

Cluster Approach to Organizing Vertically Integrated Structures of the Regional Agro-Industrial Complex

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Abstract

At the current stage the integration development in the agro-industrial sector is contradictory. The legislation uncertainty complicates the economic relations between integrated entities and market subjects. It is necessary to consider rationalization of the production structure, optimization of the organizational structure of technological food systems and the development of an economic mechanism for sharing the results of joint activities as the main areas of the economic policy within the integration process. Now it is necessary to pay special attention to organizing integrated structures based on the cluster approach, which will improve the investment climate of industries related to the production of the region's agro-industrial complex, and stimulate innovative processes (Smykov, 2007). When forming efficient and competitive agricultural production that can ensure the country's food security, such integrated structures as agroholdings involved in agricultural production, processing and sale on the basis of holding relations are important. The formation of these integrated structures has its own fundamental features and difficulties. Regional conditions for the development of the agro-industrial complex are as important here (Ushachev, 2011).

Keywords: Integration process; Integrated structures; Cluster approach; Agrocluster; Economic mechanism.



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1. Grounding the Economic Feasibility of Agro-Industrial Integration in Russia

Cooperation and integration are important parts of the policy on overcoming the crisis phenomena in the agrarian area. Reforms in the agrarian sector of the national economy resulted in the reproduction crisis that is the main restraining factor when providing the country's population with domestic food. The current disproportions among certain factors of production, land, labor and capital in the agro-industrial complex continue to deepen. As a consequence, the existing resource potential of the industry is used irrationally, and the agricultural production remains unsustainable. The reduction in agricultural output has destroyed the raw materials base of processing enterprises. Due to the lack of investments for restoring retired equipment, the majority of agricultural enterprises carry out the limited reproduction. And some large integrated formations carry out both simple and expanded reproduction (Shcherbatova *et al.*, 2013).

Under the modern production and organizational and economic conditions, due to the disintegration of entrepreneurial interests, there are three types of capital operating in isolation: financial capital in banks, production capital at enterprises, and commodity capital which turns at the enterprises that sell products. Scientific and technological progress and industrialization of agriculture objectively require the concentration of capital in large formations where all production factors are efficiently used on the basis of resource and energy-saving technologies (Ushvitsky, 2008).

The establishment of large corporations that can easier attract investments is one of the strategic areas of the agrarian sector development that makes it possible to pursue the agrarian policy. The task of the integrated economy is to level its participants' profitability. The criterion of equal exchange relations' profitability is considered to be each integration participant's share contribution to the final result of the integrated association based on the normative values (Ushachev, 2003).

The evaluation of the comparative efficiency of the world and Russian enterprises that differ by their size shows indisputable advantages of large productions. In particular, they include better financial opportunities as compared to small enterprises to acquire and efficiently use modern, expensive equipment and technologies, less need in technology and equipment per unit of the processed area, and, consequently, a high workload and efficiency of using technical means in the production, increase in the agricultural productivity, reduction of the production cost due to the scale and decrease in the share of fixed costs in the products price, better use of the resource base of the agricultural sector, more favorable conditions for borrowings, much better opportunities to implement the innovative way of production development, better conditions for the rationalization of the production and economic process based on the optimal size of the main production and servicing structural units, their specialization and geographic location, prerequisites for the introduction of a closed production cycle, processing and selling products in order to

displace intermediaries and maximize profit, opportunities to attract highly qualified managers and specialists under the terms of high salary and creating a set of social and living conditions, funds to improve working conditions, life, professional and cultural development of employees by introducing new technologies and the inflow of young professionals (Burlankov and Gubeydulova, 2009).

State support, countersanctions and devaluation of the ruble made agriculture one of the most attractive businesses in Russia. In 2011, the profitability of agricultural producers was below 12% (including subsidies). In 2016 it approached 20%. It became interesting and profitable to be engaged in farming. For five years the agricultural production increased from RUB 3.3 trillion to RUB 5.6 trillion. The economy decreases, while the agricultural industry grows (in 2015 the agricultural production grew by 2.6%, and in 2016 - by 4.8%) and increases the revenues of agricultural enterprises and wealth of its owners.

2016 became extremely productive for large agroholdings in relation to the increase in the land bank. According to the statistics, the area of agricultural land owned by legal entities continued to increase (17.3 million hectares as on 01.01.2016*, which was almost 1 million hectares more than in the previous year). Taking into account the fact that the data in the rating mean land assets under control (i.e. owned, leased or under any other legal right), the total land bank of even the top five leaders was already impressive – 3.249 million hectares. In the rating for April 2017 the total land bank under the companies' control was more than 12 million hectares.

The main resource for the growth is still the expansion by import substitution. Thus, in 2015 the share of domestic pig production increased up to 90% as compared to 50-60%, the indicator that fluctuated until 2014. At the same time, in the reporting year the share of pork produced by households decreased by 15%, while industrial production was 79% of the market. The main players of this segment, *Miratorg* and *Cherkizovo*, managed to increase their revenues by 30.1% up to RUB 96.3 billion rubles and 12.2% up to RUB 77 billion.

Besides, top ten include several companies that work on the oil and sugar market: oil-bearing crops processors and exporters (Efko, Yug Rusi, Aston), leading sugar producers (Prodimeks and Rusagro), and Sodruzhestvo, the largest processor of soybean in the country.

2. Peculiarities of Establishing and Operating a Holding Company in the Agro-Industrial Complex

The development of agro-industrial integration is a complex objective economic process related, on the one hand, to the social division of labor, on the other hand, to the need in interaction among industries and types of agrarian and industrial production. Agricultural enterprises enter into integration relations and try to mitigate the risk caused by the specificity of agricultural production, its dependence on weather and climate conditions, and the spontaneity of the agricultural products market. Processing and other enterprises of the agro-industrial complex also seek to secure stable income due to a reliable raw material base or markets for selling their products or services. In practice, agro-industrial formations are often initiated by management bodies of the agro-industrial complex. Hence, it is very important for the agro-industrial integration to be based on the principle of not forced, but convinced voluntariness and not to come down to another stage of reforming enterprises of the agro-industrial complex. Since the state lacks funds for investments, integration under private capital management is gaining its strength, which covers the most efficient sectors (Bazaev, 2006).

Two types of integration processes are usually considered: intraindustry (interaction of agricultural producers) – horizontal integration, and interbranch (organizational and economic association of enterprises from various industries) – vertical integration. The horizontal integration is an intraindustry association that involves the division of labor, deepening of the production specialization, and the development of interfarm technological links. It is often expressed in the production concentration. The vertical integration is a form of combining all or a number of adjacent links in the production and circulation from producing means of production to selling the final product to consumers. It implies the establishment of comprehensive control over all production links from a single management center. The vertical integration contributes to the formation of a new type of productive forces (Baklazhenko, 2010).

Effects of the vertical integration include saving money by connecting successive production processes, eliminating expenses to search for partners and concluding agreements, reducing expenses for storing products, ensuring control over resources, and, what is most important, mitigating the financial, commercial, production, investment, innovative business risks and ensuring reproduction processes in separate farms and the industry, as a whole (Kerashev and Baibekova, 2007).

3. Problems Related to Functioning of Vertically Integrated Companies in the Russian Agro-Industrial Complex

The development of cooperation and production integration in the agro-industrial sector is contradictory, and comes with a variety of positive or negative effects. There are many problems associated with the functioning of integrated and quasiintegrated structures in the agro-industrial complex that have great applied significance. The need to improve the economic efficiency of regional agro-industrial complexes sets new challenges for the territories, primarily related to selecting a competitive model of the regional economy that makes it possible to take the full advantage of the existing potential (Malkova and Erzhenina, 2006).

Today the most important issues of observing the legal norms of joint functioning and regulation of the investor's economic relations with agricultural enterprises and owners of real estate, land shares have not been

resolved. In the Civil Code of the Russian Federation there is almost no legislation regulating various aspects of functioning of integrated units, such types of organizations as a corporation, holding, plant, etc. [Sulakshin \(2012\)](#).

In some cases, integrating firms really contribute to efficient organization of the activity of the enterprises that are formation members. In other cases, an integrating firm uses unequal economic relations, redistributes the created aggregate income to its own advantage, and thus deprives the agricultural enterprises and organizations of normal reproduction conditions. Not only participants of the integrated formation, but also in general few people are informed about the real economic efficiency of the entire formation, because the consolidated statements are mostly not disclosed. The legislation does not limit the maximum size of land ownership, and against this background there are processes of colossal concentration of lands within agricultural firms and holdings ([Romanova, 2007](#)).

It is necessary to refer the following to negative trends related to the integrated units functioning: the increase in the number of unemployed in the countryside, depriving peasants of land and turning them into simple employees, alienating them from the labor results, strengthening contradictions between the rural settlements administrations and firms of integrating investors due to their unwillingness to participate in solving social problems of the territories where their production is located. Economic relations are established, first of all, in the investor-integrator's interests, when it is interested in the payback of its investments, obtaining the maximum profit, and this is often at the expense of the agricultural enterprise's or territory's economy. The monopoly of a large enterprise is developing, competitive but small and almost failed producers are pushed out of the market ([Shitkina, 2006](#)).

The nature of the relations that are established within the integrated formation in terms of the distribution of newly created value depends on many circumstances, including the type of economic activity that dominates with the integrating firm. If the dominating type of activity is related to the final production by using agricultural raw materials, the integrator firm, as a rule, happens to be interested in long-term progressive organizational, production and technological, structural and economic transformations in agricultural enterprises. These transformations aim at ensuring the implementation of such goals as improving the quality of produced agricultural raw materials, contributing to the reduction of costs and various types of unsubstantiated losses, increasing the regularity of supplying raw materials, improving the financial sustainability and profitability of agricultural production ([Glushchenko and Ermakova, 2012](#)).

The lack of regulation in the civil and economic legislation of the relations within the holding makes it difficult to efficiently distribute property rights in terms of economy, and makes the positions of firms included in its structure vulnerable to unscrupulous integrators. It is necessary not only to legally regulate the relations within the holding and rights and obligations of integrators in relation to the merged enterprises. It is also necessary to scientifically substantiate the model forms of organizing enterprises and economically expedient forms of organizing the interaction of independent enterprises within the holding ([Molchanenko, 2014](#)).

In this regard, it is reasonable to set the issue on substantiating rational methods and instruments for protecting property rights of enterprises and organizations that are combined during the agro-industrial integration, but that used to be independent.

4. Organization of Cluster Structures as One of the Main Areas for Improving the Economic Mechanism to Develop Integration Processes in the Agro-Industrial Complex of the Region

According to the authors, it is possible to single out the following main areas of the economic policy within the integration process:

- Rationalization of the production structure,
- Optimization of the organizational construction of technological food systems and the development of the economic mechanism for allocating results of joint activities,
- Change of property relations,
- Correction of specialization, location and concentration of production,
- Regulation of economic relations among enterprises,
- Diversification of production, i.e. the creation of new or additional productions, and
- Improvement of the management system ([Smykov, 2016](#)).

Under the current conditions, it is necessary to pay attention to the organization of cluster structures in the agro-industrial complex, to show the efficiency of their functioning and tasks of their formation in the region. The study of this problem is important when substantiating the state economic policy, improving the institutional basis of the agro-industrial complex, and contributing to the development of more efficient forms of integration.

According to the researches made by Michael Porter, the founder of the cluster approach to the theory of competitive advantages, competitive firms extend their impact to the market subjects they interact with: suppliers, consumers and competitors. In its turn, the improvement of these firms' competitiveness has a beneficial effect on the activities and status of competitiveness of the leading company. This interaction results in the formation of a cluster, i.e. a community of closely related industries that mutually contribute to the improvement of each other's competitiveness. Some clusters contribute to improving the competitiveness of individual industries of the region on the domestic and world markets.

The agrocluster is an innovative, geographically localized integrated structure with elements of network organization based on agricultural production and including various areas of the agro-industrial complex that are a part of the technological chain on creating the value added.

The development of clusters and vertically integrated companies can complement each other: the cluster approach does not conflict with the tasks of developing vertical corporations, which is important in the current structure of agricultural production in most regions (Smykov, 2007).

5. Conclusion

The organization of integrated structures on the basis of the cluster approach in the form of agroholdings will improve the investment climate of industries related to the production of the agro-industrial complex of the region, stimulate innovative processes, and, thereby, increase the competitiveness of the agro-industrial complex. Many Russian regions have prerequisites for creating a territorial production structure based on the interaction of the scientific and educational area, enterprises of the agro-industrial complex, trade, service and the state. Such symbiosis can become a "growth point" of the agro-industrial production. In addition, the cooperation with agricultural enterprises will be profitable and useful for research and educational institutions of the region. Constant monitoring of enterprises by the state will improve the efficiency of the state regional policy.

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