

**DIGITAL TRANSFORMATION OF THE CAUTERIZATION  
PROCESS IN AGRICULTURE ON THE PRINCIPLES OF  
EXPONENTIALLY**

ЦИФРОВАЯ ТРАНСФОРМАЦИЯ ПРОЦЕССА КЛАСТЕРИЗАЦИИ В  
СЕЛЬСКОМ ХОЗЯЙСТВЕ НА ПРИНЦИПАХ ЭКСПОНЕНЦИАЛЬНОСТИ



**УДК 332.02**

**DOI:10.24411/2588-0209-2019-10084**

**Barbashova Svetlana**, Head. Department, Candidate of Economics, Associate Professor, Department of Economics and Finance, FSBEI HE Financial University under the Government of the Russian Federation (Penza Branch), cdtmf051178@yandex.ru

**Burmistrova Olga**, Ph.D., Associate Professor, Department of Economics and Finance, FSBEI HE Financial University under the Government of the Russian Federation (Penza Branch), cdtmf051178@yandex.ru

**Andrey Tuskov**, candidate of economic Sciences, associate Professor, Federal State Budget Educational Institution of Higher Education «Penza State University» 440000, 40, Krasnaya street, Penza, Russia, ORCID <https://orcid.org/0000-0003-1760-2676>, tuskov@mail.ru

**Tatiana Kuznetsova**, candidate of economic Sciences, associate Professor, Federal State Budget Educational Institution of Higher Education «Penza State University» 440000, 40, Krasnaya street, Penza, Russia [bankovskoedelo@pnzgu.ru](mailto:bankovskoedelo@pnzgu.ru)

**Valeria Tolmacheva**, undergraduate, Federal State Budget Educational Institution of Higher Education «Penza State University» 440000, 40, Krasnaya street, Penza, Russia [bankovskoedelo@pnzgu.ru](mailto:bankovskoedelo@pnzgu.ru)

**Abstract.** In the regional aspect, the digitalization of the economy should consist in creating an ecosystem in which data in digital form is a key factor in production in all areas of socio-economic activity and in which effective interaction is ensured, including cross-border, business, the scientific and educational community, the state and citizens. Estimates show that digitalization will positively affect the efficiency of various industries, including agriculture. The medium-term goal should be tripling the digital economy. To a large extent, growth will be associated with increased production efficiency.

For the development of the integrated production of the region in agriculture, a transition to a cluster basis of functioning is necessary, which, when the principles of digital exponentiality are introduced into the agro-education management systems, will lead to further transformation and integration.

The success of the clustering process lies in a well-functioning mechanism of interaction between all participants in the cluster, but also in a strong leader around which the structure will be formed.

**Key words:** cluster, digital economy, agriculture, exponentiality, regional economy.

### **Introduction**

Now, with the increasing use of high technology, the digital economy is affecting every aspect of life. In highly developed countries, this type of economy has certain competitive advantages, and it is developing in Russia. Based on the realities of foreign policy and global trends, our country faces the issue of global competitiveness and national security, and the development of the digital economy in all spheres plays a small role in solving this issue.

In the Decree of the President of the Russian Federation of December 1, 2016 No. 642 "On the Strategy for Scientific and Technological Development of the Russian Federation," digital technologies play a key role in the innovative development of the state. At the same time, the first phase of the strategy (2017 - 2019) is supposed to create organizational, financial and legislative mechanisms to prepare the transition to an innovative economy, in the second phase

(2020 - 2025) it is planned to fully the introduction of the digital economy, which consists of the use of digital, intelligent manufacturing technologies, robotic systems, as well as the commercialization and export of new scientific developments.

The Russian Federation's Information Security Doctrine is the basis for shaping public policy and public relations in the field of information security, as well as for developing measures to improve system.

The President's Decree No. 204 "On the National Goals and Strategic Goals of the Development of the Russian Federation for the Period to 2024" also identified the Digital Economy program as one of the 12 priorities.

The Penza region government is working on the main areas in accordance with this program, which need to make digital transformation of priority sectors of the economy and social sphere, these include industry, agriculture, construction, financial services, transport and energy infrastructure, as well as other areas of activity without which the development of the region is impossible.

### **Methods**

One of the most important sectors of the Penza region's economy is agriculture. The trend of regional development is predetermined both by the national vector of economic development and by the specifics of the modern stage, in addition, by the region's existing resource potential and its involvement in innovative processes.

It should also be noted that the region's innovation-oriented growth requires, on the one hand, the availability of the necessary resources and, on the other, an effective mechanism for managing them in accordance with the regional system's development targets. The problem remains that there are currently many small farms in the region, where the producer performs all kinds of work independently, regardless of the availability of the necessary equipment and specialists. As the practice shows, business productivity and improved competitive properties of products increases when several large organizations specializing in the provision of specific services will participate in the production process.

The agricultural sector of the Penza region has continued to show growth with confidence over the past few years, remaining a driver of the region's economy. Gross production in all categories of households for 2017 amounted to 88.3 billion. rubles, which is 7.1% higher than in 2016. The production index for the type of activity "Food Production" amounted to 101.7%, at the end of 2017, the turnover of organizations in the type of activities "Agriculture, Hunting and Forestry" amounted to 48.7 billion. rub. (2nd place in the district). Cereals and legumes threshed 1943.9 thousand. tons of grain in weight after refining, which is 24.7% higher than last year.

Yields of cereals and legumes amounted to 28 cents per hectare. In 2017, livestock and poultry were produced for slaughter in live weight in farms of all categories 285.0 thousand. 12.2% higher than last year. In terms of meat and by-products, the region ranks 3rd in the district, with a rate of 48.1 thousand. Tons. In all categories, gross milk production amounted to 334.9 thousand. 1% higher than last year. The productivity of the milking herd in agricultural enterprises amounted to 5,155 kg of milk.

Adapting machine learning and artificial intelligence technologies to modern conditions will change the environment in which organizations operate. They will have to adapt to the changes, either by conquering new niches or by transforming existing ones.

Digital transformation of organizations is a response to the development and active spread of new information technologies around the world.

The company's regional and international expansion is often constrained by the complexity of replicating the management system to the world level. The rapid growth of competitiveness of services and products produced abroad is often the main problem in replication.

Digital transformation through automation allows you to standardize the management system and business processes, and therefore allows you to quickly deploy them on a global level.

Scaling up the management system should be a priority for agricultural production. The prerequisites for this should be the development of theoretical and methodological approaches to the use of exponential organizations as a market institution for spatial development of the region's economy. The creation of such organizations is initially possible by forming cluster structures in a particular industry or a whole set of industries.

The exponentiality of the economy and business will involve the complete exclusion of a person from the business process, but not in all industries it is possible to fully automate processes, such industries include agriculture.

In the management of the agro-industrial complex, digital transformation will focus on data collection for decision-making online and will provide remote control through digital communication channels using robotics technologies.

### **THE PROGRESS OF THE STUDY**

We will evaluate domestic and foreign views on cluster initiatives in the context of economic transformation. According to M. Porter's theory, the cluster is a group of geographically adjacent interconnected companies and related organizations operating in a particular field and complementing each other.

O. Kozlovsky and E. N. Akerman (p.82) tend to believe that the cluster is a form of a network created within the geographical boundaries of the region, in which the close location of organizations contributes to the sustainability of institutions, increases the level of interaction and intensity.

G. B. Kleiner, R.M. Kachalov, N.B. Pumping, and N.B. Pumping define a cluster as a combination of systems such as objects - economic agents, processes - a series of events leading to changes in cluster elements, the environment - the totality of institutions becoming by platform for interaction of cluster components, projects are short-term significant changes in cluster elements.

Y.A. Arutyunov proposes to consider the cluster as a "4K" set:

Concentrations of producers of goods and services in some limited territory;

Competition within the cluster

Cooperation of related economic activities in order to ensure the competitiveness of the cluster in the external market relative to the cluster itself;

Competitiveness of products produced by the cluster organizations, at least in the national market, which is achieved by a high degree of performance, based on specialization and cooperation of labor.

In foreign practice, it is generally accepted that the development and evolution of agro-industrial clusters is a relatively new area of research, which nevertheless has a formed conceptual apparatus.

The most significant results in this area were obtained in studies of the early 2000s, when the thesis on the cyclical development of the industrial (including agro-industrial) cluster was proven in a number of empirical works and then summarized in theoretical Research.

For example, M. Fritch's work addresses the geographical location of clusters and shows that location is essential both for regulating employment growth and for the productivity of the cluster as a whole.

The study by F. Malerba (Malerba, 2006) substantiates the need to take into account the development of technology in considering the processes of industrial transformation, such as the growth of firms, the dynamics of entry and exit, as well as the structure of the market, its institutional environment, as these components have an impact on the structural indicators of economic growth, which in the context of global digitalization becomes especially relevant.

Based on a number of other studies, foreign scientists have proposed several models of the life cycle of the agro-industrial cluster:

Based on an assessment of the behavior of "big players" - entry, growth and exit;

- based on the analysis of the life cycle of the industry of the base product cluster - formation, growth, maturity and stagnation .

It should be noted that all the proposed sequences contain stages of growth and decline. Some researchers separate the formation and maturity stage, while others define the stage prior to the formation of the cluster and the stage of transformation into another industrial cluster or "displacement" which is to shift production cluster to another region.

According to the authors, the sequence of the cluster life cycle should exclude the stage preceding the formation of the cluster, because otherwise any types of geographically separate productions can be attributed to clusters.

The above studies do not emphasize that the sequence of stages of the industrial cluster can significantly depend on the type of underlying industry, such as high-tech production, raw materials, manufacturing, services.

In addition, a number of studies indicate that the underlying industry significantly determines the structure of the cluster, as industries have different dependencies on the types of support.

At the moment, the prevailing view among theorists and practitioners of the cluster approach is that the uneven distribution of resources, factors of production and deployment of productive forces remains a defining feature of the economy around the world, despite significant reductions in transport and communications costs.

According to modern theory, forms of innovative agro-industrial clusters can vary significantly depending on the role of the state in their creation.

According to modern theory, forms of innovative agro-industrial clusters can vary significantly depending on the role of the state in their creation.

For example, the most common taxonomy of forms of innovative clusters is the division into four institutional forms:

The "classic" cluster of A. Marshall is a grouping of small firms owned by owners in the region, developing by strengthening trade links;

A hub model is to combine many small firms with one or more large, defining the conditions for their activities, development and diffusion of innovation;

A "satellite platform" that is a combination of agro-industrial enterprises and large processing plants connected through vertical integration and interacting with local universities and scientific Centres

The anchor model is based on the creation of innovative products by limiting the exchange between the public sector and suppliers, including in the dissemination of new knowledge.

Thus, the development of innovative agro-industrial clusters may depend on the decisions of the state, in particular, the results of a significant number of both theoretical and empirical studies show.

International experience convincingly proves the validity of the theoretical provision on the importance of the state as the initiator of the creation of an innovative agro-industrial cluster based on the existing sectors of agriculture and food industry, that will increase competitive advantages in domestic and global markets and have a significant impact on the digitalization of agri-economy.

According to Kuzmina L.N. et al. "Digital transformation has two areas: automating existing business processes to minimize human involvement and scaling the resulting management system to create an exponential organization.

An exponential organization refers to organizations that are more scalable than other organizations operating in the same area. Such effective interaction is possible when small businesses are merged into a single cluster structure."

### **Discussion**

The studied international and domestic experience of the formation of agro-industrial clusters allows us to identify the main prerequisites for cluster development in the region's agriculture sector in the transition to digital transformation business processes.

In the region, one of the main areas of development of the AIC is the support of small business entities. Small forms of farming in the region are not only one of the main producers of food, but also provide an increase in rural employment, contribute to the preservation of rural areas. At the same time, objectively, there are a number of problems that they face in their activities. These are, first of all, limited production, lack of resources, limited access to information for business, poor infrastructure, difficulties with sales of products. The task of digital transformation of business processes in agriculture is also becoming impossible for many agribusiness participants in the region.

In our opinion, the synthesis of institutional forms of cluster formations on an innovative basis of the hub model and the "satellite platform" will help to realize the main goal of innovative development in agriculture in the region.

It can be assumed that in the implementation of the "hub model" many small producers can join one of the major players in the agricultural market of the Penza region, and the



implementation of the institute "satellite platform" will involve the introduction of antitrust measures for specific production, which will lead to the development of related industries and the formation of new innovative agricultural clusters.

Integration and cooperation processes in the Penza region allow to increase production, contribute to the concentration of capital, transition from technological processes to business processes, expansion of product distribution channels, formation of effective teams to manage innovation processes in food production, as well as mutual lending within the formations.

But their work is not without a number of shortcomings, the main ones, which include the low qualifications of managers, the lack of opportunities to use transformational management systems in the beginnings of digitalization, etc.

Identified problems can be successfully implemented through integration mechanisms, which, under the circumstances, should be considered under the prism of digitization of association management processes.

Also a negative factor of their functioning is that they mainly work within the same industry, producing the same type of products, which does not allow them to influence demand, move to less expensive areas of activity, completely Use a synergistic effect.

Therefore, in our opinion, in order to further develop the region's agricultural integrated production, it is necessary to transition the majority of agricultural enterprises to a cluster-based framework of operation, which when implementing the principles of digital exponentialness in agro-education management systems will solve the problem of further transformation and integration into the contours of the digital economy.

In our opinion, the success of the clustering process will consist not only in a well-established mechanism of interaction between all participants of the cluster, but also in a strong leader around which the structure will be formed.

A number of scientists have revealed that the most successful innovative agro-industrial clusters in the world economy are:

- an oilseed cluster located in Western Australia, the institutional basis of which is the association of firms engaged in research and development not only for the development of production and marketing, but also for the development of technology Production of vegetable oils for food and industrial purposes;

Food Valley is a cluster of cereals located in EU countries operating on the basis of public-private partnerships;

- A dairy cluster located in Denmark, which aims to create innovative products aimed at realizing the potential of the milk market, which is most subject to government regulation.



We have developed and identified some approaches to the mechanism of cluster formation in the agricultural sector, the main stages of which will be described below.

The Center for Cluster Development of the Penza region was formed with the support of the Russian Ministry of Economic Development. The task of the Penza region cluster development center is to support small and medium-sized enterprises in promoting their products to the domestic and foreign market and developing the cluster system in the region.

Today, six clusters, including more than 170 enterprises, are supported in the Penza region. These include Biomed, Security, Legprom, wooden and confectionery clusters, and an IT cluster. One of the tasks of the latter, in our opinion, can be the development of software and automated control systems in all areas.

The mission of the region's Cluster Development Centre is to help consolidate the regional business community around the idea of sustainable development of the Penza region economy through a cluster-based approach to ensure its competitiveness.

The strategic goal of the Penza Region Cluster Development Centre is to promote the formation and development of the territorial economic clusters of the Penza region and intercluster cooperation through the creation of appropriate organizational and information conditions, increased social interaction and cooperation links to ensure innovative development and long-term competitiveness of the region's clusters.

Cluster policy in agriculture is one of the effective ways of structuring business, industry and agriculture, which will improve the competitiveness of companies, and will contribute to the development of the market in the conditions digitalization of basic economic processes.

Agriculture belongs to the so-called process industries, so it is advisable to form process clusters here. The most important difference between clusters and cooperative-type associations is that enterprises that make up the cluster can have different owners, autonomous management and polar-different strategies. They traditionally compete with each other in the production of a similar product. However, competition within the cluster is usually not destructive, but contributes to the development of specialization and competitiveness of each of the companies in the cluster.

Cluster as a sustainable community of interconnected enterprises, institutions, organizations and individuals can have potential that exceeds the potential of individual constituents, i.e. there is a synergistic effect. This increment arises as a result of cooperation and effective use of partners' opportunities over a long period, as well as a combination of cooperation and competition. Companies benefit by sharing positive experiences and reducing costs by sharing the same services and suppliers.

Cluster agro-industrial formations are self-centered enterprises and related other organizations that are geographically geographically located and interconnected by virtue of process, production and agricultural products on an innovative basis.

In our opinion, the upcoming transformation of the economy on the principles of digitalization, with regard to the processes of clustering will involve the replication of agricultural cluster management systems and will allow all participants in agricultural production reach a certain level of digital transformation. Then each of the participants of the cluster will be able to create a system of management of an adequate content of the exhibition organization.

The main prerequisites for the creation of an agro-industrial cluster is to ensure a level playing field for the activities of organizations in various areas of territorial education.

The study of the activities of agricultural enterprises and agro-industrial groups has made it possible to identify possible areas of innovative diversification of the activities of agricultural and other enterprises and organizations in the Penza region.

The transition to the innovative development of the region's APC predetermines the need to develop a comprehensive methodical toolkit for the formation of strategic directions for the coordinated territorial-industry development of the region using organizations as a market institute of spatial development.

In this regard, the formation of agricultural clusters in the Penza region as a mechanism of reproduction will allow to switch to automated management systems, will allow to intensify investment activities, increase competitiveness of products, which will lead to a corresponding budgetary and social impact.

Achieving the main goal of cluster-forming policy in the region's APC, in our view, should be realized by a number of tasks: creating conditions for improving the competitiveness of the economic entities that make up the cluster; Innovation, manufacturing, transport logistics, energy, engineering and housing, utilities and social infrastructure; Creating an adequate investment climate for the cluster-processing enterprise; Promoting the development of the region's additional and vocational education system; The development of small and medium-sized businesses in agriculture; improving various cooperative ties.

The region is currently operating damate Group, an agricultural holding company that develops three activities: turkey cultivation and processing, milk processing and dairy farming. The holding is inter-regional because it operates in several regions. The group of companies includes the largest milk processor in the Penza region, Penzensky Dairy Plant, with a milk processing capacity of 250 tons per day.

We have already defined the synthesis of institutional forms of cluster formations, when the merger of producers takes place around one large unit, and the state and other development institutions, as well as research and logistics centers create a niche, on the one hand, guaranteeing the stability of development up to a certain point when the activities of this structure will not need to be limited by antitrust laws. In this regard, the creation of a dairy cluster is possible in the region.

Analysis of the structure of milk production by household category (Figure 1) shows that over the past decade milk production in different categories of farms has been uneven, and there is a clear trend reducing the share of personal farms and farms in milk production. Thus, in 2017, agricultural organizations produced 48% of milk, compared to 32% in 2005, and it turns out that the main milk producers in the region are now growing.

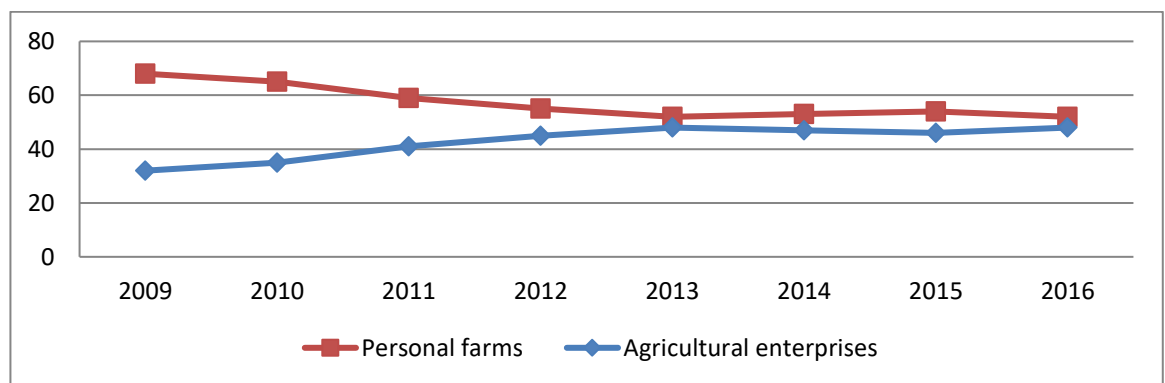


Figure 1. Share of individual milk producers in Penza region

In our opinion, in the Penza region there is an opportunity to form a cluster on milk processing and production, which will be able to exist large and small participants of production, as the implementation of support measures economically important agricultural programmes aim to create economic and technological conditions for sustainable development of domestic agricultural sectors.

This fact is also proved by the state programs implemented in the region to support certain types of agricultural production.

For example, in the Penza region, there is unrelated support for agricultural producers in the field of crop production. The amount of state support in 2018 amounted to 292.9 million. rub.

This type of support is provided per hectare of planting area occupied by cereals, legumes, fodder crops, to reimburse part of the cost of production of seed potatoes, seeds of vegetable crops open soil, corn seeds, sunflower seeds, sugar beet seeds, dolgin, technical hemp and open-ground vegetables. Subsidies are provided on the basis of the area of 2017, taking into account their preservation in 2018.

In determining the subsidy rate, an increase factor is set for enterprises with dairy cows. Thus, the regional authorities do not allow to dilute the means of state support and it is milk producers who have priority in obtaining it.

The benefits of cluster formation in milk production will be innovation and productivity growth in the medium to long term, compared to isolated agricultural producers. These innovations will be formed at the expense of all participants of cluster education, individual producers will receive comprehensive support from the state authorities, research centers in terms of access to new intensive agricultural production technologies and appropriate training.

The cluster-member agricultural enterprises will also benefit from the concentration of primary agricultural producers and will have guarantees in the sale of their products. The agricultural cluster should be formed in stages and accompanied by the task at hand (table 1).

Table 1. The stages and objectives of forming cluster education in the region's agriculture

Elements of the cluster and its infrastructure	Tasks
Stage 1 Identification of participants in the integration process	
Agricultural enterprises of various forms of ownership	The production of major agricultural products.
Food processing enterprises of the region	Guaranteed reception from primary commodity producers of products and their timely payment, as well as the sale of finished products on more favorable conditions compared to other market participants
Infrastructure Enterprises	Ensuring the normal functioning of each of the participants in cluster education in the external environment of the business
Center for Cluster Development of the Penza Region, Ministry of Agriculture of the region	Promoting the institutional development of clusters. Establishment of effective information interaction between cluster members. Lower administrative barriers. The ability to use the necessary elements of a digital economy.
Educational and research institutions	Improving the effectiveness of the system of professional and continuing education. Monitoring the needs of cluster members in human resources.
2 stage. Selection of operating principles	
Legal independence	Maintaining independence of cluster education participants
The overall strategic goal of the cluster members	Interest in the final financial results, leading to an increase in the business value of each of the participants in education.
Unified corporate cluster culture	Unified system of norms and values, evaluation of results
3 stage. Development of regulations and rules for the functioning of the cluster	
Contractual interaction system	Distribution and coordination of production and business functions.
Agreement on areas and types of joint activities	The ability to transfer part of the production functions to other cluster members.
4 stage. Development of provisions on the interconnection and interdependence of participants	

Formation of conditions for organizations to enter and exit the cluster	Assessment of the consequences of the enterprise leaving the cluster and its further functioning, sanctions for violators of the cluster ethics.
5 stage. Identification of the personnel potential of participants	
Assessment of the availability of qualified personnel of cluster enterprises	Calculation of the complexity of the main types of work, providing organizations with workers with the necessary qualifications.

The Center for Cluster Development of the Penza Region should be assigned to the functions of organizational issues and cluster management in the region. The cluster should be controlled and managed in the form of a coordinating council consisting of representatives of the executive branch (Ministry of Agriculture of the Penza region), large processing and agricultural enterprises, specialized educational institutions, structural enterprises.

Funding for the creation and development of an agro-industrial cluster should be financed by the funds of its participants, as well as with the support of the regional and municipal budgets, i.e. public - private investment.

Participants in the agro-industrial-type cluster of the region will be AIC enterprises, secondary vocational and higher education institutions; Financial infrastructure; Logistics infrastructure.

Applications for the creation of an agro-industrial cluster should be made on a competitive basis.

One of the conditions of the competition is the obligatory use of the principles of digitization of the economy, innovation in the development and implementation of investment projects.

### Results

World experience confirms that the organization of clusters in economically affluent areas makes the most efficient use of public and private capital. Organizations, functioning, bring more income to the budgets of various levels in the form of tax deductions.

The effective activities of cluster agro-formations will be determined by a largely accepted management system, the main task of which is to actively target the optimal functioning of the managed provided that all its elements must be in a relatively balanced and proportionate state.

Under the current circumstances, a new approach to cluster management is required to take into account the interests of the state and enterprises. The cluster agro-formation management system should be based, in our view, on the following conceptual principles of

governance, formulated on the basis of the requirements of the accounting of unity and the relationship of economic laws of reproduction and laws Financial and economic activities:

- Develop the concept of managing integrated formations using laws and principles of reproduction, which involves intensifying the integration of all participants in the production process through the implementation of a single policy digitally transforming the vertical of management.
- Forming a unified corporate culture with the maintenance and development of common corporate values;
- Reconciliation of economic interests between individual participants within the cluster structure in a changing internal and external environment;
- Concentrating, specializing and cooperating with a cluster of organizations engaged in similar activities to make effective use of the cluster company's resources as a whole;
- Identify unified approaches to the implementation of investment, production, technology, marketing and personnel policies;
- Use of a single legal framework for all participants in the cluster structure, enshrined in internal regulatory documents by the parent company;
- Analysis of the interaction of formation with the state through budgetary, financial and credit policy.

It should also be stressed that the management system depends largely on the organizational structure of agro-industrial associations arising in the context of institutional changes.

Agriculture has a different form of integration in agro-industrial associations, represented by vertical and horizontal links, due to the problem of centralization and decentralization of management functions and is connected, first of all, with the level of management of business and legal autonomy of subsidiaries and structural units on the part of parent companies.

Integrated cluster-type management functions should be decentralized, as production technology is separate and only strategic objectives should be addressed at the highest management level to achieve the core objectives of the integration structure as a whole.

In our opinion, the creation of clusters of agro-industrial type is not an end in itself, but a means to achieve the main goal - to create comfortable living and working conditions in the countryside, to solve the urgent social problems of the population, which can include demographics, strengthening staff, creating alternative forms of employment, improving the quality of life and incomes of the rural population. After all, at present the village is not only the

most important sector of the economy, but the traditional way of life, the preservation of cultural and historical heritage.

The generalization and systematization of the theoretical provisions relating to the digital transformation of the organization's clustering processes on the principles of exponential organization has enabled us to justify the synergistic effect of integration and globalization, that has made it possible to identify opportunities for saving resources, and as a consequence to assess the effect of creating an exponential organization.

The right combination of activities in the agriculture system on a cluster basis ensures its sustainability. Participation in the agricultural cluster provides an advantage to farmers in access to new technologies, working methods and opportunities to deliver, produce.

The success of the regional integrated policy aimed at shaping the territories of economic growth, and based on the active role of regional authorities will be to diagnose exponential organizations, maintain integrated initiatives to stimulate their development.

### Spisok literatury

1. Porter M.E., Konkursiya / M.E. Porter. M.: Vil'yams, 2002. 486 s.
2. Akerman E. N. Transformatsiya gosudarstvennoj ekonomicheskoy politiki v usloviyah «novoj ekonomiki» / pod red. O. V. Kozlovskoj. Tomsk: Izd-vo Tom. un-ta, 2011. 174 s.
3. Klejner G. B., Kachalov R. M., Nagrudnaya N. B. Sintez strategii klasterov na osnove sistemno-integracionnoj teorii // Otrasleye rynki. № 5–6 (18), (sentyabr' - dekabr') 2008. URL: <http://kurs.znate.ru/docs/index-114564.htm>
4. Arutyunov YU. A. Formirovanie regional'noj innovacionnoj sistemy naosnoveklasternoj modeli ekonomiki regiona // Korporativnoe upravlenie innovacionnogo razvitiya ekonomiki Severa: Vestn. Nauch.-issled. Centr korporativnogo prava, upravleniya i venchurnogo investirovaniya Syktyvk. GSN. un-ta. 2008. № 4. S. 6–24
5. Frich M. Vliyanie formirovaniya novogo biznesa na regional'noe razvitie - empiricheskie dannye, interpretatsiya i napravleniya dal'nejshih issledovanij. 2011. 342 s.
6. Malerba F. Innovatsii i evolyutsiya otraslej // ZHurnal evolyucionnoj ekonomiki. 2006. Tom. 16 (1). S. 3-23.
7. Lorencen M., Frederiksen L. Pochemu klaster industrii kul'tury? Lokalizatsiya, urbanizatsiya, produkty i proekty // Tvorcheskije goroda, kul'turnye klastery i mestnoe ekonomicheskoe razvitie. CHeltenhem: Edvard Elgar, 2008. S. 155-179.
8. Smirnova S.M. Klaster'naya politika kak instrument ekonomicheskogo razvitiya: na primere razvivayushchihsya i naimenее razvivayushchihsya stran // Tavricheskij nauchnyj obozrevatel'. 2015. № 2. S. 48-51.
9. Novoselov S.N., Smirnova S.M. Formirovanie innovacionnyh agropromyshlennyh klasterov: obobshchenie mezhdunarodnoj praktiki // Ekonomika: vchera, segodnya, zavtra. 2016. № 3. S. 58-67.
10. Pilotnye innovacionnye territorial'nye klastery v Rossijskoj Federacii: napravleniya realizacii programmy razvitiya / pod. krasnyj. L.M. Gohberga, A.E. SHadrina; Nak. issled. un-t «Vysshaya shkola ekonomiki». - M.: NIU VSHE, 2015. - 92 s.



11. Burmistrova O.A., Fedotova M.YU. Innovacionnye podhody k razvitiyu integracionnyh processov v regional'nom APK: ekonomicheskij aspekt Audit i finansovyj analiz. 2015. №6. S.362-366. (ISSN: 0236-2988) (zhurnal perechnya VAK).