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CREATION OF CLUSTERS AND THEIR ROLE IN THE DEVELOPMENT OF THE KKAZAKHSTAN ECONOMY

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Formulation of the problem. In the context of Kazakhstan, the creation of clusters acquires special importance, since this country has been actively implementing the strategy of finding alternative ways of economic development and diversification of its structure in recent years. Cluster initiatives are aimed at uniting enterprises in a certain sector or region in order to create a synergistic effect and ensure joint development. This creates favorable conditions for attracting investments, increasing production efficiency, improving product quality, and increasing competitiveness on the international market. *The purpose of the article* is to analyze the positions of the creation of clusters in the conditions of Kazakhstan to determine the level of sustainable development of the country based on the rating of the indices of the leading international rating companies. *The methodological basis of the research* was the logical methods of information processing, statistical analysis, comparison. *The main hypothesis of the study* was the assumption that in order to determine the level of sustainable development of a single country at the international level, an assessment of the economic, social, and environmental components of sustainable development is necessary. *Presenting main material*. The article reveals: the prospects of the cluster organization of the national economy of Kazakhstan, the essence and structure of the cluster. Based on the results of the analysis of indicators of socio-economic development of the East Kazakhstan region, the prerequisites for the creation of an auto industry cluster have been determined. *Originality and practical significance of the research.* The article considers the main aspects of the creation of clusters in Kazakhstan, including success factors, the role of the state and institutional structures, interaction with other sectors of the economy and global production chains. Examples of successful implementation of the cluster model in various sectors of Kazakhstan's economy are analyzed, as well as prospects for further development of this approach are considered. *Conclusions*. The research is aimed at revealing the potential of the cluster approach in the development of the economy of Kazakhstan, its advantages and opportunities for creating a sustainable and innovative economic system. Through systematic analysis and the use of modern research methods, we will try to identify key success factors and recommendations for the further development of clusters in the context of Kazakhstan.

Key words:
cluster, competitiveness, production cooperation, region, gross regional product, project, state program.

СТВОРЕННЯ КЛАСТЕРІВ ТА ЇХ РОЛЬ У РОЗВИТКУ ЕКОНОМІКИ КАЗАХСТАНУ

Постановка проблеми. У контексті Казахстану, створення кластерів набуває особливої ваги, оскільки ця країна протягом останніх років активно впроваджує стратегію пошуку альтернативних шляхів розвитку економіки та диверсифікації її структури. Кластерні ініціативи спрямовані на об'єднання підприємств у певному секторі або регіоні з метою створення синергетичного ефекту та забезпечення спільного розвитку. Це створює сприятливі умови для залучення інвестицій, підвищення ефективності виробництва, покращення якості продукції та підвищення конкурентоспроможності на міжнародному ринку. *Метою статті* є аналіз позицій створення кластерів в умовах Казахстану для визначення рівня сталого розвитку країни на основі рейтингу індексів провідних міжнародних рейтингових компаній. *Методологічною основою дослідження* стали логічні методи обробки інформації, статистичний аналіз, порівняння. *Основною гіпотезою дослідження* стало припущення, що для визначення рівня сталого розвитку окремо взятої країни на міжнародному рівні необхідна оцінка

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економічної, соціальної, екологічної складових сталого розвитку. *Виклад основного матеріалу.* У статті розкрито: перспективи кластерної організації національної економіки Казахстану, сутність та структура кластера. За підсумками аналізу показників соціально-економічного розвитку Східно-казахстанської області визначено передумови створення автопромислового кластера. *Оригінальність та практичне значення дослідження.* У статті розглянуті основні аспекти створення кластерів в Казахстані, включаючи фактори успіху, роль держави та інституційних структур, взаємодію з іншими секторами економіки та глобальними ланцюгами виробництва. Проаналізовані приклади успішного впровадження кластерної моделі у різних секторах економіки Казахстану, а також розглянуті перспективи подальшого розвитку цього підходу. *Висновки.* Дослідження спрямоване на розкриття потенціалу кластерного підходу у розвитку економіки Казахстану, його переваги та можливості для створення стійкої та інноваційної економічної системи. Шляхом системного аналізу та використання сучасних дослідницьких методів, ми намагатимемося виявити ключові фактори успіху та рекомендації щодо подальшого розвитку кластерів в контексті Казахстану.

Ключові слова:

кластер, конкурентоспроможність, виробнича кооперація, регіон, валовий регіональний продукт, проект, державна програма.

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Formulation of the problem. In the changing conditions of the modern global economy, where competitiveness and innovation are key factors in the country's development, the creation and development of clusters become an important tool for ensuring sustainable economic growth. Kazakhstan, as a country with great potential and rich natural resources, is constantly looking for effective ways to stimulate its economic potential and attract investments.

This scientific article is devoted to the study of the role of clusters in the development of Kazakhstan's economy and their contribution to achieving sustainable growth and competitiveness. The cluster approach is based on the concept of interaction between enterprises, scientific research institutions, educational institutions and other actors in the region with the aim of creating favorable conditions for innovative development and increasing productivity.

In modern conditions of high competition in the markets of industrial goods and scientific achievements, there is a change in the directions of development of the economy and the organization of industry. The priority task is to ensure a sustainable competitive national economy based on the introduction of advanced technologies, environmentally friendly, safe production, product quality management systems, and resource saving systems.

The factors hindering the economic development of Kazakhstan at the present stage are: a low degree of diversification, underdeveloped small and medium-sized businesses, the preservation of a raw orientation, which causes dependence on world prices for energy and other commodities.

An analysis of world economic practice shows that the most cost-effective, competitive and promising direction for business development is industrial cooperation, which involves small, medium and large enterprises. This is due to the fact that in the context of reforming local self-government, the interaction of the state, business and various institutional structures as the three most important subjects of economic policy, as well as the network interaction of various companies with each other, is of fundamental importance. Such effective cooperation is achieved within the framework of industrial clusters, which are a territorial concentration of a set of interconnected companies, as well as state and public institutions necessary for the development of the cluster's competitive advantages.

Analysis of the rest of the research and publications. Many foreign scientists deal with competitiveness management issues, including M. Porter, M. Mescon, P. Drucker, A. Thompson, F. Hedouri, and F. Brian T. The idea to use the cluster approach for competitiveness management belongs to Michael Porter. Further, it was developed in the works of many authors, such as Reine F., Feather E., Sweeney S., Martin R., Sanli P, Brenner T. Among Russian scientists, this direction is being developed by Belousov D., Salnikov D., Sivakov D. , Gurova T., Voronov A., Buryak A. At present, due to the complexity of the object of study, a holistic methodology on this problem has not yet been developed in the domestic literature. Few Russian researchers consider the very process of cluster formation. In most works, already established intersectoral complexes are analyzed. When creating an industrial policy mechanism that implements the idea of clusters, one has to overcome a number

of significant difficulties due to the specifics of the domestic economy and the multidimensionality and subjectivity of the nature of assessments of cluster schemes.

Thus, the task of adapting and substantially supplementing the existing approaches and methods for identifying and evaluating clusters arises. Moreover, the main task is not the process of defining clusters, but the possibility of developing on their basis an industrial policy for sustainable growth and ensuring the competitiveness of the economy of the Republic of Kazakhstan.

The purpose of the article is to reveal an approach to the formation of a regional industrial policy based on the creation of cluster schemes on the example of the automotive industry in the East Kazakhstan region.

Presentation of the main research material. The term "cluster" comes from the English. cluster (swarm, bunch, pile, accumulation, group). According to the theory of Michael Porter, “a cluster is a group of geographically adjacent interconnected companies (suppliers, manufacturers, etc.) and organizations related to them (educational institutions, government bodies, infrastructure companies) operating in a certain area and complementing each other” [1]. The cluster consists of an industrial and production core and an infrastructure segment that ensures its full-scale operation. The infrastructure segment is a network of diversified institutions providing training of professional personnel, development of innovations, providing financial, information and other services.

In the infrastructure segment, the state plays an important role. The main task of state bodies in the field of cluster policy is to stimulate and support the creation and implementation of cluster initiatives. There are various types of clusters that differ in scale and focus, but in general, there are two main requirements for their creation.

First, the enterprises that are part of the cluster must be interconnected. A distinction is made between vertical links (chains of purchases and sales) and horizontal links (additional products and services, use of similar specialized inputs, technologies or institutions, and other links). Secondly, clusters should unite geographically close groups of interconnected companies. The joint location of companies contributes to the formation and increase of the value-creating advantages resulting from the network of interactions between firms.

In Kazakhstan, to ensure sustainable and balanced economic growth through diversification and increasing its competitiveness, a state program was developed for the accelerated industrial and innovative development of the Republic of Kazakhstan for 2020-2024 [2]. It is based on the principles of focusing on business initiatives, supporting "breakthrough" projects and cluster initiatives in the non-commodity sector. The cluster organization of the national economy provides for the following possible option for the development of clusters in the regions of Kazakhstan:

West Kazakhstan region – clusters associated with deep processing of oil and gas; Southern region – cotton, rice, fruits and vegetables processing, wine-making; East region – interstate cluster of efficient use of coal and clusters for advanced processing of bauxite ore and other types of mineral raw materials; Central Kazakhstan – metallurgical cluster; Almaty – educational, entertaining, financial; Astana – clusters of situational and analytical work.

In the village of Alatau (Almaty region), an information technology cluster is already being created - a technopark. There are projects in the republic for the formation of technoparks in the cities of Stepnogorsk, Priozersk, an agro-industrial park in the village of Shortandy. The possibility of creating a silicon cluster and a cluster for the production of catalysts in Almaty is being explored.

In the Republic of Kazakhstan, one of the most attractive regions in terms of the formation and development of cluster structures is the East Kazakhstan region (EKR). The territory of the region, stretching for 283.3 thousand square meters. km, borders on two regions of the Russian Federation, one region of China and three regions of Kazakhstan.

The region is rich in natural resources. In terms of the richness of the subsoil, it is on a par with the Urals. The main wealth is multicomponent polymetallic ores. The main metals are lead, zinc and copper, by-products are gold, silver, antimony, mercury, cadmium, tungsten, molybdenum, bismuth, thallium, indium, tellurium, niobium and other rare metals. In addition to polymetallic ores, there are deposits of tin, tantalum, titanium, magnesium, nickel and cobalt in the Altai Mountains. Among the manufacturing industry are the largest joint-stock companies: Kazzinc, Ust-Kamenogorsk Titanium and Magnesium Plant, Ulba Metallurgical Plant; association

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"Vostokkazmed" – a branch of the corporation "Kazakhmys".

Eastern Kazakhstan is an industrialized region with a high level of industrial development. The bulk of gross value added is produced in industry. The basic branch of the economy is non-ferrous metallurgy, mechanical engineering and metalworking, energy, forestry and woodworking, light and food industries are also developed.

The results of assessing the level of economic development of the East Kazakhstan region and the performance of all economic entities of the region based on the gross regional product show that the contribution of this region to the country's economy is 5.9% in 2020. In terms of GRP in 2020, the Eastern The Kazakhstan region took the 6th position on the descending scale in the republican volume.

The financial result of large and medium-sized enterprises and organizations of East Kazakhstan region for August 2021 (rate: 1 US dollar - 146.14 tenge in 2021; 1 US dollar - 147.58 tenge in 2020) amounted to 10794.6 million tenge, in In the same period of 2020, a profit was made in the amount of 7199.7 million tenge [6].

The machine-building complex of the region is represented by large enterprises, such as: Asia-Avto CJSC, Vostokmashzavod JSC, Ust-Kamenogorsk Valve Plant JSC, Ust-Kamenogorsk Capacitor Plant JSC, Semipalatinsk Machine Plant JSC, Irtyshtsvetmetremont JSC, Mashzavod LLP, Kazelectromash LLP, Georgievsky Pumping Equipment Plant LLP. They produce cars "Niva", "Skoda", mining and processing equipment, oil and gas fittings, household electric motors and pumps of various modifications, capacitors and other electrical and cable products..

Indicators of socio-economic development of the East Kazakhstan region made it possible to use it as a platform for the development of the automotive industry cluster. Deliveries of Kazakh cars to the countries of Central Asia and the Caucasus can give the country more than $1 billion in additional export earnings per year. Along with loading the capacities of JSC "Asia Auto", which is the only car assembly plant in the Republic, the "Map of industrialization of Kazakhstan for 2020 - 2024" [3] plans to build a full cycle car plant and a technology park for the production of automotive components (components in demand in the secondary market: seats, bumpers, fuel tanks, exhaust systems, lighting, automotive harnesses, glass, tires, batteries, filters).

Over the years of existence of Asia Auto JSC, there has been a steady increase in production and financial indicators. Sales volume as of July 1, 2021 amounted to 7,763,095 thousand tenge, net profit - 697,677 thousand tenge [4]. The high competitiveness of the vehicles produced by the plant compared to foreign-made vehicles is confirmed by the results of sales. According to the results of the first half of the year, 3012 passenger cars were produced in the republic, AZIA AVTO JSC accounted for 2069 cars of KIA, Chevrolet, Lada, Skoda brands. Realization of cars in the territory of the Republic of Kazakhstan is carried out through its own branch network. At present, representative offices of AZIA AVTO JSC are open in all regional centers of the Republic of Kazakhstan.

In June 2020, an agreement was signed between the Government of the Republic of Kazakhstan and Asia-Avto JSC, according to which the company began to create a full cycle car plant. Engineering infrastructure is currently being designed for stamping, welding, painting shops and a technology park for the production of automotive components. The akimat allocated a plot of 95.5 hectares on the left bank of the Irtysh for the construction of a new production facility. This part of Ust-Kamenogorsk today is experiencing a shortage of engineering communications - electricity and water supply, gasification and other networks. By providing the infrastructure for the new auto production, the communal issues of thousands of residents of the surrounding areas will be resolved. In addition, the new automotive industry center will give impetus to housing construction and the socio-economic development of the city - it is planned to build thousands of new apartments for employees of the plant, kindergarten and school.

The project, implemented by JSC "Asia Auto" with the support of the Government of the Republic of Kazakhstan and the Akimat of the East Kazakhstan region, meets the objectives of developing high-tech production with a multiplier effect of one to ten, a high proportion of local content and at the same time stimulates social development and modernization of non-primary industries. The total investment in the project is estimated at $514 million. Reaching the design capacity will require the creation of 12,000 new jobs. The project will provide $68.6 million in annual budget contributions and

export earnings of $1.04 billion. The total GDP growth due to the project implementation will be $1.8 billion annually.

The State Program for 2020-2024 raised the issues of providing qualified human resources for the entire machine-building industry:

1) covering the need for personnel in 16 specialties through training in universities and 19 educational institutions of TVET in Aktobe, Atyrau, East Kazakhstan, Karaganda, Kostanay, Mangystau, Pavlodar regions;

2) construction in 2012 of the Interregional center for training and retraining of personnel for the machine-building industry for 700 student places in Ust-Kamenogorsk [2];

3) introduction of a system of internships at manufacturing enterprises for a period of 3 months with the assignment of individual managers in the field;

4) ensuring co-financing of the program for advanced training of managerial personnel at advanced machine-building enterprises in developed countries.

Conclusions and prospects for further research. At the present stage, the problem of ensuring sustainable growth of the economy of the Republic of Kazakhstan by increasing the competitiveness of manufactured industrial products at the global, national and regional levels becomes paramount. Economic science is faced with the task of developing an industrial policy mechanism, the main goals of which are to ensure sustainable growth rates and increase competitiveness. These goals are met by the methodology for constructing cluster schemes, which, being intersectoral complexes, play the role of "points of growth" of the regional and national economy. Clusters make it possible to overcome structural limitations, as well as the single-industry structure of production that has developed in a number of economic entities.

Prospects for further research are to develop mechanisms to ensure domestic demand for domestic engineering products (through the reimbursement of part of the remuneration on loans, the purchase of automotive equipment for state executive bodies, their territorial bodies and subordinate institutions) and the provision of financial incentives for the promotion of Kazakhstani machinery foreign construction products to the markets of Uzbekistan, Kyrgyzstan, Tajikistan, Turkmenistan, Afghanistan.

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