APPLICATION OF FOREIGN EXPERIENCE IN THE DEVELOPMENT OF FRUIT AND VEGETABLE CLUSTERS IN UZBEKISTAN

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Abstract

The article examines the activities of agricultural clusters of foreign countries, and as a suggestion their directions are given, which can be applied to the conditions of Uzbekistan. The importance of clusters in the agri-food market for producers and consumers of products is also substantiated. The directions of development of fruit and vegetable clusters and infrastructure of the modern agro-food market are presented, the realization of which will increase the functionality of the infrastructure, increase the effectiveness of the market as a whole.

Keywords:***clusters, agri-food market, fruits, vegetables, industrial complex, initiation, development, strategy, plan, subsidies, loans, processing and transport infrastructure.development, economic development of fisheries.***

Introduction. The world is driven by progress, and agriculture is not left out. Innovative models launch a system of integration of agricultural and scientific and technical spheres. To make the system more efficient, "smart agriculture" is being created, new models are being introduced.

The Republic of Uzbekistan is rapidly developing in all spheres, agriculture does not remain on the sidelines. It all starts with gradual reforms, which result in a multi-layered economy of the country and, accordingly, the accompanying infrastructure.

Agriculture is an important sector of Uzbekistan's economy, accounting for approximately 28.5% of GDP. It employs about 4.2 million people, which is more than 30% of the total employment in the country. The main agricultural crops are cotton and grain, but the abolition of quotas and price controls in 2020-2021 is already actively contributing to the diversification of crops, a gradual transition to the cultivation of other crops, fruits and vegetables. The export of agricultural products provided approximately 9.8% of Uzbekistan's external revenues in 2019.

The solution of the nutrition problem in the field of fruit and vegetable growing is one of the most important branches in the field, rich in vitamins, together with the provision of environmentally friendly products and agricultural has a very wide potential to increase the export potential of the industry. Winter and spring of the year without processing, fruit preservation, availability of market opportunities during the seasons, as well as fruits dried without the use of chemicals, a variety of put on the market in the form of jams, juice concentrates further expands the export potential of the industry.

In the conditions of modernization of the economy in agriculture, the socio-economic development of agriculture in the regions is becoming increasingly relevant. The objective of the modern period of development of the region is to ensure high growth rates of gross domestic product, increase production efficiency and achieve on the basis of this high level and quality of life of the population. Hence, both for Uzbekistan and for other countries, there is a need to activate existing and search for new sources and factors of positive dynamics of economic development. One of these sources is the development of clusters. [1]

Literature review. Many foreign researchers have been engaged in theoretical and practical aspects of the formation and functioning of clusters, including M.Porter, K.Ketels, A.Marshall, P.Drucker, T. Keller, M.Enright, J.Schumpeter and others. Their works reflect certain aspects of the problem, taking into account the peculiarities of countries and regions. In relation to the conditions of Russia, the problem of clusters was dealt with by such scientists as A.A.Migranyan, T.Tsikhan, M.Afanasyev, L.Myasnikova, L.S. Markov, etc.

Materials and Methods. A fruit and vegetable cluster is a spatial agglomeration that forms the basis of the local environment. Such clusters usually consist of Dehkan, household, farms, and medium-sized enterprises, and the central element of their success is concentrated in the forces of social capital and geographical proximity. Another feature of them is that firms are less interconnected than in agro-industrial clusters. At the same time, the regions on the territory of which clusters are formed, as world experience shows, become leaders in economic development, determine the competitiveness of the national economy. At the same time, regions that do not have clusters have obviously the worst economic situation, and in some cases become depressed territories. [4]

The stabilization of economic conditions and economic growth in the regions of Uzbekistan in recent years have created real prerequisites for the formation of clusters. In developed market countries, clusters of enterprises have been created for decades. The core of the cluster was strong enterprises with qualified management and a high level of corporate culture. The inclusion of homogeneous enterprises in the cluster contributed to the adoption of management experience and corporate culture of the basic enterprise – the core of the cluster.

As the practice of developing successful firms and successful economic systems shows, the most flexible form of economic growth is the cluster mechanism. A cluster is an industrial complex formed on the basis of a territorial concentration of networks of major manufacturers, specialized suppliers and consumers connected by a technological chain. In agriculture, a cluster is an association of agricultural producers through cooperation, covering production, processing, sale of products, procurement and credit spheres. Farmers do not work alone abroad; cooperative forms of activity are an integral part of economic life there. Most farmers are members of not one, but 2-3 or more cooperatives – supply, marketing, credit, etc. Western farmers have double protection – state and cooperative. The cluster form of production organization allows farmers to achieve high profitability.

In this regard, the study of the foreign experience of clustering, first of all, of agriculture proper, has not only and not at all theoretical significance, but primarily applied. Since, by establishing the content of the concept

of "cluster" through the prism of foreign experience, it is possible to avoid gross mistakes, huge investment losses and accelerate the formation of agricultural clusters taking into account foreign experience, adjusted for Uzbekistan.

World practice shows that in the last two decades the process of cluster formation has been quite active. In general, according to experts, by now about 50% of the economies of the leading countries of the world are clustering.

If we give an example of the nearest regions of the world with a differentiated level of development, then according to the European Cluster Observatory, today in 28 countries of Western and Eastern Europe there are 2,101 clusters in various sectors of the economy with a total of 42 million employees. At the same time, 11.5% of them carry out activities in the agro-industrial complex, giving jobs to 4.5 million people. As follows from the data in Table 1, most clusters function in the national economy of Germany, followed by Italy, Great Britain, France, Poland and Spain – i.e. the largest, economically and industrially developed states. These same states, as well as Romania, the Netherlands and Portugal, outperform other countries by an order of magnitude in terms of the number of employed workers in these clusters. But in terms of the size of the clusters themselves, i.e. the number of workers employed in them, 2 countries are leading – Spain and Lithuania, but this may also indicate low mechanization of labor. But in terms of the total number of agro-industrial clusters among European countries, Greece and Spain, Bulgaria and France are leading. However, in two European countries – Malta and Luxembourg, there are no agro-industrial clusters at all, due to the fact that the same two countries differ in the smallest number of clusters in other sectors of the economy. At the same time, Bulgaria and Greece are leading in terms of the share of agro-industrial among the other clusters by a huge margin from other European countries, as well as the total number of people employed in agro-clusters. At the same time, Lithuania, Ireland, Romania and Denmark are also the most powerful clusters in the agro-industrial complex with the largest number of workers, but possibly with insufficient machine armament of labor. [5].

At the same time, Denmark among the EU countries is perhaps the most advanced country in agro-industrial clustering, which developed a unified approach to inter-firm cooperation back in 1989-1990 and in which clusters in the agro-industrial complex are already successfully functioning, where one of the most famous is the dairy cluster "Dairy Vertical". This is due to the fact that traditionally in Denmark animal husbandry has priority over crop production, most of whose products are used for feed, and dairy cattle breeding prevails over meat, pig and poultry farming are also developed.

Clustering has already covered more than 50% of the economies of the leading countries of the world. The first large–scale cluster development programs appeared in the USA in the 1970s and 80s, in Denmark in the 1989-90s, in Austria, Great Britain, Japan in the first half of the 90s, in Finland and France in 1995.

One example of the process of creating clusters is the experience of the Japanese economy, initially based on the creation of a system of subcontracting and subcontracting links between a number of large and a network of medium and small enterprises. A typical large Japanese cluster consists of one relatively large parent enterprise using the services of two or three levels of subcontracting firms, usually located in geographical proximity to it. Instead of vertical integration, independent subcontractors of the first level are linked to the parent company by long-term contracts. Similarly, the connections of suppliers of the first and subsequent levels are established.

Table 1.

The number of active clusters in the agro-industrial complex and other sectors of the economy of some European countries identified by the European Cluster Observatory in 2004-2011 [5]

Some European countries	The total number of clusters in various industries, units.	Total number of employees in industry clusters, people.	The number of employees on average per 1 cluster, people.	Number of clusters in the agro-industrial complex, units.	The total number of employees in agro-industrial clusters, people.	The number of employees on average per 1 agro-industrial cluster, people.	The share of agro-industrial in the total volume of industry clusters, %	The share of agricultural workers in the total amount employed in industry clusters, %
Austria	87	957724	11008	8	86740	10843	9,20	9,06
Belgium	65	780712	12011	5	58739	11748	7,69	7,52
Bulgaria	48	790239	16463	22	426874	19403	45,83	54,02
Great Britain	182	4730155	25990	7	99007	14144	3,85	2,09
Hungary	59	773979	13118	11	161543	14686	18,64	20,87
Germany	314	6693224	21316	14	371204	26515	4,46	5,55
Greece	80	889570	11120	36	299431	8318	45,00	33,66
Denmark	30	788929	26298	3	91546	30515	10,00	11,60
Irish	10	346641	34664	1	42713	42713	10,00	12,32
Iceland	5	33844	6769	1	4498	4498	20,00	13,29
Spain	151	4488405	29725	35	644854	18424	23,18	14,37
Italy	234	6165837	26350	13	384460	29574	5,56	6,24
Lithuania	9	263535	29282	1	46817	46817	11,11	17,77
Malta	9	45738	5082	1	3693	3693	11,11	8,07
Netherlands	83	1201176	14472	12	96031	8003	14,46	7,99
Poland	161	2117813	13154	19	413242	21750	11,80	19,51
Portugal	48	1127298	23485	3	42861	14287	6,25	3,80
Romania	92	2236096	24305	16	610510	38157	17,39	27,30
Slovakia	45	429583	9546	3	34296	11432	6,67	7,98
Slovenia	16	218330	13646	1	20545	20545	6,25	9,41
Finland	34	445534	13104	4	29883	7471	11,76	6,71
France	165	4209316	25511	20	501571	25079	12,12	11,92
Switzerland	62	790799	12755	2	16673	8337	3,23	2,11
Sweden	65	722136	11110	1	12256	12256	1,54	1,70
Total	**2101**	**41857372**	**19923**	**241**	**4518706**	**18750**	**11,47**	**10,80**

Discussion and analysis. In Japan, there is the experience of the island of Hokkaido in implementing cluster solutions, where in the first half of the 1990s a Central organization was established to ensure the

development of industrial clusters. [6]

Studies conducted abroad show that clusters stimulate a significant increase in productivity and the introduction of innovations. Companies benefit by being able to share positive experiences and reduce costs by using the same services and suppliers.

As the cluster approach developed, the essence of cluster associations changed and enriched. Thus, in the review of the United Nations Economic Commission for Europe (UNECE) 2008 "Improving the innovative level of firms: the choice of policies and practical tools", as the main characteristics of clusters are highlighted:

- geographical concentration (closely located firms are attracted by the opportunity to save on rapid production interaction, exchange of social capital and learning processes);
- specializations (clusters are concentrated around a specific field of activity to which all participants or authors are related);
- multiplicity of economic agents (the activity of clusters covers not only the firms included in them, but also public organizations, academies, financial intermediaries, institutions promoting cooperation, etc.);
- competition and cooperation (as the main types of interaction between firms members of the cluster);
- achieving the necessary "critical mass" in the size of the cluster (to obtain the effects of internal dynamics and development);
- viability of clusters (designed for the long term);
- involvement in the innovation process (firms and enterprises that are part of the cluster are usually included in the processes of technological productive, market or organizational innovations). [7]

All possible actions are being taken in the EU to increase the innovative potential of the European industry. To this end, several projects have been implemented at the supranational level to develop cooperation between innovation clusters. The EU considers cluster policy as a key tool for improving the competitiveness of industries and regions, increasing innovation potential and economic development in the medium and long term. Industrial policy should also be innovative and contain new, more liberal regulatory instruments that can give industry greater freedom in finding its own technological solutions. [4].

In the Declaration on Strengthening Economic Cooperation in Europe (1997) and the Action Plan detailing it, the formation of new production systems based on networks and clusters is proclaimed as one of the most urgent directions for the development of European cooperation.

There are over 2000 clusters in India, of which 388 are industrial and 1657 are uniting handicraft enterprises. Clusters supply over 60% of the country's export products, and some large clusters produce up to 90% of individual types of products manufactured in India. Indian small enterprises tend to concentrate around large industrial companies, in metropolitan areas or in large cities, where there is a huge consumer market and there are labor resources combined with a developed industrial and social infrastructure. The number of small enterprises operating in various clusters ranges from 40-50 to 1700. The Indian government's approaches to stimulating the growth of export opportunities of clusters in the development of high-tech industries and services are particularly effective. This is facilitated by the state technical policy in combination with close cooperation of central government bodies with regional and local administrations interested in accelerated economic development based on the interaction of large, medium and many small enterprises. [8].

In order to regulate the state policy on innovative development of India, the National Innovation Council was established in 2010. The main tasks of this state body are the creation of innovation clusters.

Within the framework of the Indian Government's cluster policy, which began in 2000, there are 24 programs with more than 1,200 clusters. Within the framework of these programs, about 1.4 billion US dollars were allocated.

Support for the creation of clusters in Poland, including financing, is provided by the State in the person of the Polish Entrepreneurship Development Agency (PARP) under the Ministry of Economy of Poland. Currently, the clusters are subject to the operational programs "Innovative Economy" and "Support for Eastern Poland", which are funded by the state at the expense of EU structural funds. However, despite the fact that business interest in such a form of cooperation as clusters is growing, clusters are developing relatively slowly.

In Kazakhstan, in an effort to diversify the national economy, in 2003 they approved the "Strategy of Industrial and innovative Development until 2015". It is based on the formation of national clusters in the sectors of oil, gas, food and textile industries, construction materials and tourism, engineering, transport and logistics services. The issues of accelerating the development of individual clusters are widely discussed with the public. They became the subject of consideration at government meetings. [4]

The course for the formation of clusters in the Russian economy was taken in 2005. It was from this period that the topic of creating clusters became one of the main leitmotives of both federal and regional socio-economic development programs. For example, in the Strategy for the Development of Science and Innovation in the Russian Federation for the period up to 2015, stimulating demand for innovations and research results, creating conditions and prerequisites for the formation of networks and clusters are named as one of the tasks of economic modernization. [9]

The Concept of Long-term Social and Economic Development of the Russian Federation until 2020 states that the success of the implementation of the innovative scenario of the country's development will depend on the ability of state authorities to provide conditions for further improvement of the institutional environment and the formation of institutional structures inherent in post-industrial society. These conditions include support for cluster initiatives aimed at achieving effective cooperation of organizations – suppliers of equipment and components, specialized production and service services, research and educational organizations within territorial production clusters. [9]

It is necessary to emphasize the peculiarity of the study of the problem of clusters, which consists in the fact that clusters, even in agriculture, are intersectoral formations. Therefore, the criteria for identifying clusters do not have a pronounced industry specificity, but are related to territories, specific conditions where there is a certain geographical concentration of market entities.

Conclusion. An analysis of world practice has shown that the process of cluster formation is very active. According to experts, currently about 50% of the economies of the

leading countries of the world are covered by clustering.

Advantages of the cluster:

- access to various resources;
- connections, including horizontal;
- various forms of R&D outsourcing;
- change of entrepreneurial culture – growth of trust;
- facilitating entry into global chains and networks of product and technology creation.

Therefore, based on the results of foreign studies of clusters, it is possible to determine the advantages that allow participation in cluster initiatives, and systematize the factors that give the cluster the opportunity to develop successfully, as well as to assess the possible nature of interaction between technology platforms and clusters.

Thus, it should be concluded that the cluster approach covers almost all spheres of life and production, including a wide variety of processes occurring in both production and non-production systems based on the achievements of science and technology. That is why cluster management is aimed at achieving a positive commercial result based on increasing production efficiency.

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