ADVANCE THE ORGANIZATIONAL AND ECONOMIC ANALYSIS OF CLUSTERS

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ABOUT ARTICLE

Abstract: This research paper delves into enhancing the organizational and economic analysis of clusters in the context of Uzbekistan, offering a comprehensive examination of strategies to optimize the efficiency, sustainability, and economic impact of these collaborative economic entities. The study investigates the current state of cluster development in Uzbekistan, highlighting areas that require improvement. By drawing on a range of methodologies, case studies, and empirical evidence, the research aims to contribute actionable insights for policymakers, industry stakeholders, and researchers to refine their approach to cluster development and management in the unique economic landscape of Uzbekistan.

INTRODUCTION

Modern trends in economic development determine the unification of economic activities, which "leads to the formation of a unified system, which is most effectively formed using cluster approaches in the implementation of economic policy.The formation of a unified system of organizational and economic factors will ensure the harmonization of the system of formation of regional innovation clusters, and is also associated with the selection of the most informative groups of factors, which allow a more specific study of the impact of factors on the attributes of the cluster. In addition, within the framework of the presented classification of factors, some parameters of economic relations can be taken into account within the framework of the economic interpretation of mathematical symbols.

As the preferred method for assessing organizational and economic factors influencing the effectiveness of regional innovation clusters, a quantitative assessment is proposed, which is converted into a point scale using the linear scaling method. However, if it is not possible to assess factors that do not have quantitative characteristics, as well as in conditions of uncertainty of quantitative information, it is proposed to use an alternative assessment method - an expert assessment of organizational and

economic factors affecting the effectiveness of regional innovation clusters.One significant challenge is the limited collaboration among clusters. The lack of effective mechanisms for inter-cluster communication and cooperation hinders the potential synergies that could emerge from shared resources, knowledge, and innovation [1-9].

Inadequate infrastructure, particularly in remote regions, poses challenges for cluster development. Limited access to transportation, energy, and communication infrastructure inhibits the efficient functioning of clusters and constrains their growth.

Many clusters struggle with limited access to finance, hindering their ability to invest in technology, research and development, and overall modernization. Insufficient financial support impedes the competitiveness and sustainability of clusters in the global market.

The cluster workforce often faces skills and knowledge gaps that impede innovation and productivity. The need for specialized skills, particularly in emerging industries, remains unmet, creating a barrier to effective cluster development.

Regulatory frameworks may pose challenges to cluster activities. Complex and cumbersome regulations can deter entrepreneurship, innovation, and the ease of doing business within clusters, impacting their overall competitiveness.

Uzbekistan has the opportunity to strategically diversify and specialize its clusters. By identifying and nurturing industries with high growth potential, the country can foster a more resilient and competitive economic landscape.

The integration of technology presents a significant opportunity for cluster development. Embracing Industry 4.0 technologies, such as IoT, AI, and automation, can enhance productivity, improve efficiency, and position Uzbekistan's clusters on the cutting edge of innovation. Government-led initiatives and policies play a pivotal role in shaping the cluster landscape. Proactive policies that facilitate access to funding, streamline regulations, and promote research and development can create an enabling environment for clusters to thrive. Building partnerships with international organizations, businesses, and research institutions offers clusters the opportunity to tap into global markets, access new technologies, and benefit from shared expertise.

Implementing targeted workforce development programs can address skills gaps within clusters. Training initiatives, educational partnerships, and skill-building programs can contribute to a more capable and adaptable cluster workforce.

Embracing sustainability practices within clusters presents an opportunity to align economic development with environmental and social goals. Sustainable initiatives can enhance the reputation of Uzbekistan's clusters, attracting environmentally conscious investors and consumers.

Establishing effective networking platforms for clusters can encourage collaboration and knowledge sharing. Platforms that facilitate dialogue, information exchange, and joint initiatives can strengthen the overall cluster ecosystem.

MATERIALS AND METHODS

The activities of any market entity, including a cluster, are inextricably linked with the marketing activities of the entity and are an important factor influencing efficiency[10-23]. Marketing activities in the cluster can provide participants with up-to-date and more complete information about the state of the market, contribute to the development of brands of cluster enterprises, help reduce operating costs (warehouse and transportation costs, economies of scale from sales and deliveries, joint formation of promotion and distribution channels , formation of customer loyalty, etc.)Table 1.

Table 1. Evaluation of marketing factors

Dependence with influence on the efficiency of regional innovation clusters	Calculation method and rating scale	Source of information
General rule. The less effective marketing activities are, the higher the effectiveness of the formation of regional innovation clusters in the case of development of marketing activities	Marker A – high efficiency of marketing activities; marketing activities; Marker B – significant effectiveness of marketing activities; Marker C – moderate effectiveness; Marker D – low efficiency of marketing activities.	For assessment, as a general rule, expert assessments are used
Evaluation of private indicators, for example, price level	Maximum price – 300 points; Average price – 150 points; Minimum price – 0 points.	The maximum number of distribution channels for cluster products is 300 points;
Assessment of private indicators, for example, enterprise promotion policy	Marker D – low efficiency of promotion policy; Marker C – moderate effectiveness of the promotion policy; Marker B – significant effectiveness of the promotion policy; Marker A – high efficiency	Price lists and commercial offers of enterprises are used for evaluation
Evaluation of private indicators, for example, distribution of goods	The minimum number of distribution channels for cluster products is 0 points.	Expert assessments based on surveys, interviews with clients

Effective use of marketing activities is associated with the effective implementation of the marketing mix: pricing policy of the regional innovation cluster, promotion policy, product policy, cluster goods distribution policy, marketing services personnel of cluster enterprises.

A significant influence on the effectiveness of regional innovation clusters is exerted by factors that give agglomeration effects: specialization of cluster enterprises, the activity of interaction of cluster enterprises with each other, etc.

Thus, following the logic of choosing a region where the influence of organizational and economic factors during the formation of a cluster gives the greatest efficiency (increase in cluster attributes), it is necessary for each region to evaluate the influence of organizational and economic factors using the arithmetic average formula. The set of factors may be the same when monitoring organizational and economic factors, or may not be the same (if it is impossible to assess some factors for a specific region). The possibility of comparison is provided by the mathematical logic of the arithmetic mean. Of greatest interest are those regions that have a significant and high influence of factors, since the presence of these factors increases the efficiency of regional innovation clusters.

Additionally, in a similar way, an analysis of the likelihood of the emergence of organizational and economic factors affecting the effectiveness of regional innovation clusters can be carried out.

For regions of the same industry, a rating can be calculated based on an integral assessment and a qualitative level of influence of the integral organizational and economic factor can be assigned. Based on the Integral factor, a rating of regions is built, according to which the priority for creating a cluster of the industry in question in the region is set [24-28].

So, the principles of forming a system that ensures decision-making on the need to form regional innovation clusters in a particular industry on the basis of a comparative analysis of organizational and economic factors influencing efficiency can be solved by the proposed mechanism for assessing factors. The basis of integration processes are objective processes occurring in the economy, such as globalization, deepening division of labor, scientific and technological revolution and increasing openness of national and regional economies.

The formation of regional innovation clusters is determined by the need for favorable conditions or factors for its emergence, as well as subsequent development. Activation of the processes of formation of regional innovation clusters is complicated by the lack of a proven unified organizational mechanism for the formation of regional clusters.

However, the main basis for developing an organizational mechanism for the formation of regional innovation clusters can be domestic research practice in creating and testing mechanisms for the formation of clusters.

RESULTS AND DISCUSSION

Analyze the effectiveness of the implementation of scientific and technical potential, the concept of the golden ratio is used; it indicates that the ratio of own and borrowed technologies is in optimal proportion. The most progressive forms of production organization are cluster structures, in which the distribution of the share of own (0.38) and borrowed (0.62) technologies in the proportion of the golden section ensures maximum efficiency, sustainability and harmonious development of socio-economic systems.

Consequently, changing clusters in the structural change that occurs in the economy and following the priorities of the V and VI technological structures is the main problem of socio-economic development. Innovative development of clusters is based on organizational excellence. The choice of organizational forms of production largely influences the success of implementing an innovative development strategy. When the V and VI technological structures are formed, the more productive clusters are clusters that represent complex economic systems, within which interaction is based on competitiveness and cooperation. The search for a harmonious combination of such contradictory properties of systems as flexibility and stability, controllability and innovation, shifting the center of gravity in development to cooperation and interaction is necessary for the successful functioning of clusters.

The peculiarity of the cluster is that a large number of enterprises in one area stimulates the replacement of the technological structure and the spread of innovation. Therefore, an updated information environment appears, which helps to update the technological structure and the continuous development of existing technologies.

The continuity of the process of innovative development is ensured by the need to develop our own technological processes and create a strong corps of engineers and scientists. Links in the cluster must intensively invest resources in improving and improving modern technologies. The goal should be to optimize intelligent sources.

As a result of various combinations of interaction of the same elements of cluster structures, it is possible to obtain essentially different business structures, with different levels of proportions of organization, self-organization and management and different levels of efficiency.

The organizational law of composition of elements of processes occurring in a cluster ensures a positive result of the cluster's activities. Due to the fact that self-organization contains huge sources of increasing productivity in production, there is increased interest in the field of cluster management.

The modern concept of harmonious innovative development of clusters includes such concepts as self-development, self-organization and self-learning.

Organizational dominance can be achieved through self-organization and through management, which is looking for new approaches to activities, as well as mastering them and introducing them into the organization. For the innovative development of a cluster, as a form of ensuring organizational superiority, it is necessary to develop new approaches, methods and models of interaction between the main fundamental categories, such as organization, self-organization and management.

Implementation and management of innovative development of clusters. The process of improving clusters is divided into several types: organization, self-organization and management, which are interconnected.

The essence of the organization is the connection and interaction of the component processes occurring in the cluster, while also creating elements to implement priorities for society and the priorities of employees.

Organizations in the cluster self-regulate and self-organize their activities.

In advanced countries, an era of total, constant self-organization has long existed, which ensures constant growth in labor productivity, profits, profitability and other indicators of increasing production efficiency.

If we consider a systemic approach, then self-organization is the ability of the functional, elemental and structural components of the cluster to self-development, self-generation, while using, in addition to the influx of energy, information, matter from the outside, using its internal potential.

Management is the integrated process of planning, organizing, coordinating, motivating and controlling the organizational resources needed to effectively and efficiently achieve the cluster's goals.

Organizational science today is aimed at studying the relationship between the processes of purposeful management and self-organization, searching for harmony between organization and self-organization. In the process of dynamic development of a cluster, an important role is played by the constant interaction of organizational and self-organization mechanisms. The primacy of one form or another depends on the state of development of the cluster at the moment and its goals. Changing the proportions of organization and self-organization within a cluster has a huge impact on the production process and process effective development of the cluster [29-37].

CONCLUSION

The contemporary economic landscape necessitates the amalgamation of economic activities, best achieved through cluster approaches in economic policy implementation. The formation of a unified system of organizational and economic factors ensures the harmonization of regional innovation clusters and facilitates a more specific study of their impact.

The presented classification of factors allows for a nuanced analysis of economic relations within the economic interpretation of mathematical symbols, providing a comprehensive understanding of the cluster attributes and dynamics.

To assess organizational and economic factors, a quantitative evaluation is proposed, converted into a point scale using the linear scaling method. In cases where quantitative assessment is challenging, an expert evaluation method is suggested.

Limited collaboration among clusters poses a significant challenge, hindering the potential synergies from shared resources and knowledge. This underscores the importance of fostering effective mechanisms for inter-cluster communication and cooperation.

Inadequate infrastructure, particularly in remote regions, inhibits cluster development by limiting access to transportation, energy, and communication. Overcoming these challenges is crucial for sustained cluster growth.

Limited access to finance is a pervasive issue, impeding clusters' ability to invest in modernization and innovation. Addressing this financial barrier is essential for enhancing competitiveness and sustainability in the global market.

The cluster workforce faces skills gaps, hindering innovation and productivity. Specialized skill development, especially in emerging industries, is vital for effective cluster development.

Regulatory constraints, characterized by complex and cumbersome regulations, pose challenges to cluster activities. Streamlining regulations is essential to foster entrepreneurship, innovation, and overall competitiveness.

Uzbekistan has the strategic opportunity to diversify and specialize its clusters, fostering a resilient and competitive economic landscape. Identifying and nurturing industries with high growth potential is paramount.

The integration of technology presents a significant opportunity for cluster development. Embracing Industry 4.0 technologies can enhance productivity, efficiency, and innovation within Uzbekistan's clusters.

Government-led initiatives and policies play a pivotal role in shaping the cluster landscape. Proactive policies that facilitate funding, streamline regulations, and promote research and development create an enabling environment for cluster success.

International collaboration, through partnerships with organizations, businesses, and research institutions, provides clusters in Uzbekistan access to global markets, new technologies, and shared expertise, fostering innovation and competitiveness.

In conclusion, addressing challenges and capitalizing on opportunities outlined in this study will propel Uzbekistan's clusters toward enhanced economic development, innovation, and global competitiveness. The proposed measures, informed by modern economic trends and analysis, offer a roadmap for advancing the organizational and economic aspects of clusters in Uzbekistan.

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