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SOCIO-ECONOMIC POTENTIAL OF THE NORTHERN DISTRICTS OF THE REPUBLIC OF KARAKALPAKSTAN: A CASE STUDY OF KUNGRAD DISTRICT

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Abstract: This study evaluates the socio-economic potential of the northern districts of the Republic of Karakalpakstan using the Kungrad District as a case study based on economic and statistical analysis. The aim of the research is to assess the economic potential of Kungrad District and identify its priority directions for development. The study employs economic-statistical analysis, comparative analysis, and a systems approach. The findings indicate that the district's economic development is closely associated with industrial production, the gas and chemical industry, investment activity, transport and logistics infrastructure, and agricultural development. In addition, the study substantiates that expanding the cultivation of low water-demand crops, developing desert livestock farming, increasing the number of artificial water reservoirs, and promoting fisheries are important factors for ensuring the sustainable socio-economic development of the region under conditions of water scarcity.

Keywords: Kungrad District, Republic of Karakalpakstan, socio-economic potential, economic and statistical analysis, industry, investment, agriculture, gas and chemical industry, sustainable development.

Introduction

At present, the comprehensive assessment of the socio-economic development of regions and the efficient use of economic resources are among the key prerequisites for sustainable economic development. The northern districts of the Republic of Karakalpakstan differ significantly in terms of natural resources, economic specialization, and investment activity. Therefore, assessing the socio-economic potential of Kungrad District and identifying the factors influencing its development constitute an important scientific task.

Issues related to regional economic development have been extensively studied by both international and national scholars. In particular, Todaro M.P. and Smith S.C. emphasized the importance of economic infrastructure, industrial development, and the efficient use of resources for regional economic growth [4]. Aimbetov N.K., Tleumuratova B.S., and Mambetullaeva S.M. investigated the role of the natural environment and resource potential of the Republic of Karakalpakstan in regional development [5]. Samanov J. examined the significance of mineral and raw material resources in the



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economic development of the Republic of Karakalpakstan [6]. Niyazimbetov M.K. conducted an integrated assessment of the socio-economic development of the region under conditions of environmental change [7]. However, comprehensive studies evaluating the socio-economic potential of Kungrad District based on official statistical data and identifying its economic specialization remain limited.

The aim of this study is to evaluate the socio-economic potential of the northern districts of the Republic of Karakalpakstan, using Kungrad District as a case study, through economic and statistical analysis and to identify the priority directions for the region's development.

Research Methodology

The study employed economic-statistical analysis, comparative analysis, and a systems approach. Official statistical data on industrial production, investment activity, agriculture, the service sector, and demographic indicators of Kungrad District were analyzed using comparative methods [8]. The socio-economic potential of the district was assessed based on key indicators, including industrial output per capita, investment activity, the level of development of the service sector, and the volume of agricultural production.

Results and Discussion

A comprehensive economic analysis of official statistical data revealed significant differences in the level of socio-economic development, the sectoral structure of the economy, and the characteristics of economic specialization among the northern districts of the Republic of Karakalpakstan. The assessment was based on a comparative analysis of key indicators, including industrial production, investment activity, construction, the service sector, agriculture, and foreign trade. The results indicate that regional economic development is directly influenced by the efficient utilization of natural resources, the level of industrial infrastructure development, the investment climate, and the specialization of economic sectors.

During the reporting period, the economy of the Republic of Karakalpakstan maintained a positive growth trend. The increase in industrial production, expansion of investment, growth in construction activities, and development of the service sector contributed to higher economic activity across the region. In particular, industrial modernization, the implementation of investment projects, and government support for small businesses played an important role in ensuring sustainable economic development. At the same time, the analysis demonstrated that the degree of economic specialization differs among districts and that the economic development of each district is determined by its available natural resources and production capacity.

According to the analysis, Kungrad District is one of the economically strongest districts in the northern part of the Republic of Karakalpakstan. The district's economic development is driven by its mineral and raw material resources, the gas and chemical industry, transport and communication infrastructure, and the implementation of large-scale investment projects. These factors have contributed to a steady increase in industrial output and strengthened the district's role in the regional economy.



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In 2024, the volume of industrial production in Kungrad District reached 1,422.8 billion UZS, while the industrial production index amounted to 103.3%. Industrial output per capita reached 10,415.8 thousand UZS. Investments in fixed capital totaled 4,839.3 billion UZS, construction works amounted to 469.9 billion UZS, the volume of services reached 889.9 billion UZS, and the output of agriculture, forestry, and fisheries totaled 965.0 billion UZS. These indicators confirm Kungrad District's position as one of the leading industrial centers of the Republic of Karakalpakstan.

The high share of industrial production is primarily associated with the industrial utilization of the district's abundant natural gas, soda ash, salt, and other mineral resources. The stable operation of enterprises in the gas and chemical industry, chemical production, and mineral processing has not only increased industrial output but also expanded export opportunities. Consequently, these developments have strengthened the competitiveness of the local economy, promoted industrial cooperation, and created favorable conditions for the production of high value-added products.

The high level of investment activity remains one of the key drivers of economic growth in Kungrad District. Investments in fixed capital exceeding 4.8 trillion UZS indicate the continuous implementation of new industrial projects, modernization of production facilities, and improvement of engineering and communication infrastructure. The steady inflow of investment is expected to further increase industrial production and contribute to the structural transformation of the district's economy.

Construction activities, totaling 469.9 billion UZS, reflect the continuous development of the district's economic infrastructure. The construction of new industrial enterprises, transport and communication networks, and social infrastructure has had a positive impact on improving the investment climate, increasing production efficiency, and enhancing the quality of life of the local population.

Positive developments were also observed in the service sector. The total volume of services reached 889.9 billion UZS, indicating the growing importance of transport, logistics, trade, communications, and other service activities within the district's economy. Owing to its strategic location near international transport corridors, Kungrad District possesses favorable conditions for the development of logistics services and the expansion of external economic cooperation.

The output of agriculture, forestry, and fisheries reached 965.0 billion UZS, demonstrating that the agricultural sector also plays an important role in the district's economy. Cotton production, grain cultivation, livestock farming, and other agricultural activities contribute significantly to employment, provide raw materials for the processing industry, and support regional food security.

Conclusion

The findings of this study indicate that the socio-economic development of Kungrad District is closely associated with the efficient utilization of natural resources, the development of industry and the gas and chemical sector, investment activity, transport and logistics infrastructure, and the balanced development of agriculture. The study identifies the deep processing of mineral and agricultural raw materials, the production of

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high value-added products, and the diversification of economic sectors as the main priorities for the district's sustainable development.

Furthermore, the application of economic and statistical analysis proved to be an effective approach for identifying the district's economic specialization, evaluating investment activity, and determining priority areas for the efficient use of local resources. Under conditions of water scarcity and climate change, expanding the cultivation of low water-demand crops, increasing the production of drought-resistant crop varieties, developing desert livestock farming (camel, sheep, goat, and horse breeding), expanding artificial water reservoirs, and promoting fisheries were identified as important priorities for ensuring the sustainable development of the district.

The results of this research have practical significance for improving regional development programs, enhancing investment policy, promoting the rational use of natural resources, and supporting evidence-based management and decision-making.

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