

JEL Classification: O110

UDC: 338.43:332.12

**ORGANIZATIONAL AND ECONOMIC
INSTRUMENTS OF FORMATION AND
DEVELOPMENT OF CLUSTERS IN THE REGIONAL
ECONOMY**

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Introduction and Objective: Combining economic entities in the geographically localized cluster creates a synergistic effect, characterized by multiplying the capacity of all enterprises included in the structure of the cluster. Underlying the formation of the cluster principle of territorial cohesion allows us to differentiate the traditional vertically integrated structures and spatially localized economic cluster type system.

Hypothesis of the research. It is assumed that the effective functioning and development of spatially localized economic systems in a cluster, as the configuration of stable interdependent and reproducing economic relations is based on the effect of synergetic efficiency and enhancing of competitive advantages, due to the need for development and verification of the organizational and economic instruments of cluster management, with taking into account sectoral and regional characteristics of the territories of justification of algorithms creation of enterprises of cluster type.

The aim of the development of organizational and economic instruments of cluster management, with taking into account sectoral and regional specificities of the territories.

Methods: When designing problems using various methodological approaches, including a systematic approach to its subject-object-structural and functional aspects; methods and instrumentality of technology research, statistical methods, expert assessment method; method of the SWOT-analysis; tabular and graphical visualization techniques of statistical data, economic and statistical groups, the use of which allowed for the validity of theoretical propositions and arguments conclusions.

Results: Showed the characteristic tendency of the regional economic system, which consists in building the capacity of agro-industrial complex through the conversion of agricultural holdings in agrocluster as basic adaptive geographically localized economic system, unifying the entire process chain from primary production to final sale of the finished product.

Conclusions: A system of organizational and economic process management within the boundaries of interaction between enterprises of agrocluster involves implementing the unit of evaluating the economic efficiency of integration that takes into account the direct and inverse synergy.

Keywords: cluster, multicenter, agrocluster, the regional economic system.

Formulation of the problem. With the growing divergence in the levels of formation of regional geographically localized subsystems of the national economic space, the priority is the development of cluster management model, which is a territorial concentration of aggregate of interconnected business interests of companies as well as government, public, economic and social institutions that are necessary for the development of competitive benefits of clusters and regional economic systems as a whole.

At the heart of the process of functioning and development of spatially localized economic systems (clusters) lies the principle of territorial concentration of economic resources, exchange of information on the needs and technologies among enterprises of related industries, customers and suppliers. The key to the formation of the cluster itself is a market mechanism of mutually beneficial cooperation between enterprises located in the same area, due to a decrease in number of transaction costs and the emergence of positive feedback that ensures intensive development of all businesses within the cluster.

In this regard, the positive side of the cluster approach is not only a reduction in transaction costs, but also increase of the efficiency of a combined specialization (within the cluster) production due to the concentration of resources, production, customers and suppliers in a single economic space.

Analysis of recent publications and the unsolved part of the problem. Foreign experience in the development of regional management is shown in the works of authors such as: Audretsch D. [3], Dussauge P. [2], Garrette B. [2], Feldman V. [3], Mitchell W. [2], Porter M. [1] and others. Development management issues of the regional economy, improvement of tools of cluster approach were developed by many Russian scientists, in particular: Ganuschak-Efimenko L.M. [4], Shcherbak V. [5], Bakum V.V. [6], Boyko L.M. [7], Borisova I.C. [8], Brizhan I.A. [9], Savitska I.M. [9], Voynarenko M.P. [10].

The analysis of scientific papers showed that many scientists pay considerable attention to the study of various aspects of the effectiveness of new business management models in the formats of industries and regional economies. At the same time, remain poorly understood problems of formation of organizational and economic instruments of the cluster approach, with taking into account sectoral and regional specificities of the territories.

The aim of this study is to develop a methodological approach, organizational and economic instruments for the implementation of structural policy in the field of clustering of the regional economy at the state and corporate management levels.

Results of the study. The most essential features of industrial clustering of regional economic systems are: historically core clusters and industrial peripherals; the presence of excess investment sectors - generators of economic growth; infrastructure and competitiveness of the region's resources. On the basis of differentiation of industrial regional economic systems on these grounds identified priority areas for regional economic clustering system and substantiated the methodical approach to the management of the development of the clusters studied areas.

The proposed system-functional model of the development of industrial and economic cluster structures in regional economic system is based on identified and evaluated advantages of spatially localized economic systems of cluster type (as opposed to vertically integrated structures of the regional economic system): synergies, infrastructure efficiency, proportional development of the core and the periphery of the cluster.

Model of agro regional cluster includes a subjective structure, mechanism of direct and reverse economic relations between the parties of the cluster, the mechanism of balancing the current and long-term investment interests in the form of a vector direction of its synergetic development of regional economic systems level; level hierarchy structure of agro-industrial cluster and its subjective potential in the regional economic system.

For a successful organization of the cluster is of great importance its internal environment. Figure 1 shows its most significant factors.

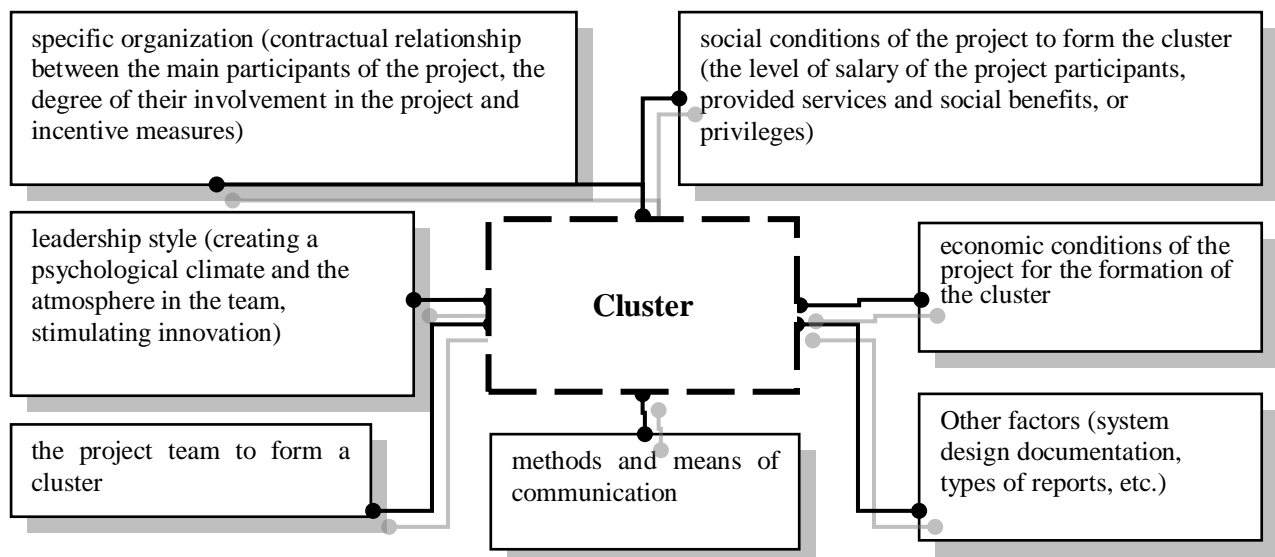


Figure 1. **Cluster (its internal environment) and the factors that have a high priority on its formation** [developed by the author]

High competitiveness of spatially localized economies achieved by three factors: 1) the active cooperation of small producers through the creation of collective institutions that support businesses in the region; 2) maximizing the potential of product differentiation; 3) high innovation activity of enterprises, flexibility and quick response to new consumer demands.

Advantages of business organization in the cluster at the level of regional economic system can be divided into two groups. The first group is related to the integration effect in general, regardless of the form in which it is represented: holding, PPG, simple partnership, as in a time of general economic globalization to operate in an autonomous, uncooperative structure, tend to be less profitable than integrated. The second group of the advantages of the cluster associated with the specifics of this particular form of business association: the synergistic effect of association of business entities in the cluster, as a system, the benefits of unification is achieved not by arithmetic addition of the resource potential of the participants, and by multiplying the opportunities for all organizations within the cluster structure. Designated features a traditional, vertically integrated structure of spatially localized cluster-type economic systems that presented in Table 1.

Table 1

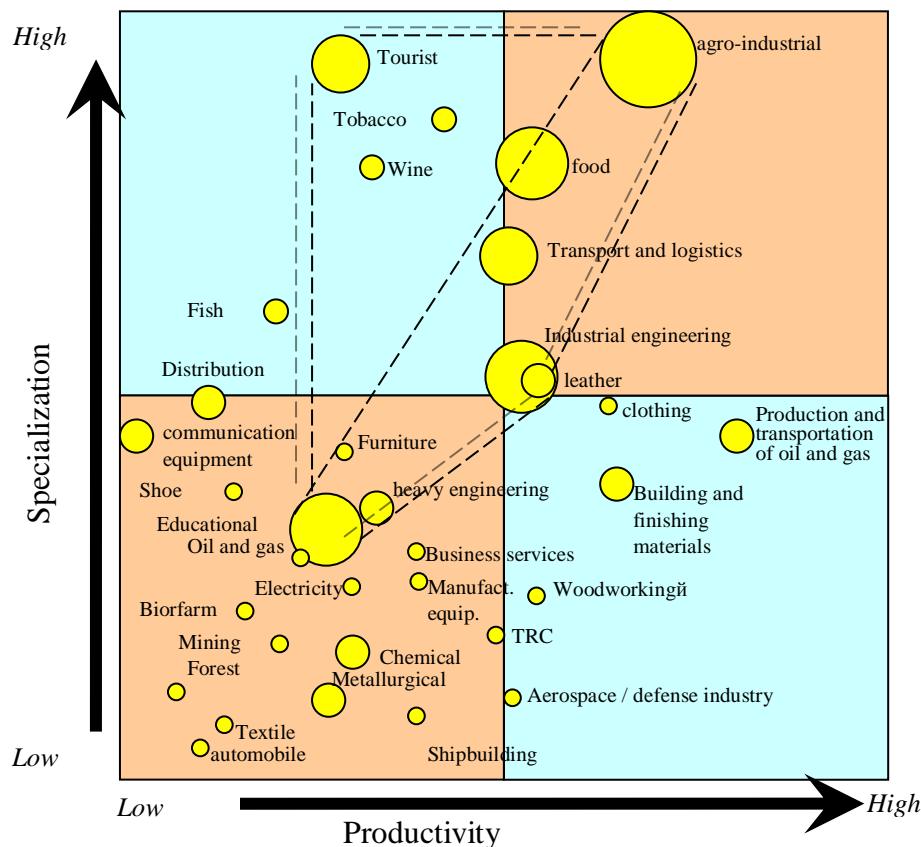
Comparative analysis of cluster-type economic systems and traditional integrated structures [developed by the author]

Evidence	Traditionally vertically integrated structure	Spatially localized cluster-type economic system
The basis of production	Rigid specialization, standardized products, mass	An innovative approach, flexible specialization within the boundaries of the regional economic system
Production structure	Corporate interaction, centralization	Centralized coordination on the agreed areas of corporate and independent firms within the boundaries of the regional economic system
Competition	On the foreign market, within the region	In a limited area (within a cluster), but tied to the boundaries of a regional economic system; cluster uses its unique resources on the basis of the unique preferences
Geographical location	Within the region, or interregional	
Economic indicators	According to the final product	From the combination of sectors within the cluster and therefore the system to regional boundaries
Labor market	Low labor mobility	High mobility of the workforce of the cluster, the possibility of "spillover" into other profiles and specialization in a single cluster (within which there are educational and research centers, universities, business incubators)
Government regulation	Measures to regulate industries and enterprises	Measures to regulate clusters and enterprises in conjunction with the conditions and characteristics of individual regional economies
Mechanisms of interaction	Formal	Formal, along with informal (exchange of information, knowledge, technology), which prevail over formal power of the cluster and specifications and features of the regional economic system

At the moment of a radical transformation of social and economic relations in the framework of regional economic systems of several regions were identified the prerequisites for the development of sectoral and cross-industry markets. Regional ecosystem structure is formed as a system of territorial distribution of goods and services for which consumers have intraregional demand. This allows the cluster to use market mechanisms to balance the supply and demand to take into account local specificities and interests of economic actors.

The relative economic independence and legal entities of Ukraine, its territorial integrity, availability management structures allow us to construct an effective regional cluster management system. The effectiveness of the regional economic system should be considered from the perspective of its orientation to the positive dynamics of sustainable economic development parameters, accompanied by economically and socially justified to reduce costs, such as energy per unit of production and services at the existing level of technological development. This fact makes the proposed structure of the cluster portfolio in regional economic system "Mironovsky Khleboprodukt", which presents a vertically integrated complex consisting of 21 enterprises located in Kiev, Cherkassy, Dnepropetrovsk, Donetsk, Vinnytsia, Ivano-Frankivsk, Kherson, which integrates production capacity of all technological chain.

The basic principle of group companies of mulicluster "Mironovsky Khleboprodukt" is continuing to provide the high quality of its products at all stages of the chain - from the time processing of raw materials to finished products, namely production of protein and sunflower oil, production of fodder, the production of hatching eggs, rearing parent stock broiler chickens, meat broiler, livestock, producing delicious beef production delicacy goose liver and goose meat, production of meat products, meat processing industry, crop production and distribution (Figure 2).



Developed by the author

Figure 2. The structure of the portfolio of clusters of Ukraine regional economic system

The priority for the Central, Pridniprovsk, Podilsk, Slobozhansk regions (place of location of mulicluster) are clusters: agriculture, tourist, food, transport and logistics, industrial engineering, education, which are part of the group (indicated by the dotted line in Figure 2) of leading clusters of the regional economic system with a high level of specialization and productivity. Within the boundaries of this group of clusters present constant clusters: food that is special for this group of regions, but do not receive proper development due to technical and economic circumstances. Clusters are presented in the lower (left) quadrant of the matrix (about 14 clusters) have a low level of specialization and productivity.

Thus, multicluster as a spatially localized economic system, which is a production complex meets the following conditions: 1) this union can act as a single entity; 2) its members are business companies - independent subjects of civil relations (joint-stock companies, limited liability companies); 3) one of the companies (cluster core) determines the decisions made by other economic entities - members of the same cluster; 4) a common policy is conducted within the cluster (investment, technological, production and economic, financial).

Agriculture multicluster "Mironovsky Khleboprodukt" is formed within its territory and is characterized by the entry into it of all interested enterprises and infrastructure facilities in the region, with specialized production and economic ties. Whereas the possibility of developing specialized business in each cluster (Figure 2) for the balanced development of the entire regional economic system. Each cluster should perform their specific functions in the regional economic system, release its business types.

As an example of an analytical evaluation of the effectiveness of the cluster approach to the work, was evaluated companies activity that are part of multicluster "Mironovsky Khleboprodukt". Investment funds in the agricultural sector allows providing farmers with the necessary agro-resources. This is reflected in lending to agricultural companies and partnerships, as well as farms for a long time for the harvest of agricultural crops in the most favorable conditions, expand franchised network (2015 – more then 2000). In multicluster was created a system of modern management, ensuring efficient use of existing capacity (operational control), defining the objectives and capacity building in order to achieve their (strategic management system). In the process of implementation of cluster management follows objectives: maintaining financial stability; increase in credit; obtaining the maximum possible profit for a given level of acceptable risk; regular payment of dividends to shareholders; business diversification. At the same time preserving financial stability and improving creditworthiness are priority objectives. For their achievements in the thesis proposed activities of the company (in fact implemented in practice) as part of a clustered enterprise management (Table 2).

The necessity of creation in multicluster "Mironovsky Khleboprodukt" of completed technological schemes, starting with the scientific and innovative institutions of the regional economic system and ending with the production and sale of high technology products and its maintenance.

Table 2

Direction of activity of multicluster "Mironovsky Khleboprodukt" within the cluster management and expected results [created by the author]

Priority goals	Areas of activity within the cluster management and results
Ensuring optimal level of accounts payable. Reducing the load on borrowings	A mechanism to prevent artificial bankruptcy, defined an additional source of financial resources in the form of commodity credit
Reducing the level of overdue receivables, providing its normal level	Performed a set of measures for the maintenance of accounts receivable at the normative level, the rapid recovery of arrears.
Increase operational efficiency and profitability	The flexible price policy to ensure break-even sales. Reduced inventories. Approved specifications of variable and fixed costs, taking into account revenue. Increased productivity by reducing manual labor, optimize the number of employees. Implemented energy and resource saving program
Diversification of business processes, more efficient use of financial resources, lower costs	Agreements governing the processes within the business units. The main conditions of agreements: full financial responsibility for the fixed resource management; the interaction between them with competitive prices and tariffs; achievement of targets for optimizing and increasing the efficiency of production as a whole
Reducing the share of fixed costs in total costs	Performed through the operational control of the current activities under the strict observance of the approved budgets, reduction of administrative and management activity costs
Change planning and analysis of the current activities of the system in order to improve the quality of management decision-making	Implemented management accounting, unified income and expense items for all kinds of budgets. Formed heart of the financial liability, revenue and cost centers

Developed an agrocluster structure with taking into account the business combination of different forms of ownership and industry sector (Figure 3).

Vector directions of synergistic development of multicluster "Mironovsky Khleboprodukt" as a cluster include: technical and technological re-equipment of enterprises based on the use of the latest scientific and technical developments, and nanotechnology; to promote scientific education and innovation agencies, centers of high technologies in the region, as an important component of regional economic system designed to ensure the formation and implementation of high-tech industries; the implementation of long-term regional programs and plans aimed at the development of innovative potential of the cluster; restructuring of the industry and design institutes in the form of business organization with developed financial, marketing and commercial business structures; creating an enabling environment for investment and innovation in the development of non-agricultural agroclusters and forms of entrepreneurship in rural areas.

Advanced optimization of conditions of agriculture in the region by improving human and scientific information support of agricultural holdings, promotion of innovations; improvement of forms and control conditions in the agricultural sector: promotion of cooperation and integration of all types of enterprises of different organizational forms in the production, processing, marketing of agricultural products, agro-service maintenance, trade and lending; the formation of unions and agricultural associations.

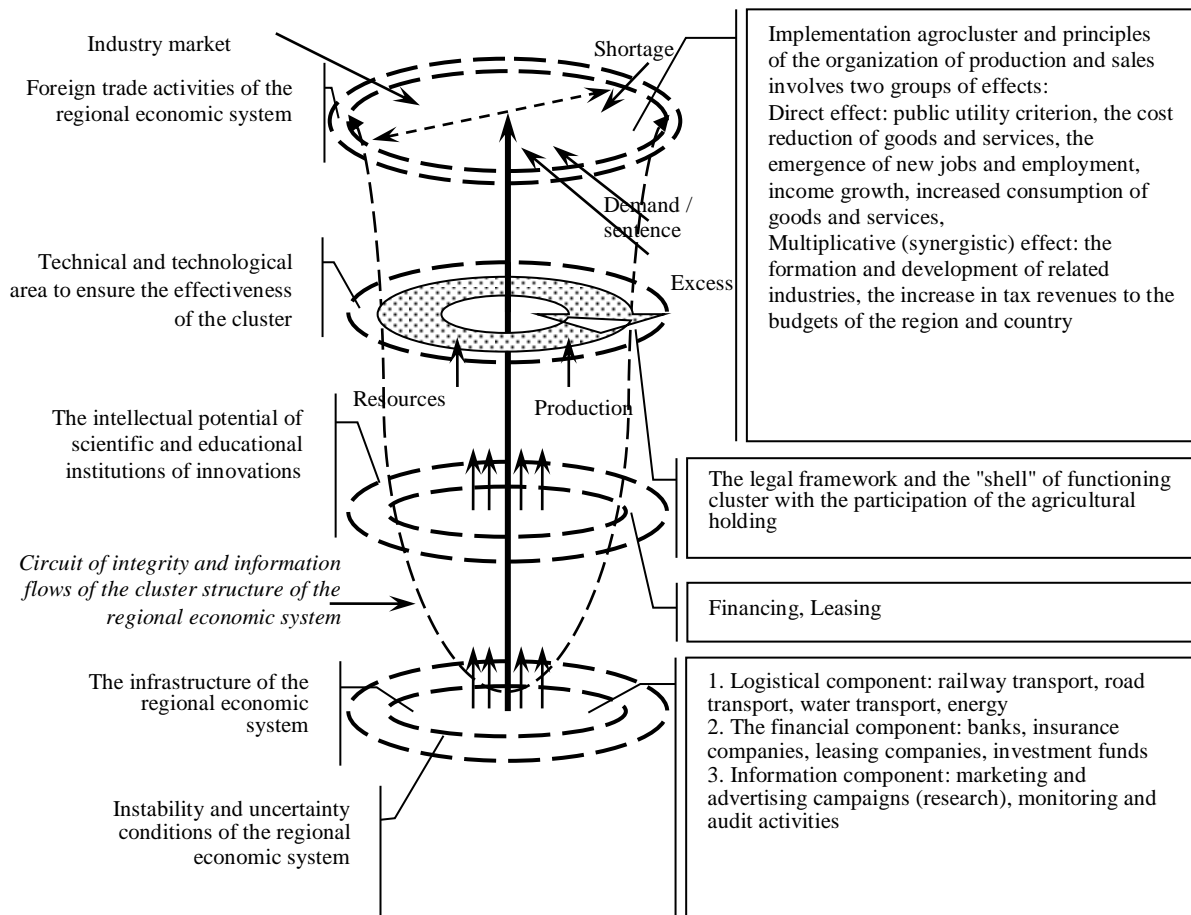


Figure 3. The structure of the regional economic system of multicenter "Mironovsky Khleboprodukt" [compiled by the author]

Thus, the status of the cluster involves obtaining synergies and increasing the competitiveness of the regional economy. The positive results of the financial condition of multicenter of "Mironivsky Khleboprodukt" ascertain projections Table 3.

Table 3

**Prediction of efficiency of the multicluster of "Mironivsky Khleboprodukt"
within the cluster management for 2017**

(Developed by the author)

Indicator	Traditional, vertically integrated management	Cluster management of geographically localized economic system
<i>coefficient of profitability</i>		
Return on assets	0,5	0,6
Return on capital	1,9	2,8
Return on sales	13,6	14,1
<i>The coefficients of efficiency</i>		
Accounts receivable turnover	1,9	2,2
Stockturn	1,1	1,3
Turnover of total assets	0,5	0,8
<i>Liquidity ratios</i>		
Current liquidity	0,8	1,1
Term liquidity	0,3	0,4
Critical liquidity:	0,02	0,03
<i>The coefficients of financial stability</i>		
Coverings	1,32	1,66
Autonomy (financial independence)	0,12	0,2
<i>Coefficients of business activity</i>		
Capital productivity	1,2	1,65
Capital intensity	0,3	0,6
Productivity	475	615

For practical implementation of the cluster approach in the research process is necessary to use adaptive organizational and economic instruments of management decisions on the interaction of the participating entities in the cluster: the direction of comprehensive diagnosis of functioning cluster; diagnostic algorithm of implementation during crisis and prevention systems; matrix interaction of structural subdivisions of the cluster; a block diagram of phases of development of the financial program of the cluster.

Conclusions. Integration in regions with favorable production conditions, as well as in areas that were maximally oriented on the agricultural markets and possessing or developing of industrial and social infrastructure, low-wage labor.

The proposed organizational and economic tools can be used in the management of the processes of formation and development of regional economies, while creating enterprises of cluster type, in the development of organizational and economic instruments of cluster management, with taking into account sectoral and regional specificities of the territories, as well as to assess the effectiveness of the cluster technology in the field of economic relations.

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