



## **Institutional Features of Cluster Development in the Russian Federation**

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### **ABSTRACT**

The paper has presented the author's views on the subject of conceptual approaches to research the features of reformations in the agrarian sphere of economy. It has paid attention to the fact that an objective compelling reason for an essential reformation of the agrarian sphere of national economy is to promote national food security. The authors think that one of the best ways to change business forms and patterns is to generate agro-industrial clusters in Russia. The authors of the paper believe that agro-industrial clusters have the potential to become in the current context an adequate response in choosing future paths to reform the agrarian sphere of the Russian Federation economy considering the common inner instability within the country as well as the constantly changing foreign-economic challenges, including food sanctions. The authors consider some theoretical aspects of creating agro-industrial clusters in the system of national economy, pay their attention to historical aspects of dialectic development of the cluster theory, analyze a possibility of exploiting advantages of clusters in relation to the agrarian sphere of national economy, carry out a development of the author's hypothesis of an official functionally structured modeling of organization of agro-industrial clusters and offer to consider agro-industrial clusters as a possible way of the reformation of business patterns in economy of the Russian Federation. Special attention is paid to agro-business holding companies as to key elements of creating subject agro-industrial clusters. The paper emphasizes relevance of the arrangement of necessary institutional conditions to create effective agro-industrial clusters in Russia.

**Keywords:** Agro-industrial Clusters, Investment Attractiveness, Quality of Life

**JEL Classifications:** E22, C38, Q13

### **1. INTRODUCTION**

The most important objective is the development of the strategy for economic and social equalization of the regions. This objective is urgent not only for the Russian Federation. It assumes large scales in the BRICS countries and other developing countries. Developed countries have not solved the issue concerning regional development.

Nowadays, development of an agro-industrial complex experiences both positive and negative changes. The embargo on import of food products among a number of the countries of Europe and America, and also sharp deviation of an exchange-value of ruble in relation to the main world currencies had serious impact on food prices that demonstrates the weakness

and instability of an agro-industrial complex in food, materials and equipment.

The endogenous factors which characterize unstable development of the infrastructure of agriculture and functional depreciation of the funds greatly influences the generation of agro-industrial clusters in Russia. Together with an adverse social and economic situation in rural territories, it makes the state to develop the cluster policy in the regions by more rapid pace.

However, these methods could become fundamental in solution of the questions connected with investment into agro-industrial complex. Absence of incentives to development influences the investment appeal and technological modernization of a complex necessary for expansion of reproduction in a complex.

## 2. MATERIALS AND METHODS

While writing this paper as an outcome for intermediate research of forming agro-industrial clusters aspects depending on investment attraction analysis in various regions of Russia, the authors chose to use the following research methods: Abstract-logical, monographic, analysis and synthesis method, along with the statistic and investment analysis methods. The informational support of this research is based on the data of the Federal Service of State Statistics, the RF Ministry of agriculture together with national and foreign reference and scientific literature. The data were processed with the help of software packages such as SPSS, Microsoft Office. Some single results of the research were presented at the Second Political and Economic Congress of the Commonwealth of Independent and Baltic States (May 2015, Moscow), at International and Regional Scientific Conferences (Russia: Moscow, Ufa; the Republic of Slovenia).

Theoretical and methodological approaches in the research of agro-industrial clusters in the economic system of Russia requires, in the first place, to define more precisely the basic concept – “agro-industrial cluster.” The input in the economic turn, the common term “cluster” is usually referred to M. Porter (2005).

M. Porter (2005) associated this concept with geographical concentration of transactors, bound by one, and the same type of economic activity as one of the mechanisms of competitive advantages for such activity. However, initial sources determine essential characteristics of this particular definition were observed in the works of J. Thunen and A. Marshall. Long before using the term “clusters,” J. Thunen researched the main principles of this economic concept. J. Thunen per se is the founder of the location theory (or the theory of production localization – authors’ editing) by the example of agriculture (Blaug, 1994). Undoubtedly, many J. Thunen’s theses on discovering the objective laws of localizing an agriculture production, which are formulated in his “Isolated State” in modern perception may seem quite abstract. Especially this concerns the issues on localization zones of agriculture activities around urban establishments because of the isolation from outer relations with an official economic model. It is important, however, that at present there is a relevance of the issue of production forces localization in agriculture as one of their determinant of stable development of rural regions.

A. Marshall focused his attention on the issues of production organization, which also indirectly concerns the essential cluster characteristics (Marshall, 1984). Along with this, A. Marshall’s algorithm to examine the advantages of organization may be presented in the form of a logical chain: Natural organization of people in a society – the process of division of labor – specialization of an educational process – usage of the advances of the technological progress – territorial specialization of production (authors’ editing). In Chapter 10 of his “Principles of Economics,” where A. Marshall explores the issues of concentration of specialized industries in separate regions, he practically describes the essential characteristics of the category “cluster,” although he is not using the very term “cluster” but “location” instead (Marshall, 1984). Interestingly enough, A. Marshall, while

studying production location issues, refers to agrarian sphere of Russian economy. In particular, he wrote: “In Russia the accretion of family groups up to the size of a rustic establishment generates the emergence of localized productions, along with this there are innumerable villages, each of which produces only one kind of produce, or even a part of a produce.”

Additionally, it is important that the main reasons for localized productions, both in the times of A. Marshall and in modern conditions, are first of all “natural conditions – character of the climate and the soil, richness in minerals and wall stone in the given region or within striking distance on land or in water” (Marshall, 1984). At the beginning of the 20<sup>th</sup> century based on the statistic method, B.S. Yastremskiy explored clusters in Russia. In particular, he determined the criteria to group different regions depending on the kind of activity: “In agricultural regions such criterion was land plottage, in cattle breeding – the amount of cattle” (Lindqvist et al., 2015). The issue of clusters in agro-industrial complex in their modern interpretation has relatively recently became the subject of analysis for many academic economists of Russia. For instance, in the last few years’ different aspects of agro-industrial clusters were studied in the works of A.M. Ableeva, V.V. Demichev and others (Maksimova, 2013).

Adapting the accumulated knowledge on the theory of clusters and the practical experience of economic management, the writes mark out the following chief features of forming modern agro-industrial clusters:

Firstly, production specialization in local economic regions depending on soil and climate conditions as well as geographical features of a region. Secondly, the features of production organization based on a large-scale specialized form of management. Thirdly, the differences in the criteria of specialization for agriculture and cattle breeding.

Based on the above mentioned feature, the writers distinguish clusters resulting from a geographical and climatic formation of enterprises, suppliers and sales companies, inside of which there is a complete food production cycle, personnel training, making supplementary products. Along with this, there is an emphasis on the competitive ratio in such integrated unification, which is important in the systematic analysis of investment attraction of agro-industrial clusters.

## 3. THEORETICAL DETERMINANTS OF DEVELOPMENT OF THE CLUSTER THEORY

Nobel laureate on economics E. Ostrom wrote that “it is impossible to understand the basic principles which are the cornerstone of a set of different features observed in various situations without a theory” (Ostrom, 2010). However, it is obvious that “when the predictions of a theory and empirical observation come into conflict, it is necessary to correct a theory .... If the theory will not be limited in time with its direction to solution of empirical riddles, theoretical work can start moving by inertia reflecting

the empirical world fewer and fewer” (Ostrom, 2010). To the same end it is possible to point out A. Marshall’s statement that “development of a theory has to go hand in hand with research of the facts, and the newest facts have the greatest value for consideration of the majority of modern problems” (Marshall, 1984). This approach in analysis of processes of reformations of the agrarian sphere of economy of the Russian Federation has special value. The twenty-year period of reformations of the agrarian sphere of the Russian economy testifies to the preservation of a steady character of the existing contradictions: In property relations, business results, issues of reproduction. And, the issues of reproduction in the agrarian sphere of economy over the last one and a half-two years of “sanctions” opposition between the western economies and the system of national economy became the most urgent and demand serious reconsideration both in the field of carried-out reforms and by using theoretical underpinning of further reformations. The analysis shows that the search for ways of solution of specified contradictions regarding scientific-theoretical underpinning of further reformations objectively causes attention to the issues of adaptation of the cluster theory potential for the organization of production and effective business in the agrarian sphere of economy. In fact, positive practices of the countries which get in the way of intensive innovative development testify to active use of a new model of the organization of economy by using the basic principles of the cluster theory. According to experts, by now clustering has already covered more than a half of the world’s economies that provides them the stability of economic development in general (Shokhina, 2013). In Russia the generation of clusters is at the initial stage of development. One of the reasons of it consists, first of all, in “washing” of meanings when using the concepts “cluster,” “location theory,” “growth pole,” “economic agglomeration.” Distortion of the essence and value of use of reasonable theoretical advantages of clusters is a logical consequence of such a variety of approaches specifying the conceptual and categorical framework. Nevertheless, in practice more and more attention is recently paid to agro-industrial clusters as a determinant of stable development of the agrarian sphere of national economy.

The introduction of the term “cluster” into the sales volume is usually connected with M. Porter who associated this concept with geographical concentration of economic entities interconnected by the same type of economic activity as one of the mechanisms of competitive advantages of such activity (Porter, 2005). The definition of “clusters” formulated by Porter can be considered now as the most universal though J. Thunen and A. Marshall see the prerequisites of the cluster theory formation.

Long before use of the term “clusters” the basic principles of this economic concept were investigated by J. Thunen with whom the formation and development of the location theory (localization) on the example of agriculture are associated (Blaug, 1994). Of course, many Thunen’s provisions when revealing the regularities of the agricultural production location which are formulated in “The Isolated State” in the modern sense can seem quite abstract. Especially, it concerns the issues concerning location zones of various types of agricultural activity round city settlements in view of isolation of a formal economic model from external relations.

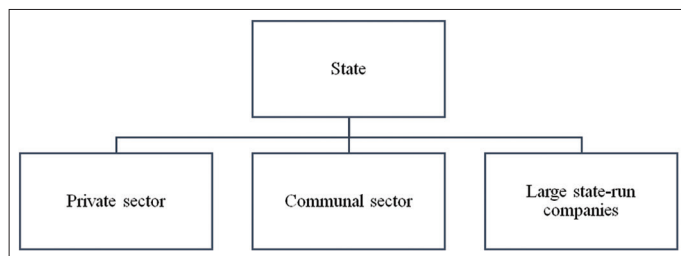
However, now the issue concerning the location of productive forces in agriculture as one their determinant of stable development of rural territories remains important.

Over the last years there is increasing scientific interest in research of the essence and advantages of clusters. For example, the issues of the cluster theory are an object of research of one Nobel laureate on economics in 2008 P. Krugman. In Russia, speaking about the cluster theory, it is possible to mention the publications of A.G. Granberg, G.B. Kleyner, A.A. Migranyan, T.V. Mirolyubov, V.P. Tretiak, T.V. Tsikhan, and others. These matters should not be also considered for the agrarian sphere of national economy as absolutely new. Both in the times of A. Marshall and in modern conditions the various reasons lead to the production localization, but, first of all, the main ones are the natural environment – the climate and soil, the existence of mineral deposits and natural stone in this region or within reach on land or sea” (Marshall, 1984). It should be also noted that in Russia in 1920 B.S. Yastremsky has investigated in his work “Relation between the elements of pheasant economic management in 1917 and 1919” clusters using a statistical approach on the examples of management in the agrarian sphere of economy. He has allocated criteria of grouping areas depending on a kind of activity: “In agricultural areas such a criterion was the area of land plots, in animal husbandry – the cattle number” (Yastremsky, 1920).

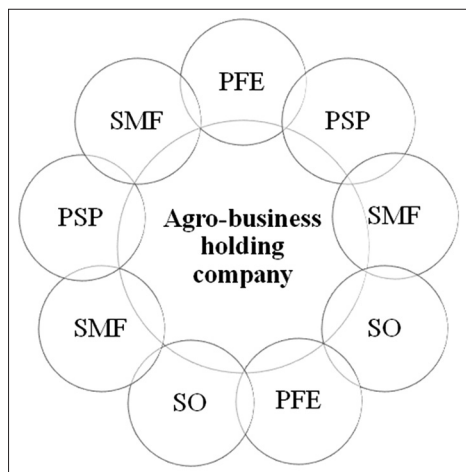
Thus, it can be said that the issues of agro-industrial clustering in theoretical aspect are indirectly considered in parallel with the origin and development of the cluster theory in general. If the basic principles of J. Thunen (about the location of productive forces), A. Marshall on production localization (use of advantages of the climate and soil), Weber on the standards (or agglomerations, namely, the expediency of the production location in its concentration places), M. Porter (on geographical concentration and specialization) and other researchers of the cluster theory will be integrated and adapted to modern realities of the transformation of business forms in the agrarian sphere of national economy, functionally structured modeling of agro-industrial clusters, where well developed agro-business holding companies are considered as an organizational kernel of agro-industrial clusters, will be possible (Figure 2).

According to this model, agro-business holding companies which are interconnected with small business forms functioning on the geographical cluster territory thanks to the system of contract relations are the center of a cluster. This system assumes use of the methodology of modern institutional theories and is widely used in practice in the developing economies. It allows two main business forms-large and small ones-being developed in parallel and without serious consequences. A bright example of solution of the problems of stable development in an agrarian sector of economy is the experience of Brazil where agro-business holding companies are engaged in processing, and peasant farm enterprises (PFE)-in production providing raw materials for agro-business holding companies. Much attention was paid to this practice of interaction during the Gaidar Economic Forum in January 2015 (Moscow) where scientists-agrarians and analysts discussed on the features of “super consolidation” in the form

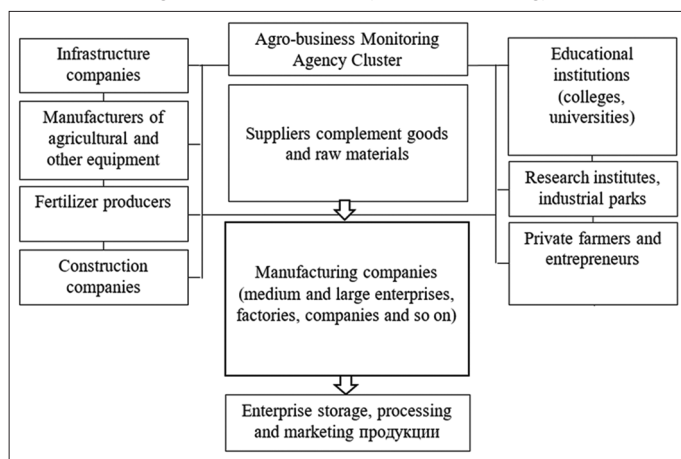
**Figure 1:** Formal and organizational structure of the first model of an agro-industrial cluster (Author’s drawing)



**Figure 2:** Formal and organizational structure of the second model of an agro-industrial cluster (Author’s drawing)



**Figure 3:** Formal and organizational structure of the third model of an agro-industrial cluster (Author’s drawing)



of agro-business holding companies and the prospects of their development. Agro-business holding companies are a quite new phenomenon to the Russian economy, but are on the upswing (Maksimova, 2013). By the economic nature and functional filling in existing forms, in fact, they are integrated mini-cluster formations, considering that:

- Specialize on the release of certain products taking into account the territorial, geographical and climatic features;
- Interact with small independent business forms in the form of PFE;
- Indirectly or directly perform social functions on those rural

territories where they are engaged in the performance of the main operations function.

Small business forms, proceeding from the management practice, are presented on the scheme not only by PFE, but also family farms (FF), personal subsidiary farms, individual entrepreneurs (IE), and others. Thus, small business forms in order to avoid their economic “pressure” and absorption on the part of agro-business holding companies can form cooperative ties as one of the organizational ways of the stability in the competitive fight against large business forms. That is, the cooperation is represented by the author as an additional structural element in the general system of the contractual relationship of an agribusiness holding as a local economic system. Besides, the presented way will be coordinated with the general principles of mechanism of creating clusters according to which “one or several firms reaching competitiveness in the world market expand influence on the immediate environment: Suppliers, consumers and competitors. In turn, the environment success has positive impact on the further growth of competitiveness of this company. As a result, “cluster” as a community of firms, closely related branches which are mutually promoting increasing competitiveness of each other eye is the points of the growth of the domestic market and a base of international expansion” (Migranyan, 2002) is formed.

This way of the formalized model, in the author’s opinion, allows to find out, on one hand, which business forms will be the center of a cluster and the points of its growth and which ones are urged to provide the performance of support functions. The model presented by the author allows to express the schematic conceptual feature of agro-industrial clusters in the system of national economy – expediency of the preservation of small business forms in each geographically localized cluster. It is proved by the fact that small business forms (PF and IE, PSE, FF, and in some cases country farms) are not only the subjects of production, but also a basis of a specific rural way of life, cultural and historical appearance, carriers of implicit knowledge, national values. That is, small business forms are a basis of the formation of informal institutes in the system of agrarian relations which are considered by the author as one of the dominants of stable development of agrarian economy (Maksimova, 2013). Therefore, during associations it is important to keep both already created universal values and a parity of interests of various business forms, having secured against absorption by large industrial agrobusiness holding companies.

On the other hand, large business forms, more approximate to a technological way, provide a transfer of innovations, technologies and knowledge to small business forms with elements of a patriarchal way. Mainly, in modern conditions only large enterprises are capable to use and realize NBIK-technologies which now are considered in the world as the major factors of increased production efficiency and competitive advantages in the world markets. The transfer and exchange of knowledge (both obvious and implicit) in a cluster are urged to become the factors of stable development and competitiveness of agro-industrial clusters and agricultural production in general. A complex of circumstances considered above causes the need to define a synergetic effect of a role of agrobusiness holding companies as the starting points of

the growth in agrarian cluster formations with the use of positive practices, saved-up traditions and experience of various business forms.

It should be also noted, despite the saved-up theoretical “baggage” on the development of the cluster theory, that now Russia sees the contradictions de-jure and de-facto to analyze the concept of agro-industrial clusters as there are no legislatively registered basic rules of behavior both in clusters and while interaction among themselves and with state institutes. But it is obvious that by the favorable scenario of the development agro-industrial clusters have to use the social and economic capacity of rural territories of the regions. In turn, agro-business holding companies, despite discrepancy of their origin and certain informational “closeness” in modern conditions, actually are a basis for the points of the generation and growth of agro-industrial clusters. Besides, it should be once again noted that the presented way of functionally structured modeling of organization of a local agro-cluster allows to use, on one hand, the obvious potential and advantages of large enterprises. On the other hand, it gives a chance for the preservation of the historical principles of multi-structurality of the agrarian sphere of national economy.

#### **4. FEATURES OF THE RUSSIAN PRACTICES OF CREATING CLUSTER STRUCTURES**

In the Russian Federation the projects on the creation of territorial formations possessing production factors for the purpose of increasing efficiency of concrete branches are realized at length.

The Federal Law on special economic zones (SEZ) from 22 July 2005 forms the main legislative and regulatory framework (The Federal Law from 22 July 2005 N 116-FZ (revised on 13 July 2015) “On SEZ in the Russian Federation,” 2005). According to it, “a SEZ – a part of the territory of the Russian Federation which is determined by the Government of the Russian Federation and where there is a special regime of the implementation of business activity, and also a customs procedure of a free customs area can be applied.” Also the law formalizes the concepts “cluster” and also describes the key points necessary for understanding of the structure of the SEZ management.

The key objectives of the SEZ creation are:

- Procurement of direct foreign capitals, advanced technologies of production of goods and services.
- Now work creation for the highly skilled personnel.
- Development of an export base.
- Import substitution.
- Access to the infrastructure.
- Development of the territory.

According to the legislation, SEZ can be created on land plots which are in state or municipal ownership including given to citizens or legal entities in possession and (or) in use and also on land plots which are in ownership of citizens or legal entities. The specified land plots have to belong to a category of lands

of the industry, power, transport, communication, broadcasting, television, informatics, lands for space activity, defense and safety lands or lands of another special purpose or lands of settlements. Tourist and recreational SEZ can be also created on land plots belonging to a category of lands of especially protected territories and objects or lands of the forest fund, lands for the agricultural purpose.

It is allowed to include land plots where there are buildings, constructions which are in state or municipal ownership including given to citizens or legal entities in possession and (or) in use, and also land plots where there are buildings, constructions which are in ownership of citizens or legal entities in borders of SEZ. However, it should be noted on the territory of SEZ it is impossible to place objects of housing properties.

The law assumes that SEZ can be a basis or a component of “clusters.” Legal practice determines this concept as a set of SEZ of one type or several types which is determined by the Government of the Russian Federation and its control is exercised by one management company. However, in scientific practice of the last years, “cluster” is not perceived as a component of SEZ. In law this definition of the concept is quite unstable and not consistent with reality at least because it is extremely difficult to find two and more SEZ in the close proximity from each other within the Russian Federation. Meanwhile, the territorial proximity and certain concentration of the factors of production are the specific features of a cluster.

In proof of our statement, if to use definitions of “cluster” from other NLA:

- A research and production cluster – a contractual form of organizations’ cooperation providing and carrying out purposeful activities for the development, production and nanotech industry product promotion to domestic and foreign markets of hi-tech production (The Resolution of the Government of the Russian Federation from 23 April 2010 N 282 “On the national nano-technological network” of 2010);
- A pharmaceutical cluster is a group of geographically localized interconnected innovative firms – developers of pharma drugs, production companies; suppliers of equipment, accessories, specialized services; objects of the infrastructure: Research institutes, higher education institutions, science and technology parks, business incubators and other organizations supplementing each other and strengthening competitive advantages of separate companies and a cluster in general. A distinctive feature of effectively operating clusters the yield of innovative products (The Decree of the Government of the Russian Federation from 01 October 2010 N 1660-p “On the approval of the Concept of the federal target program Development of the Pharmaceutical and Medical Industry of the Russian Federation for the Period till 2020 and Future Prospect,” 2010);
- Centers of the cluster development for subjects of small and medium business are created for decision-making and coordination of the projects providing the development of innovative clusters of subjects of small and medium business and increasing competitiveness of the region of the location of

corresponding innovative clusters and cooperative interaction of participants of a cluster among themselves.

Moreover, the specified documents widely use the terms “innovative territorial clusters,” “innovative hi-tech clusters,” “territorial and production clusters,” “hi-tech clusters,” “technological branch clusters,” “subject innovative clusters.” The subject ministries have issued various methodical recommendations on the cluster policy realization in the subjects of the Russian Federation which are directed to the development of cluster initiatives in the regions of Russia. The methodical recommendations are prepared taking into account the Concept of Long-term Social and Economic Development of the Russian Federation approved by the order of the Government of the Russian Federation from 17 November 2008 No. 1662-p and contain the basic provisions concerning the cluster policy realization in the regions of Russia (The Decree of the Government of the Russian Federation from 17 November 2008 N 1662-p. “On the Concept of long-term social and economic development of the Russian Federation for the Period till 2020”, 2008; The Decree of the Government of the Russian Federation from 17 November 2008 N 1663-p. On the Statement of Key Activities of the Government of the Russian Federation for the Period till 2012 and a List of the Projects on Their Realization, 2008)..

According to the mentioned document, territorial clusters present a set of enterprises, suppliers of equipment, accessories, specialized producer and maintenance services, research and educational organizations connected by relations of the territorial proximity and functional dependence in the sphere of production and realization of goods and services. Thus, these clusters can be located in the territory of one or several subjects of the Russian Federation.

Here there is a clear legal collision. The Federal Law is of top priority in law-enforcement practice. However, its last edition has no changes which were reflected in the latest Decrees and Orders.

It visually describes one of the main problems of the cluster policy in our country – the lack of a unified legislative base where the whole arch of NLA will not clash with each other and represent the unified system which investors, businessmen, and power in the regions and municipalities wishing to create in the territories both SEZ and clusters could be guided by.

Then, the analysis of practices of management over SEZ should be conducted. The main function is carried out here by the Management company determined by the law as “the public joint-stock company which implements e agreements on the creation of SEZ and which hundred percent of shares belongs to the Russian Federation, or the economic society which is created with participation of such the open joint stock company for mentioned purposes, or another economic society which signed the agreement on management over a SEZ with the federal executive authority authorized by the Government of the Russian Federation.” The management conducts the following functions (The Federal Law from 22 July 2005 N 116-FZ (revised on 13 July 2015) “On SEZ in the Russian Federation,” 2005):

1. Promotion of the creation of objects of the infrastructure of a SEZ and other objects intended to provide operations of a SEZ according to the agreement on the creation of a SEZ;
2. Support of operations of objects of the infrastructure of a SEZ and other objects intended for support of operations of a SEZ;
3. Attraction of residents and investors to SEZ for the implementation of activities for the reation of objects of the infrastructure of a SEZ;
4. A development plan for a SEZ and its validation.

This example presents the main line of the whole institutional development of such formations as clusters, SEZ, and so on – strict statutory control and performance of the general state economic policy in general. This model has both positive and negative moments, but, according to experts’ views, the most critical is that fact here that these territorial economic formations are spearheaded by the state, their realization is connected with direct inner management. This feature mostly contradicts cluster theories and theories of the production location (The Decree of the MIT of the Russian Federation from 23 October 2009 N 965 “On the adoption of the Strategy of the Pharmaceutical Industry Development of the Russian Federation for the Period Till 2020”, 2009; Guseinov, 2014).

Of course, there are also other forms of the organization. If to reject all national features and more widely generalize country models, we will receive three institutional models.

## **5. INSTITUTIONAL MODELS OF THE DEVELOPMENT OF AGRO-INDUSTRIAL CLUSTERS IN THE RUSSIAN FEDERATION**

Now, it is possible to point out three models of the cluster development in the territory of the Russian Federation, proceeding from a number of factors of the development of a branch in the region and legislation.

The first model presents clusters as a part of the state expressed in the form of, for example, state corporations and/or public joint-stock companies (such as SEZ) with complete statutory control (Figure 1).

According to the second model, clusters can be generated on the basis of agro-business holding companies, various corporations possessing resources for production and sales of goods. In this model the center of a cluster – a large enterprise – in our case, agribusiness holding company which concentrates much smaller organizations around.

According to this model, agro-business holding companies which are interconnected with small business forms functioning on the geographical territory of a cluster thanks to the system of contractual ties are the center of a cluster. This system assumes the use of methodology of modern institutional theories and is widely used in practice in the developing economies.

The third model is the classical concept based on theories of competitive advantages of Porter, non-profit organizations,

unions, associations, non-profit partnerships created in legal form (Figure 3).

The general leveling strategy for the development of a branch, agriculture as well, in the country with such large-scale regional differentiation and “failures” in certain spheres of social and economic life, causes great mistrust and a set of questions which answers do not increase optimism of experts and professionals of branches of economy of the Russian Federation. The role of the state policy concerning not only regional differentiation stabilization consists in the setup of working mechanism supporting positive moments of the development and constraining negative ones.

The creation of the unified arch of concepts and laws will allow to create more clear and effective regional policy, will help to create “the unified rules of game,” the unified institute of regional economic systems.

## 6. FORECASTING ACTIVITY AND TRENDS

From the point of view of the arrangement of emphasizes for further studying of the problem, it is possible to make an assumption demanding analysis and carrying out researches being that there are three scenarios of forecasting activity of the development for these three models of the cluster development in the country including agro-production.

We can make an assumption that the second model of the cluster development with a center in one large company corresponds to forecasting of the short-term efficiency. In the current economic situation, the performance to this model will certainly allow to increase the volume of food staples and by-products output in the immediate future by the concentration and growth of agro-business holding companies due to oppression of smaller organizations, however, there will the growth of monopolistic competition occur that is extremely dangerous in the field of food as it will actually allow monopolies to control prices and an access to food staples for the population.

The scenario of the medium-term efficiency is guided by the first model which is at the moment the most priority for the current country leaders. The nationalization of commercial enterprises, encouragement of agro-business holding companies, small and medium organizations whose cooperation will be expressed, for example, in the form of non-profit partnerships will demand strict control and creation of additional bodies which are responsible for these cluster partnerships. The made plans of production as an integral part of government agencies will allow to increase the food stuffs production a little bit longer than in the first case and also to open a new source of tax revenues and direct income from the realization by non-profit partnerships of agricultural industry products to the state. However, the Russian economy is mostly engaged in the world economic system, and due crisis will reveal the weakness of the model of state clusters and the planned system of food stuffs output.

The third estimated forecasting of the long efficiency is based on a classical model of the cluster economy providing the large-scale

development of small and medium business in the regions, of course, when ensuring necessary state support. The development of regional clusters with the inclusion of the PSE, small farms, enterprises, plants, organizations for transportation, storage and pack of products, the inclusion of a regional retail and the system of food markets was already several times approved in the countries with the developed and developing economy. However, in each certain case, and in case with our country, the issue on an individual approach to the implementation of a concrete model of the development in a certain country and even in a certain region of the country is of interest to further researches. An emphasis on so-called “real economy” especially in the Russian conditions is extremely important in the system of the stable economy development.

## 7. CONCLUSION

The results of the present research demonstrate that both in theory and in action the issues on agro-industrial clusters formation are up-to-date and require further consideration and development.

Based on the analysis investment attraction and potential possibilities of Russian regions, it can be claimed that, firstly, in a range of Russian regions there are cluster initiatives in the agro-industrial complex necessary to form agro-industrial clusters. High indices of infrastructure, production, investment attraction as well as climatic conditions compose a basis for stable development. Secondly, such regions should be given prioritized consideration, especially when government institutions allocate financial resources for agricultural development of the Russian Federation economy. The suggested mechanism of allocation will help in creating agro-industrial clusters, whose stable development will become a growing point for a common economic development of separate regions.

The analysis of the modeling results has demonstrated that on the territory of the Russian Federation at present there is a process of formation of agro-industrial clusters of various specializations in 27 regions. The creation of regional agro-industrial clusters will allow on the whole to increase investment attraction both of branches and regions. Moreover, the implementation the existing potential possibilities of now forming agro-industrial clusters into action will permit to provide national food security in the Russian Federation economy.

In many respects agro-industrial clusters can determine the development of agrarian relations in Russia. They assume more effective method of adaptation to market conditions and mostly correspond to an institutional basis of enterprises that is especially important for agriculture of Russia.

The base created by political economists during the 19<sup>th</sup> and 20<sup>th</sup> centuries, has found its application in many countries with various economic systems. Methodologies of system analysis covering sociological practices, economy, geography and now biology and chemistry, which are key ones for agriculture, have defined importance of the political economic theory in the development of cluster initiatives.

Today, in many respects the efficiency of territorial clusters is determined by interaction of organizations and enterprises representing business, science and power. Interaction of these groups of participants in economic literature received is called the mechanism of “a threefold spiral” which existence within a cluster is considered as obligatory for creating full cluster formation. Projects of the cluster development can be offered by one of these parties. The initiatives “from below,” namely, by forming separate projects and programs initiated by local business or scientific community are called cluster ones.

A significant factor constraining innovative activity in agriculture is the fact that use of innovations has a seasonal character and demands the skilled personnel. Besides, the sales market of products and making a profit in most cases have a seasonal character as well. These features can be an obstacle for self-financing of agricultural enterprises’ innovative activity. Especially it concerns enterprises which invest its own means to the expensive projects and the newest technologies acquired on import.

Competition between a set of organizations in an agro-industrial cluster can be reached only by means of a wide range of measures which includes the modernization of productions and the application of innovative technologies in an agrarian and industrial complex, the concentration of fixed assets, and also supply with skilled workers. Without these conditions clustering cannot be reached. For this reason it is important to develop a methodology that will allow to estimate the potential of creating agro-industrial clusters, and also to formulate the provisions of state support.

## 8. ACKNOWLEDGMENT

The paper was prepared on a grant of the Russian Humanitarian Science Foundation for scientific project N15-02-00560 “Model of forming agro-industrial clusters in the economy of the Russian Federation: Best variants and institutional conditions.”

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