INNOVATIVE GROWTH OF THE REGION'S BUILDING MATERIALS INDUSTRY USING THE CLUSTER APPROACH

Fayzullayev Jonibek Mambetsaliy o'g'li
Tashkent Institute of Architecture and Civil Engineering

Abstract

The article discusses issues of innovative development of building materials industry of the region based on the cluster approach. Determined the significance of regional cluster development of the industry of construction materials as the effective implementation of the innovative breakthrough of the region as an important part of strategies for strengthening innovation activities may be to support the formation and development of cluster structures. Analyses the current situation with innovation in the building materials industry of the region based on the cluster approach. In the course of the study revealed a direct correlation between involvement in innovative activities on a cluster basis, and the level of development of industry of construction materials. The conducted research allowed identifying the factors that determine the innovation process, systematization and classification which determine the sustainable functioning of the building materials industry in the period of active innovation. The proposed grouping of innovations for the construction industry taking into account industry-specific characteristics that reflect modern trends of scientific and technological progress in construction. Significance of the study lies in the fact that the proposals and practical recommendations can be used in the formation mechanism of innovative development of building materials industry and the overall regional construction complex of Russian regions by creating clusters of construction.

Key words: Building materials, innovations, cluster approach

Introduction

The trend of developing science and technology policy is the growth of innovation and leade rship in the global economy, and this process is independent of the
form of government or political system. However, there are some nations and locations wher e invention levels are higher than others.

Typically, it is contingent upon a State's willingness to coordinate the innovationa process, to oversee this process and control the relationships developing in the field of innovations. Strategic approaches to innovation are pertinent in this situation.management, allowing delib erate process lead. This tactical administration ofThe Executive Innovation level should be u sed for innovative activity.(Company), as well as the meso- and macroregional, industry, and overall state levels whole.

The capacity to link listed in is a crucial element in the success of innovation in this situation the one-level approach.

This paper, it is conceivable to put it into practice with the aid of the new Russian economic forms of clustering the government, science, infrastructure, and economic issues.A significant sector of the economy is the building materials business, which employs more than 15branches and forming the technical and material foundation of construction, the price cost of construction materials makes up the majority of the building complex expenses.Meanwhile, there is a gap in the building industry's inventive development.materials causes the entire building complex to stagnate, both due to the use of due to their expensive purchase price, outmoded components and technologies.

The scientific works of domestic and foreign authors served as the theoretical and methodological foundation of investigations of scientific approaches to the establishment of an innovation cluster in the building materials sector. Easy foreign scientists form the foundation of the innovation theory: B. Twiss [5], J. Schumpeter [3], and B. Santo [4]. Drucker [2], I. Ansoff [1], and R. were also involved in the strategic management of innovative activity.

2 Methodology

The state of the construction industry has always been a good indicator of prosperity and development potential. Additionally, the construction industry, which includes the manufacture of building materials, is a major contributor to any region's economy, and the state of the industry is a good predictor of both economic and technological advancement.

Although the construction industry is generally considered to be quite conservative, the new market economy conditions, which were centered on the use of new technologies and resurso s-beregayuschih materials, caused her to make some changes in the investment-making insulating complex with a focus on cutting-edge programs. The need for innovation is primarily driven by the desire to lower housing costs and operating expenses while also speeding up development and raising living standards. The implementation of programs for the modernization of production, an increase in production and sales volume, and an improvement in the energy efficiency requirements and resources as well as the production processes and the products themselves are the main goals for the construction materials industry enterprises in this regard.Since energy efficiency is now a crucial necessity of contemporary construction in Russia and around the world, energy-saving technology and building materials have grown in popularity. One of the biggest challenges in the path of

Getting stakeholders to collaborate effectively during the innovation process is a challenge for many inventions. When innovation is still in its early stages, this issue is especially serious. Innovation at this stage necessitates investments with the highest level of unpredictability. The lack of proof of prospective innovations in the early phases and the difficulty of defining t

he range of potential stakeholders in innovative topics contribute to the uncertainty. The fact that various stakeholders have varying ideas on innovation and view it from various perspect ives may also cause difficulties with co-innovation participants in the early stages.

As a result, the authors of innovations frequently overestimate their potential, failing to consi der the alternatives already on the market, consumer inertia, as well as other psychological fa ctors of the market's acceptance of new items. The authors frequently get bogged down in tec hnical intricacies while speaking with investors, who are primarily interested in the economi c potential of innovations, and the commercial component is typically shallow or excessively hopeful. In addition, it is frequently the level of engagement between the participants of Innovation depends on whether it will be put into practice, under what conditions, and when.

The following primary elements are linked to the effectiveness of creative development in the building materials industry:

- The potential of science, new ideas, discoveries and developments;
- Structure and production requirements;
- The resource base of innovative development;
- The availability of an effective management system that is adequate to the requirements of the time.

These elements must work together for science's potential to always outpace the demands of the creation of creative businesses. On this basis, it is required to carry out the selection of th e most efficient programs and activities of creative development by co-measuring with the resource potential in the anticipated period.

The enterprise of scientific and technical foundation has the primary components that meet the needs, and the region's innovative infrastructure, which contributes opportunities and conditions for the implementation of programs and projects of innovation development, reflecting the interaction of the company in this aspect with other companies and organizations directly or indirectly interested in the development of the system; the degr ee of innovation susceptibility staff, its professional and educational level. Based on the afor ementioned, it appears that the process by which the innovation potential of construction bus inesses is formed (Fig.1)

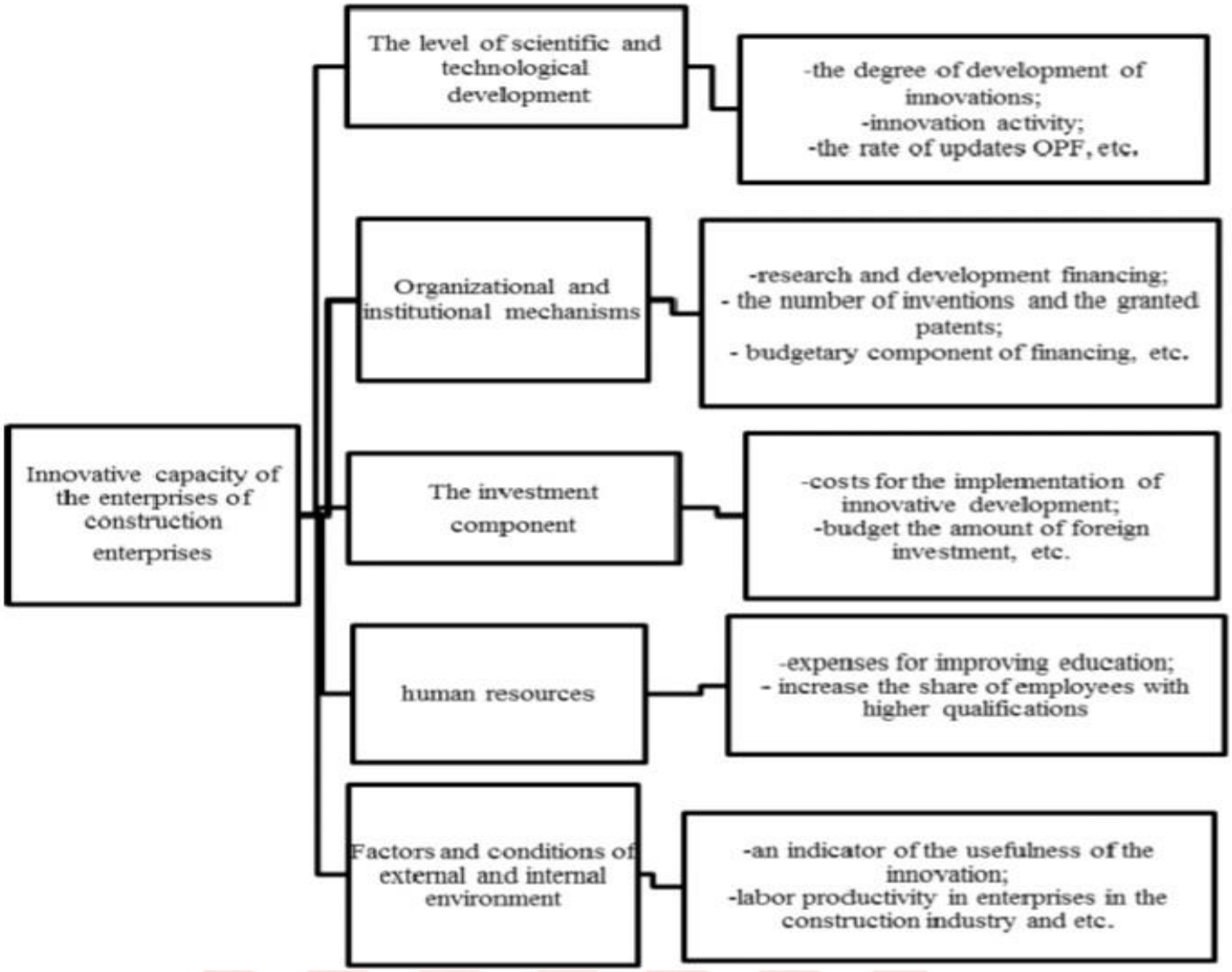

Fig. 1. The mechanism of formation of innovation potential of construction companies.

Based on the foregoing, locating and supporting the growth of regional clusters is a crucial c omponent of the innovation system in the building materials production sector [24].

The cluster's contribution to the growth of innovation lies in the stable relationships that have been established within it between the various players in the production process, but it has al so been shown to increase the proportion of competitive building materials produced by regi onal construction firms by introducing new production-organizational techniques (Fig. 2) [21,22].

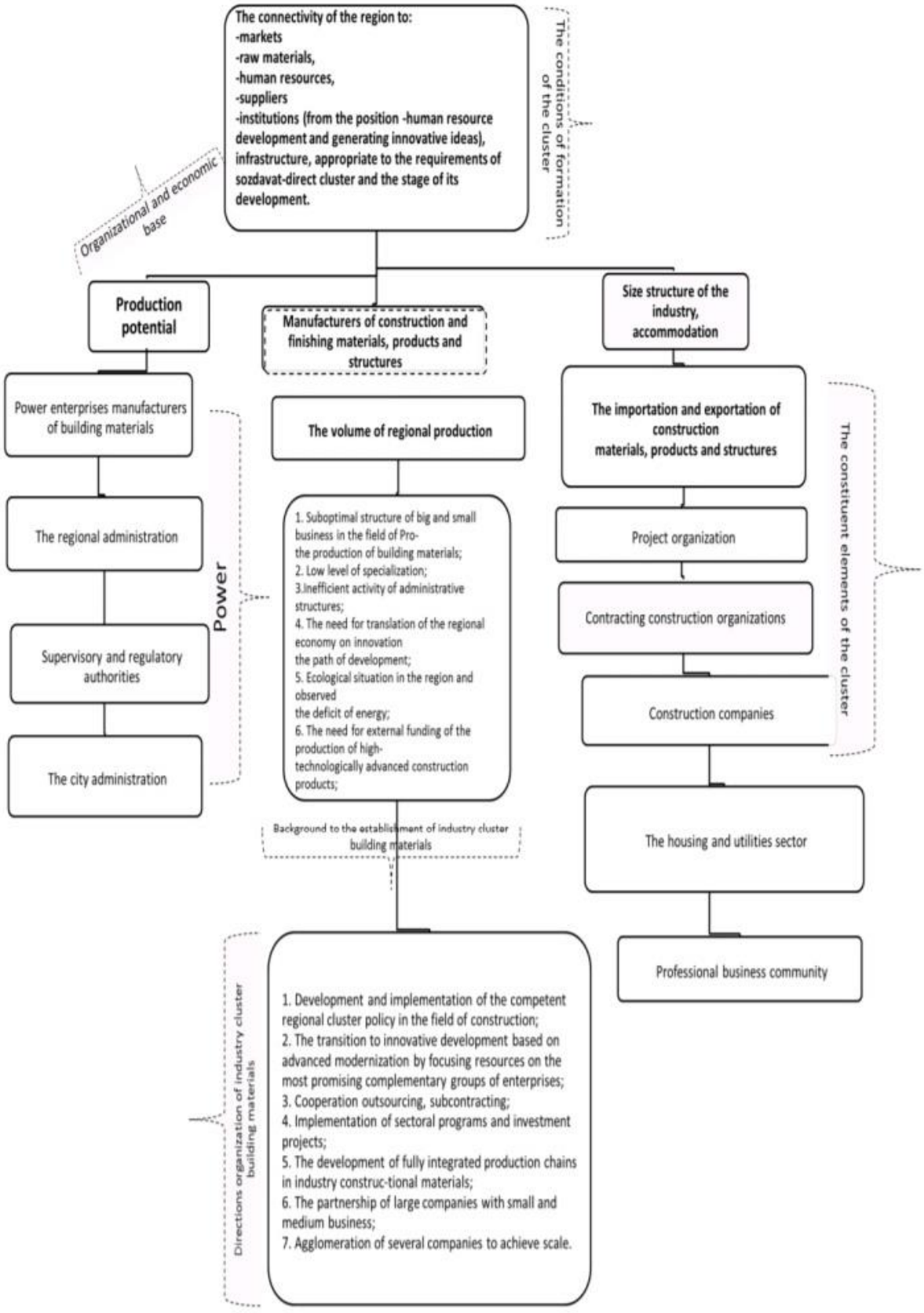

Fig. 2. The model of innovative development of building materials industry of the region based on the cluster approach.

A cooperation between large corporations and small and medium-sized businesses is the most significant vehicle for the diffusion of innovation in the regional

production clusters. Outsourcing, subcontracting, the implementation of joint programs, mar ket research, training, and other activities are the mechanisms of this collaboration. Addition ally, the cluster's participating businesses can gain from operating close to one another's indu stries or production groups, even if they don't collaborate on the creation of new products or with rival enterprises. Reducing transaction and manufacturing expenses has the advantage o f lowering the barrier to exit the
markets for the marketing and supply of raw resources. With the support of the government, a process of gradual manufacturer consolidation is being carried out under cooperative condit ions in order to create a unified distribution structure, a common policy for acquiring product ion's raw materials, and output for both domestic and international markets .They must be ta ken into consideration separately from the typical industrial operations from an analytical per spective, considering the cluster as an already well-established reality.
On the one hand, a grouping of businesses that are close together in space gives the impressi on of having a synergistic effect.In the creation and sale of goods and services, as well as in r ivalry and collaboration, there is a functional relationship between them. In addition to conce ntrating on the creation of a certain class of goods, they also provide special attention to the c reation of novel items. On the other side, there is a group of unofficial education that brings t ogether big leading businesses, small and medium-
sized businesses, research and educational organizations on a voluntary basis. Due to the clus ter strategy's intersection with industrial, economic, and regional policies, as well as the fact t hat there is no arms control industry, implementation of the cluster policy is complicated.Sec tors and industries no longer exist in the way they did during the planned economy.
Despite this, the government intends to deploy a variety of strategies to aid small and mediu m-
sized enterprises and advance regional cluster efforts. In turn, the cluster method provides lo cal governments with the means to interact with business in an effective manner, improves th eir comprehension of its distinctive characteristics and tactical requirements, and facilitates st rategic planning that is driven and focused.

Conclusion

It should be mentioned that the growth of the building materials sector in the majority of regi ons has prevented the monopolization of localized regional construction markets. Competitiv e contracting businesses gave them access to production facilities and raw materials. The pri mary developers are typically vertically integrated businesses with career and plant structure s. Their incentive to reduce the cost of construction products is constrained by the absence of a competitive environment. For instance, it takes at least one and a half years to build a 15st ory brick monolithic house in Russia, and the complexity of the project is at least 500 thousa

nd. Man-hr. such a high price. There are instances of the construction of 16-story buildings in China.
Man-hours. Almost without the use of cement.
This record was made possible through cutting-edge logistics, effective site management, and the use of contemporary materials. Designers and architects are required to function as a conduit between material makers and project developers when using contemporary materials and technologies. We require innovative projects in order for their utilization to be widely adopted.

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