AGRICULTURE

THE APPROACH TO THE FORMATION OF REGIONAL CLUSTER IN ALMATY REGION OF RK

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ABSTRACT

This work is described way for the formation of regional cluster to collect, store, process and distribution of agriculture products such as vegetables in Almaty region of Republic of Kazakhstan.

Research will be conducted by using the cluster approach and supply chain management: 1) founded on the use of heuristic knowledge of experts; 2) formal modeling techniques; 3) integrated methods (statistical, econometric), and the process approach to holistic and system modeling and reorganization of material, financial and informational flows. There are three stages of research and project issues for each stage are written in this paper.

The establisher of the cluster theory is Michael Porter, who gave a definition of cluster and substantiated the role of the cluster approach in the development of the economy at the regional and global scale. [1] The cluster approach provided the impetus for further development of the national economy of the developed countries. Due to the lack of a unified model for the formation of logistics clusters, each country develops cluster theories of M. Porter, depending on the specifics of the economic relations organization in a country, region and industry through the development of individual, specific scientific approaches to the formation of clusters; technological cluster projects and initiatives to enhance research activities and practical applications for the development of the regional economy. The research of the principles and theoretical aspects of cluster formation was carried out by foreign scientists E. Dahmen, E. Limer, M. Porter, J. Suominen, M. Todaro, I. Tolenado, M. Feldman, P. Fisher, Y. Sheffy. [1-6] In general, in the works of the foreign scientists research is carried out on factors and formation conditions, the performance of existing clusters and are not considered scientific approaches to the formation of regional logistics clusters.

Existing scientific approaches of the formation of clusters include various groups of methods (economic, mathematical, expert, marketing, mapping, forecasting). Each method has its specific, separate scope during the formation of logistics clusters and should be used together with other methods of cluster analysis. However, the proposed methodologies consider the different steps of checking the adequacy and adaptation of formed logistics clusters. In this project, using simulation techniques, simulation model of regional logistics cluster will be built. It will contain the elements of the general regularities, and carried out with the developed structural model of regional logistics cluster. Researches with simulation model will provide an overview of the model; to identify the advantages and disadvantages of the model and to improve the model. The use of simulation techniques will reduce the risks associated with the methodology implementation.

There is difference between the conditions of clusters formation in the Republic of Kazakhstan from the conditions, under which successful international logistics clusters were established and operated. Researches of foreign scientists show that all world major logistics clusters are located in developed countries (the USA, France, the UK, Germany, Italy, Denmark, etc.) with a powerful communications infrastructure; developed financial services; stable government support and a high level of public-private partnership, or in the major sea ports with access to the ocean (Singapore, China,

Malaysia), which is an important condition for a rapid and successful development of clusters. [7] One of important factors in the development of effective logistics cluster formation also relates a well chosen strategy for the development of clusters. On this basis, to implement the objectives for the formation of clusters in the Republic of Kazakhstan it is necessary to develop a methodology of regional logistics clusters formation, taking into account the circumstances and priorities of the national economy.

Objectives for the implementation of the cluster approach in the Kazakhstan economy, reflected in a number of policy papers, adopted by the State and industry levels. The Government Decree of the Republic of Kazakhstan "The concept of formation of promising national clusters in the Republic of Kazakhstan" dated October 11, 2013 for №1092 notes the need to develop new approaches and methods for the local clusters formation on the basis of the development of marketing, technology and engineering business competencies, adaptation and improvement of the foreign technology and the subsequent development of its own technology. In this Decree potential clusters in the industry and services sectors are identified, one of which is transport and logistics clusters. Policy documents are focused mainly on the development of transport cluster countries, which is one of the components of the logistics cluster. In turn, the regional logistics clusters, by the definition of foreign researchers and the experience of developed countries, are aimed at the development of the regions. Currently, the Government of the Republic of Kazakhstan makes a strong emphasis on the development of regions. The Republic of Kazakhstan has a vast territory, a variety of natural resources, economic and operating conditions, resulting in particular regions. Based on the above, the development of new scientific approaches of formation of regional logistics clusters is an important task of the national economy.

Tasks of the Project.

Project issues for the 1st stage are analysis of the foreign experience in the area of the scientific basis and formation methodology of regional clusters; analysis and estimation of the actual market state of vegetables production in the Republic of Kazakhstan.

The expected results of this research stage are developed offers to apply and adapt the foreign progressive technologies in the area of cluster formation in the Republic of Kazakhstan; the factors of regional logistics cluster formation and directions of logistics development will be specified according to the market space of the national economics. [8]

Project issues for the 2nd stage are: research in the area of regional logistics clusters in the Republic of Kazakhstan; construction of a regional cluster model; systematization of the formation conditions of regional clusters; development of a simulation model of the functioning of regional cluster.; development of mathematical models and mechanisms for managing the functional subsystems of logistics that manage material flows, such as procurement (supply), transport, production logistics and distribution; development of a software application to implement a simulation model and conduct experiments.

The expected results of the research stage are: developed infrastructure of regional clusters, a model of regional cluster and the theoretical position of the organization and management of regional clusters; mathematical models and mechanisms for managing the functional subsystems of logistics will be developed: procurement (supply), transport, production logistics and distribution; simulation model for the testing of a model and test the adequacy of the theoretical propositions management for regional clusters; definition of the formation conditions set of regional logistics clusters: economic, spatial, resource, institutional, infrastructure, competitive. development a software product with applications to the logistics subsystems: application of the mathematical model to the subsystem of purchasing logistics; Application of the mathematical model to the production logistics subsystem; Application of the mathematical model to the distribution logistics subsystem; Application of the mathematical model to the transport logistics subsystem.

Project issues for the 3nd stage are: development of the formation mechanism of regional clusters in the Republic of Kazakhstan; integrative assessment for the efficiency of regional clusters in the Republic of Kazakhstan; the validation of the structural and simulation models of regional clusters with existing forms of clusters. The expected results of the project stage are: development of the formation mechanism of regional clusters in the Republic of Kazakhstan; integrative assessment of the efficiency of regional clusters in the Republic of Kazakhstan.

Scientific novelty concludes in the following:

1. obtaining the new scientific elements for the general regularities of formation of regional clusters;

2. developing of a model of regional cluster and possible construction of structural

models of regional clusters for individual regions of the Republic of Kazakhstan according to the socio-economic conditions of the region;

3. developing a simulation model and apply simulation techniques for the researches adequacy of the model of regional clusters with existing forms of clusters.

The principal difference between the idea of the research and existing analogues in countries with the developed economics is the proposed regional clusters will be located in areas with low infrastructure and the network of transport routes, but with the certain economic, resource, labor and natural potential.

Social demand and (or) economic and industrial interest in the research and its results: formation of the regional clusters involves the development of new job places. In this case not only highly qualified specialists will be engaged in, but employees with secondary education on the non-management positions as well. For the

career development and knowledge improving of the regional staff will be provided centers for professional development for getting certificates and appropriation rating.

Formation of the regional clusters to collect, store, process and distribution of agriculture products such as vegetables in Almaty region, where business interact with sphere of logistic service and will be infused advanced scientific and innovative technologies, will increase the level of regions, which spot the economic and industrial commitment in project realization.

The impact of obtained results on the development of science and technology and the expected social and economic benefits is that scientific foundations and methodology of the research fill up field of known science and technological solves in the International and domestic practice in area of logistics clusters formation.

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