

Directions for the Organization of Construction Clusters and Further Improvement of their Efficiency

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Abstract: This article defines the idea of cluster in great depth. Directions for the organization of construction clusters are also explained, as are proposals for the growth of Uzbekistan's construction cluster system.

Key words: cluster, cluster theory, competitiveness, organizational structure of enterprises, construction, construction materials, management efficiency, innovation.

Introduction

World experience shows that the effectiveness of the management system is directly related to the promotion and implementation of promising investment projects, innovative ideas, developments, and technologies in the construction and building materials industries, as well as the introduction of innovative products.

Among the major responsibilities of our country's reforms are the implementation of appropriate construction sector management mechanisms and the establishment of favorable circumstances for life and business. This, in turn, has a significant impact on building pricing and materials, as well as the competitiveness of the country's national economy.

Today, the expansion of the world economy's integration and competitive processes leads to an increase in the requirement for cluster system organization in the process of globalization and international competition. Such clusters, for example, have been constructed in the Tashkent and Navoi areas, where 80 percent of building structures are produced and contract work is performed[1]. These and other factors establish the importance of creating cluster systems in our republic's building industry.

Literature review

Many international experts-scientists have voiced their concerns over cluster system deployment and administration. Prior to economics, the word "cluster" was commonly used in a variety of natural disciplines. In mathematics, the term "cluster" was first used in the late 1930s, while in inorganic chemistry, it referred to a family of chemical compounds comprising varying numbers of metal atoms. Cluster physics is one of the most rapidly expanding fields of contemporary physics.

Since the early 18th century, when tiny craft manufacturing prevailed, a cluster has been described as an economic agglomeration of interrelated companies located in a specified and limited region. Furthermore, at the beginning of the twentieth century, the fast expansion of industry, the establishment of new industrial hubs, and specialization in the localization of industry all led to the formation of the first concepts about clusters.

Cluster theory methodological development F. List, S. Cohen, V. Izard, J. Schumpeter, N.N. Baransky, M. Weber, A. Lesh, A. Smith, D. Riccardo, E. Hexcher, and B. Olin, F. List, S. Cohen, V. Izard, J. Schumpeter, N.N. Kolosovsky et al.[2] made significant contributions. These writers' research is of substantial scientific and practical value, and they have made significant contributions to the advancement of cluster theory, its creation, and evolution.

A. Weber's "Theory of Industrial Location" (1929) had a considerable influence on the study of labor resource problems and regional industrial distribution.

The work of eminent economist-geographers A. Lesh and V. Izard can also be seen as a requirement of the hypothesis of future clusters [3].

M. Porter contributed to the development of the cluster theory based on Lesh and Izard's study.

Cluster theory emerged in the final part of the twentieth century, with Harvard Business School professor M. Porter's study. His book *The Competitive Advantage of Countries* (1990) was widely acclaimed.

Based on the historical and philosophical roots of cluster theory, Porter advanced the idea of national, state, and local competitiveness in the context of the global economy and exposed the phenomena of clusters. Clusters, he observed, are an expression of the distinctive development of the national and regional economies. By describing the strong link between cluster partners, enterprises, and industry competitiveness, Porter established the notion of industrial clusters.

Despite its recent inception, cluster theory has been effectively implemented across a wide range of countries, sectors, and locations. At the same time, a rising number of economic theorists are continually adding to and enhancing the idea, exposing new chances and advantages of employing cluster structures, and revising previously accepted ways to their construction and operation.

It should be mentioned that the fast changing market conditions of today necessitate a new look at cluster management. Construction cluster organization is critical for strengthening the competitiveness of the competitive environment and, as a result, necessitating constant development of the quality of construction goods and services.

According to the literature, in modern society, the idea of cluster is frequently separated into national and regional variants. According to research, national cluster formation is common in the industrial network. However, the relevance of developing a cluster system is growing not just in the construction industry, but also in the service sector - healthcare, tourism, education, and so on.

According to the literature review, there are three approaches to the idea of "Cluster":

- economic entities grouped in a narrow space around a huge organization or company;
- an industrial cluster is a vertical technical system of firms and organizations that participate in the manufacture of a certain product, including all phases of production, from research through stock supply, commerce, and subsequent service;
- industry cluster.

Construction clusters are vital in the current age for assuring the improvement of construction product quality and cost reduction. As a result, construction clusters will be required to assure high quality in construction, as well as enhancement of the construction industry, construction materials, and construction pricing.

Methodology

The legal and regulatory documents in the field of the organization of clusters in construction and its development serve as the methodological foundation for the study, particularly the Presidential Decree No. 6119 of the President of the Republic of Uzbekistan, dated November 27, 2020, "On Approval of the Strategy of Modernization, Rapid and Innovative Development of the Republic of Uzbekistan's Construction Network for 2021-2025."

Additionally, on the main axes of maintaining reforms aimed at lowering the cost of construction materials in accordance with the specifications established in this decree and meetings, as well as successfully establishing a cluster system in the industry, guaranteeing their competitiveness by further enhancing the quality of construction materials, and introducing a cluster system based on contemporary management principles and concepts. The use of proposals and recommendations, appropriate process approaches, systematic and comparative analysis, analysis and synthesis, and induction and deduction techniques is common.

Result and Discussion

Currently, clusters have been developed in a wide range of industries across several nations. For instance, the relevant state entities in the Russian Federation carried out a two-stage selection of projects for inclusion in the regional innovation cluster development program based on collective coordination in 2011 in accordance with the government's directive. The selection of projects was handled by a special working group made up of more than 100 specialists from government and corporate organizations, top research universities, and the business world. Regional cluster projects that were supported by the state and were globally competitive, embodied potential for research and education, distinguished by high levels of production efficiency, and guaranteed cooperation of small businesses in the field regardless of ownership type (37 in the first stage, 25 in the second stage) succeeded in being introduced and laid the foundation for quick regional development [4].

The findings of scientific research demonstrated the need for governmental and economic organizations, relevant top science and higher education institutions, and the business community to coordinate collectively in order to create the processes connected to clustering in economic sectors. The "knowledge through science" principle is supported by the use of concentrated knowledge in I because the theoretical, methodological, and practical issues that arise in this activity, specific to the territory, network, or some of its fields, are "human capital," that is, from the reserve of abilities, skills, and goals accumulated in people, in the innovative environment that appeared with the strengthening of internal and external integration between fields and fields.

Beginning in the 2000s, scientific research on clusters has been conducted in our nation. The scientific and practical work in this area is based on the five priorities for the development of the Republic of Uzbekistan in 2017–2021, which were adopted at the initiative of Shavkat Mirziyoyev, the President of the Republic of Uzbekistan. These priorities are deepening democratic reforms, modernizing the economy, and diversifying the nation's top industries. To start, comprehensive changes were implemented across the board to improve the economy of the nation. Technopolis, technopark, and cluster are only a few of the terms associated to these processes that have influenced our way of life.

On November 27, 2020, the President of the Republic of Uzbekistan signed Decree No. PF-6119, titled "On Approval of the Strategy of Modernization, Rapid and Innovative Development of the Republic of Uzbekistan Construction Network for 2021-2025," and December 2, 2021 The responsibility of creating building clusters was delegated at the video-selector conference on "problems of providing with" development of the construction materials industry and population housing, with the exception of the Tashkent and Navoi areas. [1].

In specifically, a joint-stock firm called "Ohangarontsement," which is a member of the "Evrocement group" holding, was used to form an industrial cluster for the manufacturing of building materials. Within the cluster, a lot of projects have been carried out. a new line with a capacity of 100,000 cubic meters of high-quality concrete and reinforced concrete products per year, a new line with a capacity of 4,000 tons of fire-resistant bricks per year, and a new cement factory with a production capacity of 3 million tons per year using the "dry" method. including 200 million dollars have been invested overall in the cluster's development. [5].

The key developments over the past few years have been the public's thorough understanding of the issues facing our nation's cluster industries, the approach taken to solving those issues in unison, the efficient use of available resources (such as labor, energy, and raw materials), the active knowledge-exchange among enterprising experts, the stability of socioeconomic ties, and the integration of production into a particular technological system. demonstrated how the framework is a trustworthy cooperative relationship.

Briefly put, clusters serve as a contemporary economic intermediary for the development of a creative, competitive, and effective economy, ensuring the delivery of finished goods to consumers, the expansion of production forces, the expansion of production volume, and the efficiency of production processes. A foundation for growth is established by factors such as the integration of production, education, and science in these clusters as well as by the helpful collaboration of small businesses in the industry.

Conclusion and Recommendation

A coherent theory of clusters has not yet been produced in global research, despite the fact that the importance of clusters in economic development and the activation of creative activities has been observed in several economic studies.

Implementation of the cluster construction system (production-construction, investment-construction, and project-construction clusters) based on organizational collaboration and consideration of the best international experience; Implementation of the system of experience sharing in the cluster method and training of masters and narrowly qualified specialists in particular fields of construction and assembly processes.

On the basis of research into international experience, a methodology for cluster collaboration (production-construction, investment-construction, and project-construction clusters) has been developed.

The second stage involves increasing cluster collaboration in the fields of collaborative investment, design, and construction.

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