INTERNATIONAL SCIENTIFIC JOURNAL VOLUME 2 ISSUE 12 DECEMBER 2023 UIF-2022: 8.2 | ISSN: 2181-3337 | SCIENTISTS.UZ

# CLUSTER MECHANISMS IN INNOVATIVE DEVELOPMENT AND MODERNIZATION OF NATIONAL INDUSTRY

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**Abstract.** This article examines the innovatively developed economy and technological process, as well as in organization, management, training. Clusters are one of the forms of new structures based on the integration of research and production. An important task of the cluster policy is the introduction of new technologies and the creation of conditions for the re-equipment of the industry.

**Keywords:** innovation, economy, cluster, structure, globalization, products, implementation, service.

**Introduction.** In the context of post-industrial society, globalization and informatization of the economy lead to significant changes in economic structures. Further deepening of product and technological specialization based on the social division of labor in industrial management is a key driver of economic growth. At present, inter-firm and inter-industry research and production cooperation, internationalization and integration are of paramount importance.

An innovatively developed economy implies the introduction of innovations both in the production and technological process, as well as in the organization, management, and training. Clusters are a form of new structures based on the integration of scientific research and production. An important task of the cluster policy is to introduce new technologies and create conditions for re-equipment of the industry.

A cluster is a network of independent manufacturing and service firms, including suppliers, technology and know-how developers, market institutions that interact with each other in a single value chain, and consumers.

One of the authors of the theory of international competitiveness is the American economist M. Porter, who believes that it is advisable to see a country's competitiveness not through individual firms, but through a set of firms in different industries - the international competitiveness of clusters, in particular, the ability of these clusters to effectively use internal resources. It explains the impact of clusters on competitiveness in detail using the following three explanations:

-increase competitiveness through open access to special funds and specialized personnel, expanding access to information, institutions and social resources, and stimulating additional economic activity;

-increase the innovative potential of the firm through the rapid dissemination of technological knowledge and innovations. Competitive pressure within each cluster increases the focus (motivation) of companies to innovate;

-encourage the rapid creation of new businesses based on private entrepreneurship, paying special attention to the firm's employees.

Important components of clusters include large companies that produce key goods and services under the merger, small high-tech firms that upply them, technology parks, universities,

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central and local government agencies, and public organizations (chambers of commerce, industry associations and unions).

**Research methodology.** A systematic approach to the research process, abstract-logical thinking, guruhlash, comparison, analysis was using the choice of the tracking method.

**Analysis and results**. The most important characteristics of the development of national industry based on the cluster approach are: association of organizations by their forms of ownership, organizational and legal status, industry and territorial affiliation based on belonging to a single system of production of final products with high added value:

-all cluster members have their own legal and economic independence, which does not require the creation of a hierarchical management system that reduces administrative and organizational costs.

-not only market and competitive relations, but also cooperation in the field of joint use of brands and other intangible assets, transfer prices, transaction reduction schemes based on mutual trust to achieve a common goal based on common strategic plans, agreements and alliances;

-in contrast to regulating the activities of individual enterprises, public cluster management allows you to create an infrastructure system based on regional innovations based on public-private and investment - innovation cooperation.

Unlike the usual forms of cooperation between small and large businesses, the innovation cluster system is characterized by the following features:

- -availability of leading companies, including specialized service organizations, capable of occupying a significant share in the domestic and foreign markets;
  - -clustering clusters in a specific border area that can demonstrate its priorities.
- -interaction участников of cluster participants c in order to bring competitive products to the domestic and foreign markets;
  - -the presence of competition among участников cluster participants.
- -fast distribution новостей of news due to the development сетей передачи of data transmission networks.

In world practice, there are various ways to activate and further improve innovation policy. These include the formation of a developed innovation infrastructure (technoparks, business incubators, innovation funds), the creation of a technology transfer network, direct and indirect financial support for innovative projects, as well as the cluster mechanism approach to innovation implementation, types of activities.

In a relatively broad sense, an innovation cluster is a group of enterprises created for a specific purpose on the basis of centers of scientific knowledge and business ideas, training highly qualified specialists. An innovation-type cluster should be able to effectively adapt to changes in the external environment. The innovation level of a cluster is understood as the centers of scientific knowledge and business ideas, the degree of integration of highly qualified educational institutions into the cluster, the share of innovations and high-performance products in the total production volume, both qualitative and quantitative characteristics of these products are clear.

Cluster competitiveness refers, first of all, to the sustainability of the ability of economic entities to maintain their competitiveness in the long term, making maximum use of the external environment.

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The cluster approach provides government agencies with tools for effective business cooperation. It helps to better understand its specific aspects and tactical tasks, as well as target and justify the country's resources.

Strategic planning in such a way as to create broad opportunities for improving and developing the competitiveness of the national economy. Continuous value chains will increase the amount of investment in the country and related tax revenues.

In this regard, one of the tasks in the field of improving competitiveness is to determine the cluster potential of the country. The potential of clustering is the existing competitive advantages of production facilities, enterprises and infrastructure organizations located in the country, the ability to combine these advantages and use them to increase the competitiveness of the national economy.

It should be noted that an innovation cluster in industry can only be successful if it has the following three important components:

- -leading enterprises capable of producing competitive products sold in the domestic and foreign markets;
- -a well-developed network of service enterprises capable of providing high-quality services to all participants of the innovation cluster;
- -infrastructure that includes qualified labor resources, the ability to attract investment, the absence of administrative barriers, high research potential, etc. existing optimal business environment (external and internal competitive environment for cluster enterprises).

At the present stage, there are several models for the development of national industry based on the cluster mechanism, which can serve as a basis for creating innovative clusters. These are models from the United States, Western Europe, Asia, and Latin America.

According to the experience of developing innovation clusters in foreign countries, these structures can be based on technoparks, technopolises, and high-tech territories.

The international experience of cluster organization shows that this mechanism should be used for the development of innovative systems in the national economy: the industry structure based on the cluster approach allows science, education, advanced innovations, as well as state support for export activities. Since entrepreneurship in the context of globalization contributes to the emergence of new opportunities for innovative development, it leads to an increase in the social and environmental responsibility of enterprises. Here it is advisable to list the features of the innovation cluster.

First, an innovation cluster is a complex system that combines several elements, since it covers a wide range of industries (construction, oil and gas, medicine, etc.) that are integrated through the innovation process, which includes the creation and dissemination of innovations.

Secondly, the effectiveness of innovation cluster participants is assessed not only by innovations in the production sector, but also by innovations in management, organizational, social and other areas.

Third, the number or quality of existing enterprises is not enough to form an innovation cluster, but also a system of relations based on scientific foundations, intellectual knowledge and experience, technical capabilities, logistics routes and communication channels, and sustainable innovative development.

Fourth, relations between cluster participants are built on the basis of a combination of competition and cooperation. This is ultimately a successful partnership and partners to achieve a

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common outcome leads to opportunities for effective use of knowledge, experience and innovation potential.

Thus, the innovation cluster is interconnected through the process of continuous creation, implementation, dissemination and modernization of innovations in various fields based on targeted actions that can systematically develop their activities and have a positive synergistic impact on the development of the national economy, means a corporate complex consisting of enterprises, research institutes, government agencies, research centers, and associations consumers.

In our opinion, to create an innovation cluster in the country , the following conditions must be met:

- -availability of large enterprises.
- -creating conditions for the continuous development of innovation activity of all cluster participants;
  - -creation of infrastructure to support small innovative entrepreneurship;
  - -availability of research centers;
- -availability of educational institutions that provide training and retraining of qualified personnel for innovative enterprises of the cluster;
- -creation of an innovative transport and logistics system that ensures effective communication between all cluster participants;
- -implementation of the national innovation policy to determine the need of cluster enterprises for innovative products;
  - -creating a framework for combining existing and future clusters into a single system.

It is also necessary to create an infrastructure for supporting innovation clusters based on an integrated approach to their effective functioning, develop a methodology for monitoring cluster development on this basis, and create a system for stimulating innovation activity of enterprises.

For the sustainable functioning of the innovation cluster mechanism, certain preparatory measures are necessary:

- -development of the concept of cluster organization and management;
- -formation of a cluster development project management system based on the industry interaction model;
- -identify the innovative potential of the cluster and the possibility of creating demand for innovative products in other countries;
- -increasing the production capacity of cluster enterprises and the efficiency of managing existing production processes of the entire production system;
- -establishment of contractual relations between all cluster participants with the distribution of functions, powers, knowledge and experience in this area, as well as responsibility;
- -development of a system for evaluating the effectiveness of methods of measures to stimulate cluster development.

The organization of an innovation cluster is based on the interaction and relations of industrial enterprises with scientific and higher educational institutions with the support of state structures in the interests of implementing innovation policy for the development of the country.

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An innovation cluster can be described as a large system that creates certain advantages for the development of the country, industrial enterprises and the development of various cluster participants.

In conclusion, the creation of innovation clusters in Uzbekistan will change the essence of national economic policy, and all efforts will be aimed at developing the system of interaction between business and government agencies, rather than Ha supporting individual enterprises. Industrial policy should be aimed at creating competitive advantages for the country 3a by creating innovation clusters as a mechanism that will give practical results in achieving these strategic goals.

The innovation Cluster Policy is the master plan for innovative development of Uzbekistan. It should reflect not only the primary sectors formed around new and important technologies for the country, but also the scheme of promising industries and services technologies developed based on available resources, infrastructure, and market conditions.

It can be seen that an innovation cluster is a dynamic system that develops based on the use of a synergistic result. Cluster policy helps to determine the initial state of socio-economic relations in the production of innovative products. It will create conditions for the development of research bases in our country, increase its innovation potential and determine the ways of technological progress in the near future.

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