



## **Agro-industrial Clusters as a Factor of Increasing Competitiveness of the Region**

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### **ABSTRACT**

There are two main and urgent problems in modern development of regions' economy concerning the transition of interregional divergence and the transition of difficult regions to a model of "catch-up" development and the determination of new more competitive forms of their spatial organization development. Best practices and theoretical studies of future development reorganizations in reference Russian regions allow to consider agro-industrial clusters as such a form. A cluster approach formed taking into account affirmative synergetic effects of a regional agglomeration, network effects, diffusion of innovations can be an accelerator of social and economic attitude development of difficult regions, prevent deprivation of rural territories. Development of general agreements of clustering is combined with development of a complex system of strategic planning of the cluster territory creation. A development plan of an agro-industrial cluster and a program of its realization are reasons for implementation of complex state support of cluster initiatives and cluster potential attitude development. Thus, an imperative of economic space causes the need for modernization of program-oriented and goal-oriented management of social and economic development of difficult regions, rural areas of the formation of a cluster strategy and network models of interaction in an agro-industrial complex.

**Keywords:** Cluster, Creation, Agricultural Industry, Region, Competitiveness, Agriculture

**JEL Classifications:** J43, A19, A10

### **1. INTRODUCTION**

Formation and development of regional clusters is estimated as an important competitive advantage of the modern economy, providing a real synergistic effect, as the basis of regionalism in the global economy. In accordance with the conclusions of Porter of the competitive advantages of clusters reflect the trend towards integration and socialization of the economy. According to the theory of Porter, a cluster - A group of geographically adjacent interconnected companies (suppliers, vendors, and others.) And associated organizations (educational institutions, public administration, infrastructure companies) operating in a certain area and complementing each other. Most modern theory of competitiveness based on clusters designed Feldman. The advantages of this theory lies in the fact that they are based on

extensive empirical research diversification of forms in different countries. Competitiveness of Russian regions is defined as the presence of competitive industries or industry segments, as well as the ability of regional authorities to create conditions for regional enterprises to achieve and retain a competitive advantage in certain areas. The implementation of cluster initiatives at the regional level aimed at achieving the following objectives:

- Improving the competitiveness of cluster members through the introduction of new technologies.
- Reducing costs and improving the quality of the corresponding high-end services through the synergy and harmonization of approaches to quality, logistics, engineering, information technology, etc.
- Provision of employment in the conditions of reforming of large enterprises and outsourcing.

- Consolidated lobbying cluster members in various bodies. Noise clustering: A lack of trust among potential cluster actors; uneven technological and managerial level of the various business entities; virtually inactive business information systems; lack of competence and expertise in the partnership activities; a low level of entrepreneurship; Inactive professional associations; ineffective innovation policy.

For regions with their climatic, natural resources and scientific cluster form is most preferred, especially in the territorial organization of the food processing, chemical industry and agribusiness. Cluster type of business should be the determining factor in the strategy of development of the relevant industries, which necessitates the development of the foundations of the cluster theory with regard to the specifics of the industry and the territorial organization of production in the region. Innovation strategy in the region should include a number of priority areas on which to plan specific activities, the creation of investment areas for its implementation. The development of regional clusters is an important element of policy on the development of innovative potential of any region, increasing the competitiveness of regional enterprises. Business and scientific community, regional authorities, associations and other interested parties play a significant role in increasing the competitiveness of regional clusters (Arzhakov and Silnov, 2016). They are compatible with each other, interact with the environment, provide the flexibility of the cluster structure and adaptability to rapidly changing market conditions from the experts, products and services for continuity and reliability. Clusters stimulate a significant increase in productivity and innovation. Companies benefit by having the opportunity to share good practice and to reduce costs by sharing the same services and suppliers. Constant interaction promotes formal and informal knowledge sharing and collaboration between organizations with complementary assets and skills. Local educational institutions and infrastructure create additional benefits for companies. Rivalry between firms stimulates competitiveness and pushes them to constant renewal. Many of these benefits are more significant for small businesses than for large companies that have a greater potential for the creation of these benefits at the expense of domestic reserves. Territorial-production integration based on clusters as a system “open” type in the near future will become one of the main directions for placement of the productive forces in the region. According to the assessment, obtained through the analysis of opportunities and identify strategic directions the industry, performed by the office for the development of processing industries using SWOT-analysis, the strength of the food processing industry is a favorable geographical position of the region, the presence of chernozems and flat terrain, development of crop and range of investment laws. Weaknesses is high degree of wear of process equipment, not enough meat and milk raw materials of its own production, not a wide range of products, weak marketing activity of the enterprises and the lack of qualified specialists in the industry. It features the industry include the creation of advanced agro-industrial clusters, integration of industrial and commercial capital is a merger, acquisition and concentration of assets among the largest players in the market. A threat is a collaboration with the WTO and the development of similar competitive industries in neighboring regions.

In the long-term development of the Russian Federation for the period until 2020, the main directions of the transition to the innovative socially oriented type of economic development. One of the constituent elements of the sixth direction - The transition to a new model of spatial development of the Russian economy is to create a network of regional industrial clusters, realizing the competitive potential of the territories.

Creating the concept corresponds to the last cluster as an effective form of territorial increase competitive advantage manufacturers. This concept is based on the theory of competitive advantage of Porter, the concept of regional clusters Enright, the theory of industrial districts Marshall and Italian industrial districts Bekatini, the concept of a combination of the value chain and clusters, the concept of learning region. It can be argued that the first precursors of clusters in Russia were territorially-industrial complexes (TIC), based on the respective TIC theory developed by Soviet scientists, with extensive use of system analysis methods and economic-mathematical modeling.

Under the cluster refers to a set of legally independent producers of goods and services, their providers, creators of technologies and know-how (universities, research institutes, engineering companies, etc.), the infrastructure market institutions (stock exchanges, markets, consultants, etc.) and users interact with each other within the same value chain.

Cluster form of organization of production is sufficiently developed in many leading countries of the world. For example, in Finland, occupying in recent years, according to the methodology of World Economic Forum, a leading position in terms of competitiveness, this form of management is defined as a priority.

To date, the formation of innovative high-tech clusters should be a priority on the road to achieving the strategic objective of improving the competitiveness of the real sector of the region.

In 2007, in accordance with the methodology of the company “Bauman Innovation,” comparable to the methodology of the World Economic Forum used for the preparation of country rankings in the Global Competitiveness Report, made assessment of the level of competitiveness of the Southern Federal District (SFD).

According to calculate an index of international competitiveness in the international ranking of the Russian Federation, there are a few positions and the SFD is on these indicators between Latvia and Mauritius. Despite the fact that Russia is in the same rating stands at 71 place, the level of competitiveness of the real sector of the region cannot be considered acceptable. The relative competitiveness of district contradicts relatively low in comparison with the average performance level of life that, in particular, to a large extent depends on the level of development of productive forces in the region.

From the perspective of economic development of the SFD is one of the regions of the “Applicants for leadership.” This group includes the regions, which have more or less acceptable level of

per capita gross regional product, but developed rapidly enough. The reasons contributing to this, a lot.

The development strategy of the SFD to 2020 identified the main factors contributing to the lack of competitiveness of the real sector of the region:

- The lack of competitiveness of products, goods and services producers boundary. Lack of modern technology, providing high-quality characteristics of manufactured products and services.
- Significant degree of physical and moral deterioration of basic equipment in most county enterprises.
- Lack of sufficient innovative touched, determines the competitiveness of the real sector of the economy. Backwardness of innovation infrastructure.
- The large number of bankrupt enterprises in agriculture. Insufficient use of modern market management systems, work organization, resource, etc.
- Low level of service and high prices for County resorts.
- High enough image of the many resorts in the county compared to resorts competitors.

This list can be supplemented with power shortages factor in the economic system of the region, which limits the opportunities for economic growth.

Also highlighted related to non-competitiveness of the economy District threat to the most important of which are:

- The threat of growing technical and technological backwardness of many industries from the competition in Russia and especially abroad.
- A high level of industrial infrastructure and depreciation of fixed assets - the threat of further degradation.
- Lack of sufficient innovative groundwork for ensuring high rates of economic growth in the long term.

That is, to date, a causal link between the lack of competitiveness of the regional economy and its determinants is bilateral. Adverse factors exert their negative impact, competitiveness is reduced, which further worsens its basic components. Hence the need for quality adjustment methods of management and organization of production in the region.

Lack of competitiveness is also linked with the predominance of the economic system in the SFD of industries with relatively low productivity employment.

The most developed in the structure of the real sector of the region's industries are agriculture, food industry, health resorts and tourism, manufacturing, transport and logistics activities.

At the moment, a significant part of the SFD of the employed population works in the least productive sectors of the economy: A large part of the interest is employed in agriculture, the food industry, the sector of social services traditionally have low productivity. The share of employment in high productivity sectors is minimal. For example, <1% of the county population is employed in the fuel industry.

The development of the real sector of the region should be based on an intensification of the innovative way in the priority areas: Health resorts and tourism, agriculture and energy.

## 2. MAIN PART

To deal with business depression in the region during the period of reconstruction it is necessary to make a decision in promoting competition at various levels and in various spheres of economic activity. In these conditions the transition from a model of "catch-up" development to a model of rapid development is possible only due to increasing competitive opportunities of the agro-industrial potential of the region and the state in general.

In globalization the level of competitiveness of state economy and agriculture depends on overall performance of such new competitive forms of the production organization as agro-industrial clusters by which is understood a group of interdependent companies in a certain territory, suppliers of equipment, specialized suppliers, sub-suppliers, infrastructures, research institutes, higher education institutions and other educational mutually supportive organizations which strengthen competitive advantages of separate companies and organizations, and also a cluster in general (Benefits and Implications of Cluster Development of Regions of the Russian Federation. Russian Business Portal of Business Information Support Alliance Media).

A cluster approach in agro-industrial development management is realized in the form of the cluster policy. In world practice there are two models within which the cluster policy is conducted. They are liberal (the USA, Great Britain, Australia, Canada) within which a cluster is considered as a market component, and the role of federal authorities consists in removal of the barriers for its natural development, and dirigiste (Japan, Korea, Singapore, Sweden, France, Finland, Slovenia) aiming at active participation of the country in the creation and development of clusters.

The statistics conducted in the Russian cluster policy confirms the formation of a dirigiste model which, in our opinion, is the most effective in modern Russian conditions.

As the main sources of information the paper has used publications and reports, modern scientific approaches to research of peculiarities of development of an agro-industrial complex, agricultural associations in the region and in economy of the Russian Federation, and also works of domestic authors which are devoted to the organization and development of agro-industrial clusters and their role in the economic system of the Russian Federation. The paper has also used comparative analysis methods, grouping, systemic approach on the basis of comparison of theoretical and practical material and the solution of practical tasks.

## 3. DISCUSSION

The implementation of the state agro-industrial cluster policy assumes development of strategies focused on the formation of clusters in agricultural associations.

Priority strategic directions of the formation of agro-industrial clusters should be defined taking into account regional feature, and the state policy where, first of all, the high ratio of farm people and the rural unemployment level should be pointed out (Table 1). So, support for development of regional agro-industrial clusters is the priority direction of the state cluster policy (Bogdanova & Lemetti, 2011).

The plan of development of an agrarian sector should be based on research of the spatial potential of development of the Russian Federation also.

Target programs, which present a way of achievement of the assigned purpose in the strategy, can help to carry out the strategy of agrarian society development.

It should be noted that the majority of developed and realized programs of agriculture development were frontal that means that they influenced socio-economic processes of large economic systems of the state, or local that means that they were focused on the improvement of the structure of cities, rural settlements or city agglomerations.

Such programs often became a way of budgetary joint financing of a set of separate projects, but not means of supply of progressive structural shifts in the agrarian sphere, accommodation of public contradictions (Ernst, 2008).

In our opinion, programs of a local type directed on the formation of agrarian clusters on the basis of the creation of unified orientation of agriculture, complex development and use of territorial combinations of natural and economic resources, specializations and production cooperation o, territories and competitive environment are productive.

Conducted researches of the condition of the agrarian sphere of the state, regions, settlements, market potential, competitive environments allow to point the following potential agrarian clusters: A cluster on meat production and meat packing, a fruit and berry cluster, a cluster on production of wool products, a cluster of dairy product, and others.

Cluster structures occur in institutional environment which is characterized by certain qualitative properties stimulating the clustering process.

Significant properties of the institutional sphere promoting the clustering process are the considerable level of competition inducing local economic entities to the integration interaction and the high level of production concentration.

**Table 1: Ratio of urban and farm people and the unemployment rate in 2015, %**

Country	The ratio of farm people		The unemployment level	
	City	Village	City	Village
The Russian Federation	73.7	26.5	6.4	10.8

The prevalence of farms of the population in production of agricultural goods of the state testifies to the prevalence of natural and small-scale production and almost the total absence of competition between producers as a basic element of a cluster form of the business organization.

And therefore low competition and production concentration put into to an insufficient critical mass of participants of an agro-industrial cluster (Polunin, 2012).

## 4. RESULTS

In this regard development of small forms of economy management in the agrarian sphere of domestic economy is important. For this purpose target programs of the state and regions which determine development of peasant farms for increasing production and sale of agricultural goods with the use of conditions for the creation, expansion and modernization of the production base of newcomer farms, the organization of conditions for peasant farms for availability of financial resources, the stimulation of the transition of citizens who are engaged in part-time farms to peasant farms (Myrzaliyev, 2005).

A favorable and acceptable investment climate is among conditions stimulating the process of the agrarian clustering.

The improvement of an investment climate during the recovery growth, first of all, assumes carrying out active innovative policy of the state promoting the greatest application of intellectual, scientific and technical resources.

There are the following effective mechanisms of innovative policy of development of agrarian spheres under the conditions of the recovery growth:

1. The establishment of minimum admissible costs for science and innovation funding in the budget and giving to these papers the status of protected.
2. The organization of innovative centers such as the Innovative Consulting Center, the Center of Agrarian Reforms, the Center of Scientific and Technical Information, and the Coordination Council for Innovations that conducts analytical researches of innovative opportunities.

The diversified structure of economy is one of defining conditions of the creation of an agrarian cluster.

Analysis of the structure of manufacturing activities of economy allows to claim that an agro-industrial complex mainly manufactures production of narrow limits. While in the Russian Federation the total average output of branches of agricultural processing surpasses the average volume of the production of agriculture goods. On average in regions the economic results of branches of food and light industry counting on one citizen taking into account the created value added lag behind the economic results of agriculture (Hukhrin, 2008).

The agro-industrial cluster policy should be based on support of those branches and spheres of economy which can give a

synergetic effect and a fillip to independent development of agricultural business. Such effect, in particular, is provided by the transport infrastructure which provides the reliability of communications between economic entities, and also an access for consumers to outputs. Analyzing an agro-industrial cluster as a form of institutionalization of economic interests, it should be noted their key role in increasing employment of farm people.

In our opinion, restructuring of the system of trade and saves promotion of agricultural goods and food should become a necessary condition of clustering in an agro-industrial complex of the state.

## 5. CONCLUSION

Conducted complex analysis of socio-economic tendencies, the creation of a cluster in an agrarian sector under the conditions of the recovery growth on the basis of the diagnostics of indicators of its efficiency and productivity, and also the spatial potential of agriculture development in the Russian Federation, shows that, despite the existence of a number of factors which put up a sturdy resistance to functioning of the agrarian sphere, low competitiveness, adverse investment policy in domestic agriculture, prerequisites of the transition to a cluster model of development are formed.

It has found out that the formation of cluster-forming conditions will demand active state policy directed to increasing competition and production concentration in the agrarian sphere, the improvement of an innovative component of investment climate, the diversification of the structure of economy, the stimulation of branches and spheres of regional economy which can give a synergetic effect.

The formation of the resource base of support for investment projects directed on the formation and functioning of agro-industrial clusters of the agrarian sphere assumes the foundation of a unified investment system including such institutes as the unit investment fund of agricultural consumer credit cooperatives, funds of financial mutual aid, agro-industrial leasing funds, the venture innovative fund, and also the institute of mortgage credit lending.

And only these projects will allow to realize effective activity of agro-industrial clusters and the high level of quality indicators of final goods.

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