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**FORMATION AND DEVELOPMENT OF CLUSTER
POLICY IN UKRAINE**

**TWORZENIE I ROZWÓJ POLITYKI
KLASTROWEJ NA UKRAINIE**

Abstract: The article presents world and Ukrainian experience of formation and development of cluster policy. There are determined typical way of cluster's forming in the region provides, problems and incentives for the development of agricultural clusters in Ukraine. There are highlighted SWOT-analyse of creation of agrocluster, main elements of government policy on support of the agricultural clusters' development.

Keywords: cluster policy, cluster, regional development, growth points.

Streszczenie: Artykuł prezentuje światowe i ukraińskie doświadczenia w zakresie tworzenia i rozwoju polityki klastrowej. Określa typowy sposób tworzenia klastrów w tym regionie, jak również problemy i bodźce do rozwoju klastrów rolniczych na Ukrainie. Przedstawiono analizę SWOT tworzenia klastra agrarnego, główne elementy polityki rządowej dotyczącej wsparcia rozwoju klastrów rolniczych.

Słowa kluczowe: polityka klastrowa, klaster, rozwój regionalny, punkty rozwoju

Entry

Development of regions over the last decade is characterized by disparity and low economic growth and concentration of production, investment, financial, labor potential in a small number of regions.

Clusters provide a unique framework for the development of innovation, increase productivity and profitability of small and medium enterprises. In case of total globalization the regional structures, which can't form clusters, are in the danger – they could lose their competitiveness and market stability, in addition the real threats to the economic security of the region are becoming. An active clustering reduces isolation of various companies (from small to large structures), strengthens industrial relations, and leads to increase the productivity.

Clustered approach proposes effective methods and tools for stimulation of innovative development of the regions, ensures a concentration of financial resources and tools, as well as employment, equals the territorial socio-economic disparities by increasing allocations to local budgets.

This approach is absolutely relevant for the Ukrainian national economy, which has a significant potential for clustering in traditional and new areas of scientific and technological development. In comparison with the EU countries it demonstrates rather low level of activity in the creation of new forms of innovative business¹. In case of the national competitiveness and in terms of the global development conditions, it requires generalization of an adequate EU experience devoted to clusterization.

1. World experience of formation and implementation of cluster policy

Global researches confirm that the economy of territories, which is formed based of clusters – this is the model of competitive and investment-attractive economy, which is based on using synergy effects and scale. Clustered local networks of territorial - productive systems are the sources and factors of ensuring a high level and quality of life, economic growth and sustainable development of territories.

Analyzing the examples of international cluster policy abroad, we could indicate several models of clusters:

¹ В.И. Чужиков, О.Д. Лукьяненко, *Кластерная политика Европейского союза, „Экономика Украины”* 2013, 2 (607), С. 81-91.

1. European model suggests the concentration of competing companies within the same geographic area, which produce a differentiated product and form a special product and marketing strategy within the cluster and beyond;

2. North American model combines a number of industrial companies on the principle of territorial specialization;

3. The Asian model is characterized by the imposition of clustering and high role of the state. The model assumes the vertical integration and specialization of enterprises within the same geographic area;

4. The Japanese model of clustering is characterized by the concentration of small and medium-sized enterprises around the large company-monopolist. Industrial communication suggests vertical and horizontal integration in case of competition between the small companies for the right to supply².

In foreign experience of cluster formation are the following options for their construction:

- “Top down” - the authorities define the strategy of clusters, allocate resources, form a coordinating council;
- “Bottom up” - is the result of combining of separate projects and programs, the initiative comes from the entities;
- Mixed - combines both options³. The choice of options depends on the authorities- on their readiness to cooperate with the business. Clusters can't exist without support from the local authorities.

In world practice, there are the following forms of stimulation of small innovative enterprises within the clusters:

- direct funding, up to 50% of the cost of creating new products and technologies (France, USA);
- granting loans without interest payments (Sweden);
- targeted subsidies for scientific and technological research;
- establishment of foundations for innovations' implementation taking into account all possible commercial risks (England, Germany, France, Switzerland, the Netherlands);
- grants of up to 50% of the costs of expenses on innovations (Germany);
- reduction of state taxes for individual inventors (Austria, Germany, USA);
- postponement of fees' payment or exemption from them, if the invention relates to energy savings (Austria);
- free record keeping up to the request of individual inventors, free services of attorneys, exemption from the duties (the Netherlands, Germany)⁴.

² О.В. Несмачных, В.В. Литовченко, *Кластерная политика в стратегии инновационного развития России и зарубежных стран*, „Фундаментальные исследования” 2014, № 9, С. 162-165.

³ Д.П. Карпова, *Использование кластерного подхода в управлении региональной экономикой*, „Региональная экономика и управление” 2007, 14, электр. науч. журн.

⁴ Е.В. Маркушина, *Кластеры и кластерные стратегии в развитии экономики региона*, „Проблемы современной экономики” 2010, № 2.

During the determination of the structure and development of clusters, two models of national policy were established: liberal and capellmeistered⁵. According to the first model, the cluster is considered as a market mechanism. The role of the government in this case is to eliminate barriers which block its natural development. This policy is used in countries with liberal economic policy (USA, UK, Australia), where a sufficiently developed market mechanisms of regulation. The leading role within the implementation of cluster policy in these countries belongs to regional authorities and regional organizations.

The second model is characterized by the active role of the state in promoting and supporting development of clusters via using a variety of instruments, including financial. As an example of using of this model we can named the next countries: Japan, South Korea, Slovenia, Singapore, Sweden, and France.

“Growth points” (in practice they can be implemented through the national projects, operational programs, etc.), traditionally named a concrete investment projects, which create jobs and make positive social and economic impact. As usual “growth points” are associated with the following sectors: transport (freight road construction, development of transport infrastructure); communication technologies; energy sector (and projects that raise environmental energy); environmental protection; research and innovation; social infrastructure; education and training; urban development (activities which are aimed at strengthening the role of cities and centers of growth – for example improvement of social infrastructure and housing, modernization of urban transport, support of economic activity in urban areas, improvement of environment); industrial development (and old industrial) areas; rural development; fisheries; tourism and investment in facilities for recreation and culture and so on.

An anti-crisis development of Eastern Europe countries shows that the best synergistic effect is providing by the best projects of “growth points”, covering the next areas⁶:

1. “Equal and integrated urban development” (within the “Regional Development” program). It’s about the activities which are aimed at strengthening the role of the cities and the centers of growth, for example, improvement of social infrastructure and housing, modernizing urban transport, support of economic activity in urban areas, improvement of ecology and the environment of urban (and suburban) areas of development.

2. “Regional and local availability”. The goal is to provide better connection between urban and remote areas because of their roads and transport construction, improve infrastructure of communication networks and information technologies.

3. Tourism development. The priorities of this trend are: development and modernization of tourism infrastructure (primarily organizing cultural and historical monuments, development of the hotel sector); improvement of tourism services within the country; strengthening partnerships between the objects of tourism industry and other

⁵ Ю.О. Ульяновченко, *Методологічні засади формування кластерної політики в умовах глобалізації* [Електронний ресурс] – Режим доступу: www.kbuapa.kharkov.ua/e-book/db/2010-2/doc/1/06.pdf

⁶ Regional Development Programmes 2007–2013 / Regional Policy // Офіційний сайт Європейської комісії [Електронний ресурс] Режим доступу: http://ec.europa.eu/regional_policy/country/prordn/search.cfm?gv_pay

areas related to the tourism. Tourism development creates favorable conditions for small businesses (especially in services), promotes the growth of self-employment (“green tourism”), reduces unemployment.

4. Local development and cooperation. This is a priority of «growth points» formation which refers to peripheral communities that need an increase of investment flows for the next improvement of living conditions and local level (with the exception of the most populous metropolitan areas). Priority importance is taking by the investments in industrial, educational and health infrastructure. In practice, this process is realized due to activation of local initiatives, combining financial and material resources of neighboring local communities.

In the nearest future Ukraine should focus on the combination of elements of these models. It is necessary to turn out their own experience of formation of cluster policy, which should be tailored to the state, the specific nature of socio-economic development of the regions and the national economy. In this case, regardless of the chosen model, the state should determine the extent and depth of their participation in the processes of clustering economy⁷.

International experience shows that the cluster organization of regional development on the basis of in-depth specialization and concentration of production which taking into account natural resource and spatial advantages of territories, for which the activities of industrial clusters become as a “growth points”, have become the main mechanism for socio-economic development of territories.

2. Background for creation of agribusiness clusters

Formation of agro-industrial clusters is possible within the next key areas: inter-farm co-operation; territorial co-operation at the district and regional levels; inter-regional co-operation. Development of these areas devoted to the objective economic process linked, on the one hand, with the social division of labor and specialization, scientific and technical progress, natural and economic conditions; and on the other – with the need for interaction between specialized industries and types of agricultural and industrial production. Neighborhood associations may be combined into a corporation at the zonal level, combining several processing organizations.

However, in order to reconcile the interests of the participants of the regional industry sub sectors it is necessary to create an agro-industrial elements which are combining agricultural production with processing and marketing of products, logistics and agroservice⁸.

Agricultural organizations come into this unification movement, because they are seeking to reduce the risk, which is associated with production, its dependence on climat-

⁷ А.П. Тищенко, *Кластерный подход к управлению региональным экономическим развитием и перспективы его внедрения в Украине*, „Бизнес-Информ” 2013, №2.

⁸ С.И. Грядов, И.В. Ковалева, *Агропромышленный кластер: проблемы и перспективы развития*, ‘Вестник Алтайского государственного аграрного университета’ 2009, № 4 (54), С. 74-79.

ic conditions, natural market for agricultural products, dictate processing organizations, need to improve the competitiveness of production.

Processing and service companies are also seeking to secure a stable income based on a reliable source of raw materials and its better use, improvement of the products' quality and work up a market. *The choice of integration's way* depends on product-economic circumstances in the region, situation on the food market, combining forms of capital and their participation in the management process. But regardless of the chosen form, the main thing for all agro-industrial groups is that they combine the whole reproductive process from farm producers to consumers of finished products. Participants of this system ensure product's promotion as a company's property through the whole chain: financing - production - processing - sales - financing.

The economic effect could be achieved by: reducing the cost of production due to the supplying needed resources at the stable prices; shortening the pay-back period for the funds and resources needed for a new production cycle.

The principle of synergy during formation of clusters means an ensuring of taking the joint action by participants of the regional industrial cluster in order to achieve common objectives⁹. Striving for sustainable innovative development, cluster members unite and organize their activities, complementing each other, so that the potential of the cluster was substantially higher than the potential of its participants. Synergy enables organizations to accelerate the introduction of new products, resulted in increased sales and reduced costs.

Within the framework of industrial clusters the following synergies can be formed: technological (sharing core technologies, the diffusion of technological innovations, transfer of know-how); resource (sharing concessional resources of key species: production area, technological equipment); infrastructural (sharing concessional infrastructure required for all businesses: banking, insurance, consulting services); informational (the formation of a common information space in related sectors and related specific sectors of the economy)¹⁰.

The typical way of cluster's forming in the region provides¹¹:

- Identification of sources needed for funding of the regional clustering;
- Analyzing the economic development of the region and its sectors;
- Evaluation of the region based on its main components of competitiveness;
- Selection of promising sectors for clustering based on the assessment of socio-economic status, specialization, economic conditions;
- Presentation of the report;
- Analyze of industrial competitiveness as well as competitiveness of individual companies;

⁹ Е.С. Куценко, *Кластеры в экономике: Основы кластерной политики государства* [электронный ресурс]. Режим доступа: URL: <http://promcluster.ru/index.php/publications-clis/63-clisneco3>

¹⁰ Ю.П. Анискин, *Корпоративное управление инновационным развитием: монография*, под ред. Ю.П. Анискина, М.: Издательство „Омега – Л” 2007, 411 с., С. 143-144.

¹¹ А.І. Сухоруков, *Моделювання та прогнозування соціально-економічного розвитку регіонів України: монографія*, А.І. Сухоруков, Ю.М. Харзішвілі. – К.: НІСД, 2012 – 368 с.

- Choosing of the major companies which will be chosen as a basis for the future cluster;
- Preparation of a cluster's conceptual model based on best international practices in formation of clusters taking into account local characteristics;
- Projects and programs development;
- Implementation of cluster's program;
- Evaluation of projects' implementation, preparation of technical and financial reports related to achievement of cluster's aim.

One of the most promising forms of interaction between the government and agribusiness is cooperation aimed on development of agricultural clusters. In case of this cooperation, entrepreneurs' competitiveness will be increases based on specialization and concentration of production, involving innovation research institutions, the formation of recycling. At the same time, on the governmental level it will be based on equipping rural areas with modern agro service, agriculture, residential and cultural areas (as agrocity). All these efforts aimed on achievement of stable social and economic development of the region¹².

Industrial clusters that joint industry, technological chains, research and financial institutions in the region should become an active distributor of innovations. Primarily, cluster should provide a growth of qualitative production's parameters, development of small business, increase of employment¹³.

3. Problems and incentives for the development of agricultural clusters in Ukraine

As of now, development of agro-clusters in Ukraine is complicated by the weakness of integration links between agro-producers, processors and research institutions, as well as the reluctance of most farmers to become entrepreneurs, innovators, who are able to initiate formation of agrocluster. Therefore, there are only a few examples of the practical establishment and operation of agricultural clusters in Ukraine, which were initiated by farmers and based on experience, borrowed money from international practice of cluster development.

The results of a special survey based on answers from of more than 2080 CEOs in 27 administrative regions of Ukraine (tab. 1):

¹² М.Ф. Кропивко, *Кластерний підхід до управління сільським розвитком*, М.Ф. Кропивко, „Економіка АПК” 2008, № 5. С. 57.

¹³ Ю.П. Анискин, *Корпоративное управление инновационным развитием: монография*, под ред. Ю.П. Анискина. М.: Издательство „Омега –Л” 2007, 411 с., С. 143-144.

Table 1. The most problematic factors in doing the agrarian business in 2013**Tabela 1.** Najbardziej problematyczne czynniki w prowadzeniu działalności rolniczej w 2013 r.

| Factors for doing agrarian business | % | Importance of factor |
|-------------------------------------|------|----------------------|
| Instability of governance policy | 19,3 | 1. |
| Tax policy | 10,7 | 2. |
| Inefficiency of government services | 10,2 | 3. |
| Corruption | 9,4 | 4. |
| Access to land resources | 8 | 5. |
| Rates of taxes | 7,6 | 6. |
| Access to finance | 7,2 | 7. |
| Inflation | 7 | 8. |
| Instability of local authorities | 5,7 | 9. |
| Low qualification of workers | 5,2 | 10. |
| Undeveloped infrastructure | 5 | 11. |

Source: Звіт про конкурентоспроможність регіонів України 2013. // [Електронний ресурс].
 – Режим доступу : www.feg.org.ua

The development of agricultural clusters in Ukraine is complicated because of the next factors¹⁴:

- Imperfect of legal framework for the operation of clusters and, as a result, a lack of state support for cluster initiatives of enterprises;
- Absence of trust between the public authorities and business, as well as between individual companies, companies reluctance to disclose or share inside information because of the possible occurrence of abuse and dependence on powerful partners;
- Weakness of existing agrarian clusters due to the low level of competition in the domestic market, the lack of “aggressive” suppliers and demanding consumers;
- The possibility of losing the right to receive benefits now and agricultural subsidies in any organizational changes or production (including when you enter the cluster);
- “Isolation” of science and education from agro production, agricultural customers don’t act on scientific and innovative products and the products of research institutions can’t find a buyer among producers;
- The lack of foreign investment and venture capital, which is an important source of clusters in developed countries;
- No united systematic database on existing and potential clusters, which prevents the creation of a society in understanding the benefits of cluster association and coherent picture of the functioning and performance of the existing agricultural clusters in Ukraine.

¹⁴ О. Собкевич, В. Русан, А. Юрченко, *Щодо державної політики підтримки розвитку аграрних кластерів в Україні*, Аналітична записка <http://www.niss.gov.ua/articles/760/>

The cluster approach can stimulate economic development through regional factors: common goals of producers and consumers of the region; close negotiations between institutes and managers of companies; mutually beneficial relationships between technology developers and products manufacturers; involvement of financial intermediaries in clusters cooperation; development of efficient clusters' infrastructure; providing better investing in information infrastructure; improvement of the administrative system and improve performance clusters; improvement of social and health services cluster members (table 2).

The benefits of agro-industrial clusters can be the next: realization of competitive advantages of the region for the production of food associated with geographic location, climate, vast areas of agricultural production regions, etc., opportunities inherent for them as an integrated system aimed at improving techniques and technologies. An obligate condition for effective functioning of agro-industrial cluster is a developed market infrastructure. Its subjects perform a very important function: bagging, packaging, storage of goods in warehouses, refrigerators, downsizing (or vice versa, an increase) in the supply, transportation and delivery of products; Providing information on demand, supply, prices, conditions of sale, location of the goods; financial assistance to support the production, in some cases, etc. Infrastructure should create the conditions for maintaining an appropriate mix of demand and supply, reducing the time the sale of goods, the acceleration of capital turnover, reduce costs and prices of goods movement, forming an effective competitive environment¹⁵.

4. Prospective directions of clusters' development

As of now among the promising directions of clusters' development in agriculture can be the following:

- Green tourism. Thus, in Poltava region there are tourist-recreational cluster "Gogol's places in Poltavshina" which route runs through Mirgorodskiy, Dikan, Shishatsky districts, Velyki Sorochintsy and Gogoleve villages with different sightings (cultural institutions, churches, landmarks, etc.), concerning the life and career of the writer. There is also a cluster of eco-agro "Oberig", which brings together 10 agrohouses was conducted in Gryziv village (Shepetivske district, Khmelnytsky region)

- Organic Production - project participants jointly work out procedures for inspection and control of organic products, allowing them to receive both domestic and international certificates of compliance and deliver accordingly labeled products in domestic and foreign markets. Thus, in the Poltava regional cluster operates manufacturers of environmentally friendly products, with the support of local authorities integrates enterprise which aimed at production, certification and promotion of environmentally friendly products that are free of transgenic and chemical additives. Even now some companies are in the process of international certification to produce the feasibility of production abroad;

¹⁵ Е.В. Доржиева, *Формирование агропромышленных кластеров как условие инновационного развития региональных систем*, „Известия ИГЭА” 2011, № 4. С. 76-78.

– Highly specialized production of certain types of products. Successful examples of this trend is the fruit cluster “Podolsk apple” in Khmelnytsky the production and sale of apples and “natural milk”, which operates in Rivne and agricultural combines working in the field of dairy farming;

Table 2. SWOT – analyze of creation of agrocluster

Tabela 2. Analiza SWOT tworzenia agroklastra

| Strength in 2014 | Trend of changes ↑ ↓ Possibility of changes (H- high, M – middle, L - low) | Weakness in 2014 | Trend of changes ↑ ↓ ≈ / Possibility of changes (H- high, M – middle, L - low) |
|--|---|---|---|
| Great amount of lands | ≈H | Update of material and technical equipment | ↑ M |
| Composition of land resources | M | Development of regional infrastructure | ↑ M |
| Favourable climatic conditions for growing high quality crops | ≈M | Low quality billet, processing, storage products | ↑ M |
| Ecological products | M | Rising of prices on energy resources | ↑ H |
| The average annual productivity growth of domestic c / d to 4.5% (best rate in the world) | ≈M | High prices of imported products, seeds, pesticides, genetic resource for animals, equipment, software | M |
| Record crops (excluding the Crimea) | ≈ ↑M | | |
| Foreign exchange earnings from exports (1 place) | ≈ ↑M | | |
| Opportunities | | Treats | |
| 83.1% of Ukrainian agro imported to the EU without duty, another 2% - drops to zero duty for 10 years, and the remaining 14.9% of category s / g products The EU tariff quotas | ↑M export promotion, domestic producers access to European markets | Corruption (lax enforcement). Advanced access to land (the moratorium on the alienation and change of purpose of agricultural land) | ↓ M |

| | | | |
|---|---|---|------|
| The introduction of modern agrotechnological policy to increase cereal yields. | ↑ M | Inflation Tax Policy Changes in legislation, the abolition of privileges | ↓ M |
| Great demand for agro production in the world and domestic market | ↑H creating leadership in the global food market | Difficulty in obtaining patents for the production of seeds that are adapted to the climate for maximum results | ↓ H |
| Reconstruction of roads, railways, ports, agrilogistics | ↑ M | Compliance with European quality standards, food safety | ↑ H |
| The development of processing and after-sales training | ↑H growth of value of added products through its processing | Reduction of community's incomes | ↑ M |
| Great investment potential | ↑ H | The lack of state support for development | ↑ M |
| High business activity of the population, improvement of business climate | ↑ H | Degradation (depletion) of lands | ≈ ↑M |
| Existed significant educational and scientific potential in this area (5 academies, 22 agricultural universities) | ↑M | Limited water resources | ≈ ↑M |

Source: own

- Innovation. Thus, the regional agro-industrial innovation cluster „Ahroinnovatsiyi” was established in Rivne. Its founders: 4 public authorities (Rivne Oblast Administration, Department of Economics and Investment Policy Rivne Oblast State Administration, the State Agency of Ukraine for Investments and Innovations), 3 research organizations and universities, 5 manufacturing plants of Rivne and 3 innovative structure and service agencies. The purpose of this cluster is to unite efforts, coordinate and implement the joint actions aimed at development and implementation of innovations in agriculture of Rivne region. In 2009 in Chernivtsi oblast created Ukrainian-Romanian „First agrarian cluster” aimed at growing fruits and berries and horticulture development. The main goal is to create interaction between manufacturers, certification inspectors, transporters and consumers. Cluster's activities aim at increase innovation of agricultural activities; improving the investment climate for industries that make up the cluster; develop a mechanism to support innovation

activity of regional governments and local authorities; establishing a system for training of specialized personnel agribusiness area; saturation of Ukrainian fruit and vegetable market with environmentally friendly products; sales berries and mushrooms in Western Europe. In 2011 in Vinnitsa region under the SSRD, funded by the EU, established food processing cluster. The activity helps to create a cluster in a network of farmers under cooperative structures, building partnerships between producers and processors of agricultural products.

Table 3. Existence of clusters initiatives in strategies of regional development in Ukraine

Tabela 3. Występowanie inicjatyw klastrowych w strategiach rozwoju regionalnego na Ukrainie

| № | Development strategy | Existence of clusters initiatives | Period |
|---|--|--|-------------|
| 1 | Strategy of Vinnitsya oblast | promising clusters of specialized industries, including food processing and light industry | by 2015 |
| 2 | Complex strategy of Dni-propetrovsk oblast | establishment of three clusters: the professional and higher education institutions; agriculture and construction | by 2015 |
| 3 | Strategy of economic and social development of Donetsk oblast | Creation of two clusters: steel combined with metallurgical engineering; agriculture and food production | by 2015 |
| 4 | Strategy of economic and social development of Kirovograd oblast | creation of ecological cluster of agricultural producers | 2013 – 2020 |
| 5 | Strategy of economic and social development of Mykolaiv oblast | Creation of clusters of agricultural producers and clusters based on shipyards | by 2015 |
| 6 | Strategy of economic and social development of Sumy oblast | creation of cluster in agriculture, corn, beet sugar, milk clusters and cluster pig production | by 2015 |
| 7 | Strategy of economic and social development of Kharkiv oblast | Creation of 9 clusters: aviation, space, energy, engineering, pharmaceutical, nano- and biotechnology, agricultural products processing, gas production and energy production, housing and communal services, health | by 2015 |

Source: Т.В. Пуліна, *Особливості створення кластера підприємств харчової промисловості, „Бізнесінформ”* 2015, № 1, с. 172-177.

5. Methodology of agribusiness clusters' formation

Based on the theory of cumulative development¹⁶, the concept of “growth poles”¹⁷ and “development poles”¹⁸ the development of methodology is based on the position that organ-

¹⁶ G. Murdal, *Modern problems of “third world”*. Drama of Asia. Translation from English / G. Murdal. – M.: Publishing house “Progress” 1972, p. 767.

¹⁷ F. Perroux, *Note on Concept of “Growth Poles”*, F. Perroux In: “Regional Economics: Theory and Practice”, New York – London 1970, p. 93-103.

¹⁸ J. Boudeville, *Problems of regional economic planning*, J. Boudeville, Edinbyrgh 1992, p. 192.

ization of the clusters' production is an intermediate step in the formation of modern innovative economy. The regional features of soil, climatic and economic conditions of farming causing significant regional differences in the set of cultivated crops. Efficient placement of agro-industrial production in the country, with taking into account natural and economic conditions, allows using land, tools and employers in more efficient way. For getting the maximum possible average of harvest per unit area with the lowest cost of labor and material means it's necessary to locate each branch in places with the most favorable conditions.

During development of strategic plan of the territory's development, it's needed to identify "growth points", which development will be accompanied by a multiplier effect for economic base of the area. This issue is particularly relevant in the context of limited financial resources. Using the effect of investment multiplicative, directing them to the poles of development and growth points, will support formation of agricultural clusters as factors of reconstitution of social-economic potential of the regional economy and the country. In this case, a methodology of regressive analyze of structure of gross agricultural areas' formation facilitates the identification of growth poles and growth points of some agricultural branches¹⁹. Proposed methodology allows to identify "growth points" - some high-tech companies with a highly competitive functioning on the market. Around these "growth points" the emerging competitive environment companies created a critical mass of innovative solutions to create competitive products on the market. On this basis, created the prerequisites of the cluster. Each participant interaction within the cluster "growth points" and beyond is a necessary element in a closed chain competitive innovative agricultural products. In these regions correspond to the specific characteristics of the poles of agricultural products (table 4).

Table 4. Oblasts for forming the clusters of agricultural production in Ukraine

Tabela 4. Obwody w tworzeniu klastrów produkcji rolnej na Ukrainie

| Product type | Oblasts for forming the clusters of agroproducts production of agro products |
|--------------|--|
| Grain | All oblasts excluding - Все області, крім Zakarpattia, Ivano-Frankivsk, Luhansk, Lviv, Rivne, Chernivtsi |
| Sugar beets | Cherkassy, Vinnitsa, Poltava, Khmelnytsky, Kyiv, Chernihiv |
| Sunflower | Poltava, Kharkiv, Poltava, Sumy, Dnipropetrovsk |
| Potato | Chernihiv, Kyiv, Zhytomyr, Poltava, Volynska |
| Vegetables | Kharkiv, Kyiv, Donetsk, Lugansk, Poltava, Kherson |
| Meat | Cherkassy, Poltava, Khmelnytsky, Vinnytsia, Donetsk, Luhansk |
| Milk | Vinnytsia, Cherkasy, Kirovohrad, Zhytomyr, Kyiv, Rivne |

Source: own

¹⁹ М. Одинцов, *Методические основы выявления полюсов развития и точек роста как предпосылок формирования агропромышленных кластеров*, „Бизнес-Информ” 2014, №3, с. 177-182.

After the formation of poles of development and growth points it's necessary to identify the leading enterprise for certain types of agricultural products. They appear in the points of growth as companies that produce highly competitive agricultural products. Identified poles of development or poles of competitiveness and growth in terms of an enterprise leaders corn, beet, sunflower, meat, milk and other agricultural products that operate within the territorial and sectoral food subsectors – they represent the core from which the creation of agricultural clusters should be started. Processing companies, which are based on the latest equipment, which products will be actively promoted on the market according to community's demand, will become stimulators for optimal structure of agricultural production. Within this circuit, the negotiating of terms of interaction between the nucleus and suppliers of agricultural products as raw material for the agro-industrial clusters will be held.

6. Government policy on support of the agricultural clusters' development

Government policy on support of the agricultural clusters' development should facilitate the modernization of the industry, improve the efficiency of agricultural business and social development of regions²⁰. The main elements of this policy should be the following.

1. Establishment of the legal framework of cluster development areas, which provides:
 - consolidation, especially at the level of economic legislation, the legal regime of functioning of clusters in Ukraine, in particular through introduction of the legal category of «cluster»;
 - approving by the Cabinet of Ministers of Ukraine with the relevant resolutions «Concept of clusters in Ukraine», developed by the Ministry of Economic Development and Trade of Ukraine and the «National Strategy Concept of formation and development of cross-border clusters», developed by the Ministry of Regional Development, Construction, Housing and Utilities of Ukraine;
 - add-ons to Paragraph #2 of Article #7 «Measures of stimulation of depressed areas» under the Law of Ukraine «On stimulating regional development»²¹, by stressing it in the next wording: “providing of the state support, including financial, to small businesses, promote the formation of infrastructure of business development, such as business centers, business incubators, innovation centers and consulting, venture capital funds, clusters, etc.”;
 - development of Law of Ukraine “On the self-governing business associations in the agri-food sector” by the Ministry of Agrarian Policy and Food of Ukraine, aimed at creating conditions for the formation and development of self-government in the agri-food sector of Ukraine and settlement of legal, economic and social bases of self-creation and economic about ‘associations (including agricultural clusters).

²⁰ О. Собкевич, В. Русан, А. Юрченко, *Щодо державної політики підтримки розвитку аграрних кластерів в Україні*, Аналітична записка <http://www.niss.gov.ua/articles/760/>

²¹ Про стимулювання розвитку регіонів: Закон України // Офіційний вісник України – 2005, № 40, с. 25. – ст. 2529. – 21. жовтн.

2. Improving the efficiency of cooperation within the “region - science - production” system, which requires:

- regional center of scientific providing agricultural production should advertise and demonstrate of advanced researches, which help implementation of such developments in industrial activities of cluster association’s enterprises;
- regional and district administrations, based on clients’ demand of the agriculture cluster, should form an order to Ukrainian universities and technical schools on education of specialists (faced the required profile plus further job placement in cluster’s structure;
- regional and district administrations should place state orders for products with higher quality requirements devoting in effectively working farm clusters.

3. Providing support for the development of agricultural clusters at the regional level. To face this option the regional and district administrations should:

- carry out organizational and economic support to initiatives of enterprises and organizations of cluster’s association via development of social and industrial infrastructure in the region, in which the agricultural cluster operates, creation of comfortable environment for living and recreation of workers;
- develop websites and a single database with information on existing regional clusters, inform entrepreneurs about the benefits of the cluster model of production during the events of enterprise development, create electronic application forms for businesses wishing to become a member of clusters;
- implement on the local level the “single window” procedures that will speed up licensing procedures (especially in construction and land acquisition), to carry out partial funding of the social, industrial and household infrastructure through public-private partnerships within the agreed project.

Conclusions

Ukraine should involve international experience of clusters’ development and support clusters initiatives, including in agriculture. The current situation where the initial creation of clusters act as small producers are not promising. It is important to develop regional business environment based on public-private partnership, which could be based on business’ using of favorable climatic, territorial and economic conditions of the region with an active government support of manufacturers’ initiatives aimed at development of social and industrial infrastructure.

The proposed methodic approach on identification of poles of growth points of agrarian products based on regression analysis of creation of gross agricultural outputs depending on natural and economic conditions on the regional and district levels of production. Identified poles of agricultural sectors in the region and growth points within the regions in terms enterprises – leaders of corn, beet, sunflowers, meat, dairy and other agricultural production - these are the milestones in which conditions for the development of agro-industrial clusters were cristalized.

Bibliography

- Чужиков В. И., Лукьяненко О. Д., *Кластерная политика Европейского союза*, "Экономика Украины" 2013, 2 (607).
- Несмачных О.В., Литовченко В.В., *Кластерная политика в стратегии инновационного развития России и зарубежных стран*, "Фундаментальные исследования" 2014, № 9.
- Карпова Д.П., *Использование кластерного подхода в управлении региональной экономикой*, "Региональная экономика и управление": электр. науч. журн. 2007, 14.
- Маркушина Е.В., *Кластеры и кластерные стратегии в развитии экономики региона*, "Проблемы современной экономики" 2010, № 2.
- Ульянченко Ю.О., *Методологічні засади формування кластерної політики в умовах глобалізації*, О.Ю. Ульянченко [Електронний ресурс] Режим доступу: www.kbuara.kharkov.ua/e-book/db/2010-2/doc/1/06.pdf
- Regional Development Programmes 2007–2013 / Regional Policy // Офіційний сайт Європейської комісії. – [Електронний ресурс] – Режим доступу: http://ec.europa.eu/regional_policy/country/prordn/search.cfm?gv_pay
- Тищенко А.П., *Кластерный подход к управлению региональным экономическим развитием и перспективы его внедрения в Украине*, "Бизнес-Информ" 2013, №2.
- Грядов С.И., Ковалева И.В. *Агропромышленный кластер: проблемы и перспективы развития*, "Вестник Алтайского государственного аграрного университета" 2009, № 4 (54).
- Куценко Е.С., *Кластеры в экономике: Основы кластерной политики государства* [электронный ресурс]. Режим доступа: URL: <http://promcluster.ru/index.php/publications-cls/63-clsineco3>
- Анискин Ю.П., *Корпоративное управление инновационным развитием: монография*, под ред. Ю.П. Анискина. М.: Издательство «Омега -Л» 2007, 411 с.
- Сухоруков А.И., *Моделювання та прогнозування соціально-економічного розвитку регіонів України: монографія*, А.И. Сухоруков, Ю.М. Хара зішвілі. – К.: НІСД, 2012.
- Кропивко М.Ф., *Кластерний підхід до управління сільським розвитком*, М.Ф. Кропивко, "Економіка АПК" 2008, № 5.
- Звіт про конкурентоспроможність регіонів України 2013* [Електронний ресурс] Режим доступу: www.feg.org.ua
- Собкевич О., Русан В., Юрченко А., *Щодо державної політики підтримки розвитку аграрних кластерів в Україні. Аналітична записка*, <http://www.niss.gov.ua/articles/760/>
- Доржиева Е.В., *Формирование агропромышленных кластеров как условие инновационного развития региональных систем*, "Известия ИГЭА" 2011, № 4.
- Пуліна Т.В., *Особливості створення кластера підприємств харчової промисловості*, "Бізнес-інформ" 2015, № 1. – 2015.
- Murdal G., *Modern problems of "third world". Drama of Asia*. Translation from English / G. Murdal. – М.: Publishing house "Progress" 1972.
- Perroux F., *Note on Concept of "Growth Poles"*, F. Perroux In: *Regional Economics: Theory and Practice*, New York – London 1970.
- Boudeville J., *Problems of regional economic planning*, J. Boudeville, Edinbyrgh 1992.
- Одинцов М., *Методические основы выявления полюсов развития и точек роста как предпосылок формирования агропромышленных кластеров*, "Бизнес-Информ" 2014, №3.
- Собкевич О., Русан В., Юрченко А., *Щодо державної політики підтримки розвитку аграрних кластерів в Україні. Аналітична записка*, <http://www.niss.gov.ua/articles/760/>
- Про стимулювання розвитку регіонів : Закон України*, "Офіційний вісник України" 2005, № 40. – ст. 2529. – 21. жовтн.

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