster;
- Optimization of the whole chain of added values and cost reduction, etc.

The main criteria for the effectiveness of interaction between enterprises in the cluster include:

- Increase in production, sales;
- Improvement of the main indicators of production and economic activity of the main participants of the cluster (profitability, capital productivity);
- Increase in tax revenues;
- Increase of investment attraction;
- Increase in the number of enterprises and associations participating in the cluster;
- Increase in the share of small and medium-sized businesses in the cluster;
- Development of economic relations between the cluster members.

In accordance with the cluster theory of economic growth enterprises included in the cluster compete with each other within the cluster, which constantly stimulates innovation activity and lead a common marketing policy outside the region. The combination of competition and cooperation is the main feature of the business cluster, which is not taken into account by the Kazakh developers of regional development programs due to the mentality that tends to create vertical formations. This leads to the instability of economic systems to external challenges, their stagnation, capture by an outside investor or Manager due to the lack of internal momentum of development, incentives for the main players of the territory and the sustainable functioning of the mechanism of adaptation to changes in macroeconomic parameters and the external institutional environment.

From this point of view, the higher the degree of clustering of the specialized territory – the more intensive the stochastic search for individual objects, as a result of which the rules of the game are developed and fixed, ensuring deterministic development. It follows that any region must have economic dualism, owning:

- Heredity, i.e. to have stable institutions and connections within the system that support immunity from the impact of global crises on financial and commodity markets, systematically and meaningfully countering the trends of standardization and unification, while maintaining technological innovation diversity;
- Variability (adaptability), adapting as quickly as possible to global economic development trends, institutional changes in the external environment and external demand.

Competition in the domestic market has three levels:

- Inside the cluster;
- Between clusters;
- Between domestic and foreign manufacturers;

In its resolution, in the case of controlled clustering, such a structure usually goes through five stages:

- Motivation of potential participants of strategies;
- Development of common strategies;
- Implementation of the pilot project, which checks the rules of the game established within the cluster;
- Inclusion of self-regulation mechanisms;
- The transition of the provisions of regulations and the system of agreements business tradition.

The success of the leading companies directly depends on the companies-suppliers of raw materials, components, components and specialized services. At the same time, the General economic conditions, such as the availability of human resources, technologies, access to financial resources, infrastruc-

ture development, and the state of the business climate, are the basis for the activities of both firms.

Clustering is the dominant principle of the regional economic policy of the country, designated by the President of Kazakhstan. The course of improving the competitiveness of the economy requires the regional authorities to rethink their role and greater initiative in interaction with business, as the competitiveness of the economy, although the macroeconomic term, but its real content is the competitiveness of specific companies that operate in specific regions. This situation necessitates the definition of new approaches in the regional development of the country.

At present, it is possible to note the establishment of relations between companies and the government and regional authorities, educational, scientific organizations, financial institutions and each other. For each of the seven areas, the government has developed a “Sectoral plan of assistance in the development of clusters“, which included specific steps to address the problems facing the business. It should be noted the importance of strengthening the interaction between the state and business, when there is an equal dialogue with the development of joint solutions for the development of business and the economy.

One of the main problems that led to the need to create and use the cluster method was the lack of mutually beneficial relations between partners in a single technological chain “production-storage-processing-sales“ of agricultural products. For example, in the cotton-textile industry, this problem is the lack of interaction between producers of raw materials and textile enterprises, as well as with suppliers of machinery, technologies, seeds, fertilizers, fuels and lubricants, etc., i.e. there is no mechanism of mutual interest of participants in the value chain.

The mechanism of interaction between the participants of the territorial and sectoral cluster includes economic relations between agricultural producers and processing enterprises; land tenants and its owners, producers of seeds and fertilizers; direct (equipment, electricity, fuel, water and human resources) and indirect (financial, construction, transport and storage services) suppliers; economic relations of the main components of the cluster with auxiliary, in particular, accompanying and supporting enterprises (universities, public unions, state bodies, Committee on standardization and Metrology, etc.), infrastructure (road and railway, telecommunications), wholesalers, exporters, etc.

The analysis of foreign experience of cluster development confirms that the States of different countries concentrate their efforts, supporting the existing clusters and the creation of new networks of companies that have not previously been in contact with each other. The state not only contributes

to the formation of clusters, but also becomes a member of the networks. For example, in Germany since 1995 the program of creation of biotechnological clusters Bio Regio works. In the UK, the government has identified areas around Edinburgh, Oxford and South East England as the main locations for biotech firms. In Norway, the government is promoting the development of a cluster that includes the production of wood and wood products, paper, furniture, printing and related equipment. Most European countries, despite the fundamental difference in approaches, have developed a cluster strategy. Countries implementing the strategy include Denmark, the Netherlands, the Flemish region of Belgium, Canada (Quebec), Finland and the Republic of South Africa (under the new government). France and Italy are countries that have long practiced a kind of cluster strategy, although named differently.

It should be noted that the co-operation of clusters is initiated from below by interested entrepreneurs and inventors, and only in very rare cases – representatives of the state and local structures of political power. The state does not directly interfere in this process; it does not prescribe the direction, number and composition of participants, technology of cooperation and other similar issues. Public organizations usually organize and finance meetings and seminars to intensively disseminate the cluster idea and to improve its efficiency. Direct definition of the specific content

of the joint work is solely the business of entrepreneurs and other members of the cluster, i.e. people who work daily and directly in the market conditions. Only they (and not civil servants) are able to determine the prospects of a particular process, invention, etc.” [6].

Thus, the successful implementation of the cluster policy will contribute to further diversification of the economy; increase its competitiveness, increase innovation activity and quality of life. The development of innovative clusters will help to equalize the levels of development of individual territories of the country, the removal of social tensions.

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