

EXPERIENCE OF THE UNITED STATES OF AMERICA AND THE REPUBLIC OF CHINA IN DEVELOPING CLUSTERS IN UZBEKISTAN

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Abstract:

This article examines the role of clusters in the economy of the USA and China, their types and varieties of products they produce. Opinions of leading research scientists about clusters. The procedure for organizing agricultural clusters. The results of implementing the cluster system in several areas in leading countries are covered in detail.

Keywords: Clusters, tax administration, volume of turnover, working staff, tax revenues, agro-industrial, buttermilk-agricultural clusters, tourism, agriculture, automotive, industry.

Introduction

Introduction

The cluster system is a complete system that covers all processes from the production of raw materials to the delivery of processed finished products to the consumer. Currently, the cluster system is used in several sectors of the economy of our country. In particular, in agriculture, tourism, the technological sector, pharmaceutical production and other areas.

Our President Sh.M. Mirziyoyev has repeatedly emphasized the effectiveness of this system, and it has been demonstrating its effectiveness in the economy.

In the Republic of Uzbekistan, the cluster system was first introduced in the agricultural sector in 2017.

Literature Review

Cluster theory was first advanced in the 19th century by the German economist Johann Heinrich von Thunen and his followers W. Launhard and A. Weber. A. Marshall, in his work "Principles of Economic Science", selected urban agglomerations and industrial areas as research objects and conducted studies on the relationship between productivity and geographical localization of production. He proved that the productivity of enterprises and organizations depends on their geographical location near economic zones. B. Lundvall and B. Johnson proposed the concept of "development blocks" related to cluster theory and

emphasized that sectoral or regional production associations, the process of continuous training of the entire population of the country, are a source of national economic growth and competitiveness. The modern interpretation of cluster theory was fully formed in the 1980s. M. Porter empirically proved that large competitive companies tend to concentrate in certain areas.

Research Methodology

The analysis used statistical grouping, comparative and trend analysis methods. The article provides a comparative analysis of the scientific and theoretical views of economists on the place of the cluster system in the economy.

Analysis and Results

Among the leading countries with a developed cluster system, the United States stands out. In the USA, the cluster system plays a very important role and has become one of the main mechanisms for increasing the country's economic development, innovation and competitiveness. Clusters operate in various sectors of the US economy and help strengthen the country's position in global competition.

The cluster system and its development in the USA have led to changes and impacts on production at the following key stages:

The concept of clusters was widely promoted in the United States in the 1990s. The theory of clusters was first introduced to the world in Michael Porter's book "The Competitive Advantage of Nations" (1990). Porter's research on clusters laid the foundation for the formation of various studies and production strategies aimed at clustering economic activities in the United States. According to Porter, clusters are interconnected, geographically close associations of companies, educational and research institutions, government agencies and other organizations that, through competition and cooperation, contribute to the creation of new products, services and innovations.

In the development of the cluster system in the USA, economic, social and political factors play an important role. The cluster system in various regions of the USA is formed through the country's incentive policies and direct state support:

- Silicon Valley is one of the most famous technological clusters in the USA. Silicon Valley is the center of its young technology companies, world-famous IT giants, and is recognized as a center of new innovations, clustered research in agriculture, industry and information technologies. Technological successes and research by universities there have contributed to the development of innovative clusters.
- Boston and Cambridge - this region has become the center of clusters in the field of biotechnology and pharmaceuticals. Universities (for example, Massachusetts Institute of Technology) and research centers ensure the innovative development of this cluster.
- Detroit – Detroit's automotive clusters are primarily known for their automotive and continuous technological development. After World War I, automotive clusters were

formed in this region, which helped to modernize the production system and increase the global competitiveness of the automotive industry.

In the US, clusters have developed mainly in various sectors and specific regions. They are aimed at increasing competitiveness in each sector, stimulating production efficiency and innovation. The main types of clusters are:

- Technological clusters (Silicon Valley and others): new technologies, startups and advanced manufacturing.
- Biotechnology clusters (Boston and Cambridge): research and innovation in the medical and pharmaceutical industries.
- Automotive clusters (Detroit): automotive and auto industry development.
- Agro-economic clusters (Missouri and Iowa): agriculture and food production.

In the United States, clusters have played an important role in the development of regional and sectoral economies. The main advantages of clusters are that they:

- Create jobs: clusters help develop local manufacturing and service sectors.
- Stimulate innovation: new technologies and products are created through competition and cooperation.
- Stimulate industrialization and diversification: clusters help integrate complex industrial sectors and increase competitiveness.

The US cluster system is currently serving as a successful model for several countries around the world. Clusters in the US play an important role in shaping the economic policies of various countries. This experience is being applied, among others, in countries such as the European Union, China and India in their research and production strategies. The cluster system in the US is an important mechanism for increasing the country's economic development and competitiveness, which is aimed at stimulating innovation and modernizing production. Clusters help strengthen the US economy in global markets and create new jobs.

Following bar chart shows about comparison of cluster numbers in three countries.

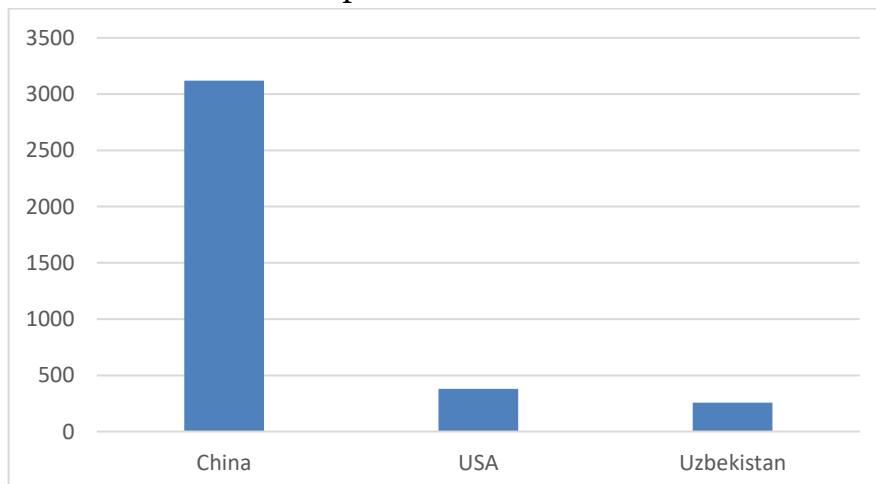


Fig 1. Information about the number of clusters in three countries

This bar chart, presents a comparison of the number of clusters in three countries:

- China has by far the highest number of clusters, with a value slightly above 3100.
- USA follows with a much lower count, around 400 clusters.
- Uzbekistan has the fewest clusters, approximately 270.

Key Observations:

- China dominates the chart, indicating it has a significantly larger cluster presence compared to the USA and Uzbekistan.
- The number of clusters in China is almost 8 times higher than in the USA and more than 11 times higher than in Uzbekistan.
- The bar lengths visually emphasize this large disparity.

The cluster system is also very well developed in the Republic of China. In China, the cluster system has played an important role in ensuring a number of positive changes and economic development. This system has become one of China's major strategies for industrialization and innovative development. Clusters in China have developed mainly in accordance with the country's industrialization and specialization policy and have helped to increase its competitiveness in the international market.

The development of clusters in China began in the 1990s, during the period of economic reforms and the transition to a market economy. At this stage, the Chinese government began to promote clustering in order to develop new economic strategies and integrate the economy into the world market.

The main goals of this process were:

- Increasing competitiveness.
- Increasing production efficiency.
- Encouraging innovation.

In China, the cluster system has developed in several major sectors and industries. Clusters have been formed in important areas such as technology, industry, agro-economics, and energy. These types of clusters have developed as follows: Technology clusters are similar to China's Silicon Valley, and technology clusters have developed especially in Shenzhen. Shenzhen is mainly a center for technology and electronics manufacturing clusters, and large companies such as Huawei, Tencent, and BYD operate here. Technology clusters have played an important role in boosting the development and production of this city.

Shenzhen technology clusters have helped to develop innovative products, information technology, and the digital economy. This has also increased China's competitiveness in the international market.

Automotive clusters have developed in China, including in the cities of Shanghai, Guangzhou, and Changzhou. These clusters are home to automotive giants such as Geely, BYD, and Great Wall Motors. These clusters have helped to develop automobile manufacturing, electric vehicle production, and energy-saving technologies.

Agro-economic clusters based on agricultural production and farm production have developed in China. These clusters have increased, in particular, in regions such as Hebei, Shandong, Hunan, and Jiangsu. Clustering has played an important role in introducing innovations and new technologies in the agricultural sector.

In cities such as Beijing, Shanghai and Shenzhen, clusters have been formed in the pharmaceutical and biotechnology sectors. These clusters have seen a development in the production of medicines, innovative biotechnologies and the export of pharmaceutical products.

In China, clusters have been formed focused on green energy, renewable energy sources and energy efficiency. In regions such as Shanghai and Zhejiang, clusters focused on energy sources such as solar panels, wind power, and hydropower have developed.

In China, the cluster system is important for economic development and innovation and competitiveness:

- Increasing competitiveness: Clusters have strengthened competition in domestic and international markets. The integration of clustered production and innovation has increased operational efficiency.
- Creating jobs: Clusters have created many jobs and have contributed to the development of the local economy.
- Encouraging innovation: Competition and cooperation between clusters helped to create innovation and introduce new technologies.

The Chinese government has implemented a number of strategies and state support for the development of the cluster system. Among them:

- Regional socio-economic development.
- Modernization of production capacity.
- Innovation clusters and production centers.
- Clusters focused on green economy and renewable energy sources.

The cluster system in China is aimed at becoming global innovation centers in the future and further increasing competitiveness. State support, integration of new technologies and industries, as well as the development of clusters focused on international markets will serve as the main continuous development of the economy.

In China, the cluster system has been very successfully integrated and has played a significant role in the modernization of the economy. Clusters have helped ensure China's success in global economic competition and create new jobs.

Conclusions and Suggestions

In short, clusters are a modern economic intermediary in the formation of an innovative, competitive and efficient economy, ensuring the delivery of finished products to consumers, increasing production capacity, increasing production volumes, healthy production relations and efficiency. Innovations are associated with the "human capital", that is, the thinking of enterprising specialists in clusters that combine industry and cross-

industry activities. In these clusters, along with the integration of education, science, and production in the sectors, the beneficial cooperation of small enterprises in the sector also creates the basis for the enhancement of internal and external integration elements between the sectors.

The essence of the cluster is that the farms, enterprises, and institutions in its composition unite into a single team in the process of producing raw materials, creating finished products, and selling them. As a result, the cost of production decreases and there is an opportunity to make more profit.

The cluster system has shown great importance in the economies of the United States and the Republic of China. The largest clusters in the United States and the Republic of China are mainly in the automotive industry, information technology, pharmaceuticals, agriculture, and education.

In our country, the cluster system is currently used only in the agricultural sector. In this case, clusters, in cooperation with farms, are engaged in the production, cultivation, supply of agricultural products with chemicals, fuel and equipment, processing and selling products. Based on the experience of the USA and the Republic of China, there is an opportunity to transfer a number of sectors to the cluster system in our country. In particular, in our country, we can cite the automotive, pharmaceutical and education sectors as examples.

Currently, the rapidly developing tourism sector in our country is also being clustered. The nature of our country, its favorable climate and clean air attract foreign guests. The main factor in the tourism cluster is the hotel business, and it is necessary to prepare, train and provide skills to each employee working in it.

We can conclude that it would be advisable to apply the cluster system in many areas, based on the economic indicators of developed countries and taking into account the conditions of our country.

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