

## **THE ROLE OF CLUSTERS IN THE AGRO-INDUSTRY**

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### **1. Introduction**

The present paper highlights the major characteristics of a cluster. The article focuses on the advantages and features of cluster development in the region. The essence of the clusters concept and its importance for the development are considered in the agro-industry .

### **2. The Role of Clusters in the agro-industry**

Processes which take place in the world economy influence economic competitiveness and economy of Ukraine as a whole. The first sector which suffers from intensification of competition is agro-industry because it is the major industry in the economy of our country. It produces 96-98 % of the Ukrainian food products, 50-55 % of feedstock, and its part in a national income is about 30 % [1].

World agro-industry develops in direction of strengthening competitiveness. However, Ukrainian agricultural systems are not moving rapidly towards market-driven systems. This industry needs to develop new sources of competitive advantage. It is clear that business-as-usual is not an option for the industry. There should be linkages between geographically proximate group of firms and associated institutions in related industries which can make strong cluster in the agro-industry.

Various aspects of agro-industrial activities and competitiveness of regions were investigated in works of leading Ukrainian and foreign scientists, among whom are V. I. Bogachev, M. V. Zubec, R. Camagni, K. Chapman, M. Porter, M. Raco and others. However, many issues related to increase of agro-industrial competitiveness in the economy of region remain unsolved.

In this context, new theory of regional development came to force. This applies especially to the role of clusters (M. Porter). According to researches of clusters, Porter defines clusters as “geographic concentrations of interconnected companies and institutions in a particular field. Clusters encompass an array of linked industries and other entities important to competition. They include, for example, suppliers of specialized inputs such as components, machinery, and services, and providers of specialized infrastructure. Clusters also often extend downstream to channels and customers and laterally to manufacturers of complementary products and to companies in industries related by skills, technologies, or common inputs. Finally, many clusters include governmental and other institutions – such as universities, standards-setting agencies, think tanks, vocational training providers, and trade associations – that provide specialized training, education, information, research, and technical support” [2].

Clusters are now seen as a critical factor in fostering development, through the connections they make between the industrial and research worlds and the support services they can provide, particularly to small firms which would otherwise not have the resources to access them [3].

Clusters come in many different forms. Some of them are organized around large anchor companies that have attracted a network of suppliers and service providers over the years. Others are groups of small- and medium-sized companies that have been able to overcome the disadvantages of small individual size through active collaboration. Yet another category is represented by small start-up companies that have developed around a university or a research institution.

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Cluster systems are characterized by the following features:

- The presence of large organization leader, which determines long productive activity, marketing, investments and other activities of the whole cluster.
- Territorial and geographic localization of interconnected companies.
- Stability of economic relations in the cluster system.
- Innovation management, which allows using experience and knowledge in the existing clusters and establishing new cooperative networks within a cluster.
- Several organizations can be leaders of a cluster, however, they remain competitors which makes cluster different from cartel or financial group [4, p.74-81].

Forming and development of clusters are the effective mechanism of bringing investments and activation of external economic integration. Integration of clusters in global relations allows raising the level of technological base and speed up economy growth, due to the increase of competitiveness of enterprises that comprise a cluster.

Many countries of the world use cluster approach for development of agro industries. A good example is Matiguas, a prime area for consolidating a cluster related to cattle raising and dairy production because it already has hundreds of ranchers, long-standing traditions and skills in this field, existing importers of livestock inputs and the capacity to produce and export more milk and cheese [5].

Due to clusters companies have next advantages:

- Firstly, companies can achieve higher levels of productivity, because they have close access to specialized suppliers and service providers.
- Secondly, companies could rapidly learn from the best practices of close competitors because they can turn ideas more efficiently into prototype products and services.
- Thirdly, companies can find many external services and assets due to international partnerships among cluster companies.
- Fourthly, firms can hold same market share, get free market niche on some territory.
- Fifthly, cluster can attract international managers as entrepreneurs.

In spite of the positive affect of clusters, there are some problems that impede effective clasterization in Ukraine:

- a lack of awareness of government and business in the questions of cluster approach;
- absence of public policy on maintenance of cluster initiatives;
- insufficient level of development of outsourcing.

Agro industrial clusters consist of small and big farming companies, transport organizations, companies in farm machine industry and materials industries.

An agro industrial cluster has in the basis a complex of agricultural productions and also concomitant productions. Efficiency of clusters formation is influenced by the following factors: specific character of basic production; products innovation; pattern of production; competition and level of its development; mobility of labor force in a region management system; level of technology; influence of state administration [6].

One of the key points of effective agro-industrial functioning is a developed market infrastructure. Infrastructure creates conditions for maintaining the necessary supply and demand, reducing the time of distribution of goods, accelerating capital turnover, reducing costs and prices of commodity

movement, creating an effective competitive environment. Therefore, clusters depend on a number of key factors: related technology, government policies and market conditions.

Cluster model in the agro-industry can be presented as follows (figure 1).

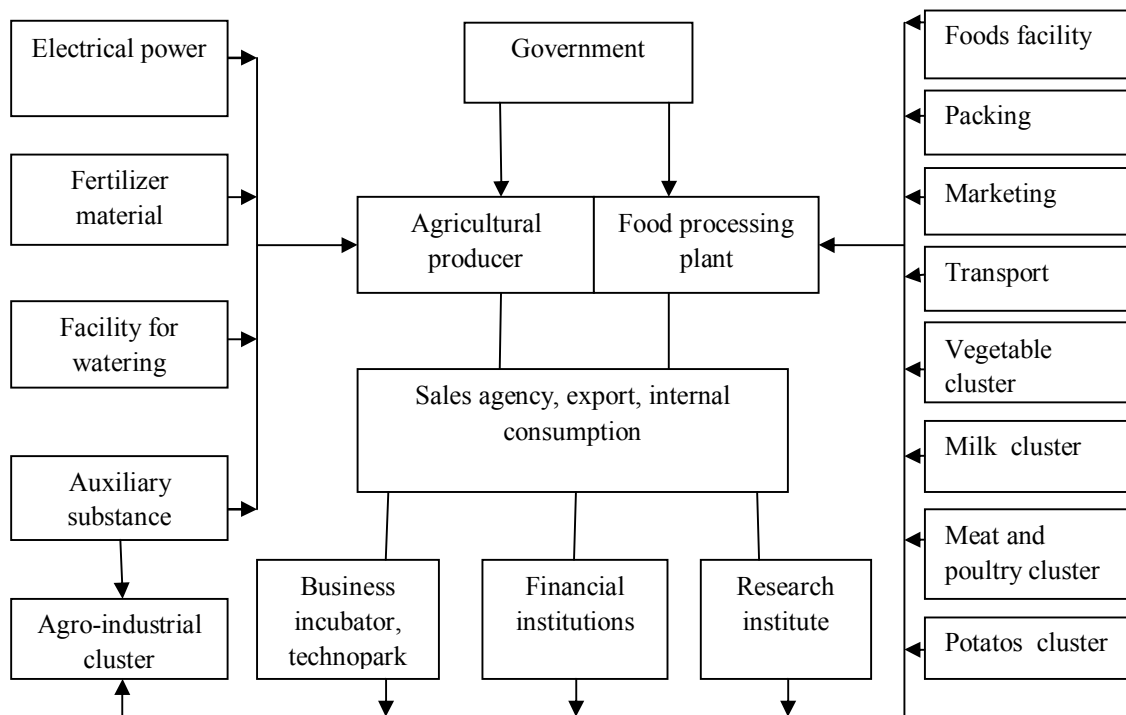


Fig. 1. Model of agro industrial cluster [7]

The first level is producers of facilities productions for agriculture. They consist of producers of fertilizers, producers of equipment for a harvest, for watering of harvest, producers of seed and auxiliary materials.

The second level is small enterprises, corporations, agro industrial organizations: meat-packing plants, suckling's combines.

The third level is wholesale-retail firms, companies carrying out export activity.

These three levels actively co-operate with government, innovative enterprises, credit-financial institutes, research institutes, transport companies, marketing companies.

So concentration of competitors, buyers and sellers promotes the production growth with efficient specialization. The cluster engages many small organizations, small businesses in agriculture. The positive effects are achieved by:

- reducing production costs, as producers supply the necessary resources at stable prices;
- reduction of the return of funds and resources needed for a new cycle of production.

The concentration of agricultural production, processing and manufacturing and selling of the final product within the same integrated economic entity provides an opportunity to regulate the market conditions and it helps to be competitive in the wholesale food market.

### 3. Conclusions

Agro-industry is a key to the foreign markets. However, ensuring growth of the market is clearly not enough for Ukrainian industries. There should be new instruments in agro industrial activities. Only strong partnership between producers, specialized suppliers, service providers and government can increase productivity. Many problems can be resolved by cluster initiatives, its key tools for

increasing the productivity, competitiveness of the region, attracts foreign investment and enhancing external integration.

The role of clusters in agro-industry is felt more and more. Some government policies and objective changes in the economy, as clusterization, are responding to accelerate development of agro-industry.

Formation of clusters in agro-industry includes improving of investment climate, raising the level of innovations, growth in agricultural competitiveness, developing innovation activities, ensuring effective information exchange. Therefore, if a group of businesses concentrates on agro industry activity in one region consolidating and strengthening the social and productive network, it will lead to reduction of costs, increase of competitiveness and exports.

## References

1. Ткаченко В. Г. Деятельность предприятий АПК Луганского региона в условиях экономического кризиса / В. Г. Ткаченко [Электронный ресурс]. – Режим доступа: [http://www.nbuu.gov.ua/Portal/chem\\_biol/nvlnau/Ekon/2009\\_5/articles/V.\\_G.\\_Tkachenko](http://www.nbuu.gov.ua/Portal/chem_biol/nvlnau/Ekon/2009_5/articles/V._G._Tkachenko).
2. Porter M. Clusters and the new economics of competition / M. Porter [Electronic source]. – Access: <http://www.linkpdf.com/ebook-viewer.php?url=http://www.wellbeingcluster.at>.
3. Skokan K. The Role of Clusters in the Regional Policy of the Czech Republic / K. Skokan: Book of Abstracts // 2nd Central European Conference in Regional Science. – October 10<sup>th</sup>, 2007 [Electronic source]. – Access: [http://mpira.ub.uni-muenchen.de/12353/1/MPRA\\_paper](http://mpira.ub.uni-muenchen.de/12353/1/MPRA_paper).
4. Цихан Т. В. Кластерная теория экономического развития / Т. Цихан // Теория и практика управления. – 2005. – № 5. – С. 74–81 [Электронный ресурс]. – Режим доступа: [http://www.asau.ru/doc/nauka/vestnik/2009/4/Economy\\_Gryadov.pdf](http://www.asau.ru/doc/nauka/vestnik/2009/4/Economy_Gryadov.pdf).
5. Mandang T. Development of agro industrial cluster in Indonesia an investment opportunity / T Mandang, H. Wiryokusumo [Electronic source]. – Access: [http://kdei-taipei.org/artikel/investasi/Agroindustrial\\_Cluster.pdf](http://kdei-taipei.org/artikel/investasi/Agroindustrial_Cluster.pdf).
6. Гоголь М. М. Формирование агропромышленных кластеров как направление стратегии экономического роста / М. М. Гоголь // Аграрний вісник Причорномор'я. – 2009. – № 49. [Электронный ресурс]. – Режим доступа: [http://www.nbuu.gov.ua/portal/chem\\_biol/avpch/En/2009\\_49/Gogol%20M.M.pdf](http://www.nbuu.gov.ua/portal/chem_biol/avpch/En/2009_49/Gogol%20M.M.pdf).
7. Горетов И. Н. Особенности кластерного развития регионального АПК / И. Н. Горетов // Российский экономический интернет-журнал [Электронный ресурс]. – Режим доступа: <http://www.e-rej.ru/Articles/2009/Goretov.pdf>.

## Summary

According to researches of clusters, Porter defines clusters as «geographic concentrations of interconnected companies and institutions in a particular field». Cluster in agro industry involves a complex of agricultural productions, concomitant productions, service providers, and associated institutions. Efficiency of clusters formation is influenced by the following factors: specific character of basic production; products innovation; pattern of production; competition and level of its development. Clusters increase the productivity, competitiveness of the region, attract foreign investment and enhancing external integration. The development of agro industrial clusters is an important agenda for governments and companies.

**Keywords:** cluster; agro-industry; economic efficiency; clusters in the agro-industry.

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