



SPECIFIC FEATURES OF THE LOCATION OF INDUSTRIAL ENTERPRISES IN BUKHARA REGION AND TRENDS IN INDUSTRIAL DEVELOPMENT

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ABSTRACT

This article analyzes the location and development trends of industrial enterprises in Bukhara region, including their regional characteristics, geographical location, resources, infrastructure, and production potential. The sectoral composition, territorial distribution, economic efficiency, and competitiveness of industrial enterprises in Bukhara region are evaluated based on statistical data. In addition, practical recommendations have been developed for the efficient use of the region's industrial potential, eliminating existing problems, and developing industry in the future.

Keywords: Bukhara region, industrial enterprises, territorial location, oil and gas industry, textile industry, construction materials, clusters, industrial zones, diversification, investment projects.

Introduction

Bukhara region is located in the western part of the Republic of Uzbekistan and is one of the important industrial centers of the country. The region is distinguished by its rich natural resources, particularly oil and gas deposits, construction materials raw materials, and agricultural products. Additionally, Bukhara region has a favorable geographical location, transport infrastructure, skilled labor resources, and industrial production traditions [1].

Favorable conditions are being created for the sustainable development of industrial enterprises in the region within the framework of the Decree of the President of the



Republic of Uzbekistan No. PQ-4227 dated March 4, 2019, "On measures to form a modern business environment in Bukhara region and create additional favorable conditions" and the Comprehensive Socio-Economic Development Program of Bukhara region for 2020-2024 [2].

MAIN PART

Bukhara region is one of the leading industrial centers of the Republic of Uzbekistan, accounting for 4.8% of the country's total industrial production in 2023. With this indicator, the region has occupied high positions in the republic [3].

According to the results of 2023, the volume of industrial production in the region amounted to 31.6 trillion soums, showing a growth of 116.2% compared to 2022. The stability of growth rates indicates an increase in the competitiveness and investment attractiveness of industrial enterprises in the region [4].

Table 1 Dynamics of industrial production indicators in Bukhara region (2019-2023 yy)¹

Indicators	2019	2020	2021	2022	2023
Volume of industrial products (trillion soums)	14.8	17.6	20.8	27.2	31.6
Growth rate compared to the previous year (%)	110.5	101.5	100.1	106.0	106.1
Share in the republic's industry (%)	4.6	4.8	4.6	4.9	4.8
Industrial products per capita (million soums)	7.7	9.1	10.6	13.6	15.6

As can be seen from the table above, there is a steady growth in all main indicators of industrial production in Bukhara region. Particularly, the region's industry maintained positive dynamics even during the COVID-19 pandemic.

The industry of Bukhara region, with its sectoral composition, covers important areas of economic development. In the region, the oil and gas extraction and processing industry occupies a leading position and is developing in close connection with the chemical industry. At the same time, the textile and garment-knitting industry in the region is also developing rapidly, playing an important role in increasing export potential.

The food industry, along with meeting the needs of the population, serves to create added value through deep processing of agricultural products. The construction

¹ Compiled by the author based on data from the State Statistics Committee of Bukhara region



materials manufacturing sector plays a key role in supporting large-scale infrastructure projects in the region.

In addition, the machinery and metal processing industry enriches production processes with modern technologies, serving the sustainable development of the economy. The electricity generation and distribution sector ensures the continuous operation of the region's industry and is of strategic importance.

Table 2 Share and growth rates of industrial sectors in Bukhara region²

Industrial sectors	2023		2024	
	Share, %	PVI, %	Share, %	PVI, %
Mining industry and open pit mining	1.4%	107.9%	1.0%	88.5%
Manufacturing industry	94.4%	106.8%	94.4%	107.1%
- Coke and petroleum refining	49.0%	107.3%	39.7%	99.0%
- Textiles, clothing, leather products	21.1%	105.3%	20.8%	109.6%
- Food, beverages, and tobacco	14.4%	108.6%	20.7%	113.4%
- Other non-metallic mineral products	5.0%	111.9%	5.6%	107.9%
- Chemical products, rubber and plastics	2.0%	102.7%	2.7%	137.3%
- Metallurgy	0.2%	85.0%	0.2%	99.0%
Electricity, gas, steam supply and air conditioning	3.6%	93.4%	3.8%	96.2%
Water supply, sewerage, waste utilization	0.6%	105.8%	0.8%	109.2%

As can be seen from the table, the oil and gas sector occupies a leading position (39.2%) in the region's industry. This is associated with the activities of large enterprises such as "Uzbekneftegaz" JSC, "Bukhara Oil Refinery" JSC, and "Shurtan Gas Chemical Complex" [5].

In terms of territorial distribution, industrial enterprises in Bukhara region are unevenly located. The main industrial potential belongs to Kagan city, Bukhara city, Karaulbazar district, Gijduvan district, and Romitan district.

² Compiled by the author based on data from the State Statistics Committee of Bukhara region



Table 3 Industrial production indicators by territories of Bukhara region (2024 y)³

City/district	Volume of industrial production (billion soums)	Share in the region, %	PVI, %	Industrial products per capita (thousand soums)	PVI per capita, %
Karaulbazar	17,637.2	41.7%	105.2%	876,513.5	103.2%
Bukhara city	4,514.1	10.7%	107.4%	26,268.1	105.3%
Gijduvan	2,760.7	6.5%	108.6%	8,234.7	106.7%
Romitan	2,244.5	5.3%	108.4%	8,757.1	105.9%
Jondor	1,998.1	4.7%	110.4%	8,390.9	108.4%
Kogan	1,570.6	3.7%	106.2%	15,180.7	104.8%
Shofirkon	1,353.3	3.2%	106.2%	7,392.0	106.4%
Gijduvan	1,234.7	2.9%	108.6%	8,234.7	106.7%
Karaulbazar	1,207.2	2.9%	98.4%	20,789.9	96.3%
Bukhara district	1,103.0	2.6%	105.5%	6,373.5	104.0%
Kagan city	1,021.8	2.4%	106.2%	13,106.6	104.6%
Vobkent	920.0	2.2%	98.4%	6,704.5	96.3%
Olot	978.1	2.3%	106.8%	5,451.3	105.0%
Peshku	920.0	2.2%	107.7%	8,494.4	105.1%
TOTAL	42,317.3	100%	106.4%	20,537.0	104.7%

As can be seen from the table data, 59% of industrial production falls to Bukhara city, Gijduvan and Karaulbazar districts. Oil and gas, chemical, and machine-building enterprises are located in these areas. Karaulbazar district has the highest volume of industrial production per capita (876.5 million soums), which is explained by the location of the "Bukhara Oil Refinery" [6].

Gijduvan district specializes in textiles, pottery, and construction materials production. Romitan district has developed metal products manufacturing, construction materials, and food industries [7].

The major industrial enterprises operating in Bukhara region are:

- "Bukhara Oil Refinery" JSC
- "Navoiyazot" JSC Bukhara branch
- "Uzbekistan Railways" JSC Bukhara locomotive depot
- "Bukhoroteks" LLC textile cluster
- "Gijduvan potters" group of LLCs
- "Bukhara gold fiber" LLC
- "Kogondontexnika" JSC

³ Compiled by the author based on data from the State Statistics Committee of Bukhara region



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- "Bukhara Airways" state enterprise

In recent years, cluster-based industrial development has been observed in Bukhara region. Particular attention is being paid to creating vertically integrated production chains in textiles, agricultural products processing, and construction materials production [8].

Currently, 8 textile clusters are operating in the region, which produced a total of 18.2 thousand tons of yarn, 45.3 million square meters of fabric, and 12.7 million pieces of garment-knitting products in 2023. These clusters exported products worth \$98.3 million [9].

The location of industrial enterprises in Bukhara region has a number of specific features, and their territorial distribution is determined by factors such as natural resources, transport infrastructure, labor resources, historical industrial centers, and free economic zones.

First of all, the oil and gas industry enterprises in the region have been formed near mineral deposits, especially extraction and processing enterprises in Karaulbazar and Karakul districts rely on the local raw material base. The development of industry in these areas is directly related to the availability of natural resources.

Also, the location of industrial enterprises in places with convenient transport infrastructure is of great importance. The development of industry in Kagan and Bukhara cities is associated with the presence of railway and road junctions, which helps to export products and reduce transportation and logistics costs. Similarly, the location of high-tech and export-oriented industrial enterprises near the "Bukhara Airways" international airport increases the economic attractiveness of the region.

Labor resources also play an important role in the formation of industry in Bukhara region. Textile, food, and construction materials manufacturing enterprises operate in the densely populated districts of Gijduvan, Vobkent, Bukhara, and Romitan. Such location increases the possibility of providing the necessary workforce for production and helps reduce transportation costs.

The location of industrial enterprises in the region is also associated with historical industrial centers. Gijduvan pottery, Bukhara jewelry, and textile production centers are developing based on traditional craftsmanship. In these areas, craftsmanship traditions formed over centuries have given impetus to the development of industry, and the experience of local masters ensures the competitiveness of the industry.



Another important factor influencing the location of industrial enterprises in Bukhara region is the establishment of free economic and industrial zones. The "Bukhara-agro" free economic zone established in 2017, as well as the "Gijduvan" and "Kagan" industrial zones, have created the basis for the formation of new industrial centers in the region. Tax and customs incentives provided in these areas, as well as modern infrastructure facilities, allow for the rapid development of investment projects.

The harmony of these factors serves the sustainable development of industry in Bukhara region, creating wide opportunities for increasing the economic potential of the region and creating new jobs.

The following main trends in industrial development are observed in Bukhara region: Despite the dominance of the oil and gas sector, a process of diversification of industry is observed in the region. Over the past 5 years, the share of textile, food, and pharmaceutical industries has been increasing. In 2023, the share of the oil and gas industry decreased by 6.3% compared to 2019, while textile and food industries increased by 3.2% and 2.1% respectively [10].

Table 4 Dynamics of production of main industrial products in Bukhara region⁴

Industrial products	2023	2024	Difference (+/-)	Change, %
Mining industry				
Sulfur, t.	1,006.0	1,088.7	+82.7	+8.2%
Gypsum, t.	450,694.0	109,245.1	-341,448.9	-75.8%
Services related to oil and natural gas extraction, million soums	275,450.3	195,950.0	-79,500.3	-28.9%
Manufacturing industry				
Fuel oil, thousand t.	55.1	74.9	+19.8	+35.9%
Vegetable oil (refined), t.	19,287.5	13,321.4	-5,966.1	-30.9%
Soft wheat and spelt flour, t.	86,865.0	72,978.0	-13,887.0	-16.0%
Cotton seed, t.	18,461.0	27,069.5	+8,608.5	+46.6%
Cotton fiber, t.	138,046.0	113,208.0	-24,838.0	-18.0%
Electricity, gas, steam supply				
Electricity, million kWh	2,029.0	1,686.4	-342.6	-16.9%
Heat energy, thousand gcal	711.5	684.5	-27.0	-3.8%
Water supply, sewerage				
Wastewater transportation and treatment services, million soums	18,949.8	32,479.4	+13,529.6	+71.4%
Septic tank cleaning services, million soums	422.2	410.3	-11.9	-2.8%

⁴ Compiled by the author based on data from the State Statistics Committee of Bukhara region



Attention is being paid to increasing the share of innovative products and producing high-value-added products in Bukhara region. In 2023, 578 innovative projects were implemented by industrial enterprises in the region, and the volume of innovative products amounted to 2.8 trillion soums. This indicator has increased 3.5 times compared to 2019 [11].

Special attention is being paid to the development of export-oriented industrial production in the region. In 2023, the export of industrial products amounted to \$638.5 million, which is 1.8 times more than in 2019. Textiles (29.7%), chemicals (23.5%), food products (18.3%), and construction materials (12.2%) occupy a leading position in the export structure [12].

Table 5 Implementation of the program for the localization of finished products, components, and materials production in Bukhara region⁵

Indicators	2023	2024	Change
Number of projects, units	132	160	+28 (+21.2%)
Number of enterprises, units	121	148	+27 (+22.3%)
Production volume, billion soums	4,910.8	7,677.3	+2,766.5 (+56.3%)
Localized products exported, million USD	54.0	39.8	-14.2 (-26.3%)
New jobs created, units	274	840	+566 (+206.6%)

As of 2023, 6 industrial zones are operating in Bukhara region: "Gijduvan", "Kagan", "Bukhara", "Jondor", "Romitan", and "Karakul". A total of 245 projects have been implemented in these zones, 3.7 billion dollars of investments have been utilized, and 15.4 thousand jobs have been created [13].

Table 6 Activity of industrial zones in Bukhara region (2023 y)⁶

Industrial zone	Year established	Number of projects	Volume of investments (million \$)	Jobs created	Production volume (billion soums)
"Gijduvan"	2017	62	920	4,350	1,250
"Kagan"	2018	47	870	3,680	980
"Bukhara"	2019	52	780	3,120	860
"Jondor"	2020	34	520	1,870	540
"Romitan"	2021	28	380	1,420	420
"Karakul"	2022	22	230	960	280
Total:	-	245	3,700	15,400	4,330

⁵ Compiled by the author based on data from the State Statistics Committee of Bukhara region

⁶ Compiled by the author based on data from the Main Department of Economic Development and Poverty Reduction of Bukhara region



There are a number of problems in the process of industrial development in Bukhara region, characterized by territorial imbalance, lack of diversification in the industrial structure, low energy efficiency, shortage of qualified personnel, and weak innovative activity. In particular, the concentration of industrial enterprises mainly in Bukhara city, Kagan and Karaulbazar districts, and the low volume of production in some districts are among the important problems. Also, the industry of the region is highly dependent on the oil and gas sector, and the insufficient development of other sectors has a negative impact on the stability of the sector.

In order to eliminate these problems, promising directions for modernization and diversification of industry in the region have been determined. In particular, for the deepening of the oil and gas industry, the "Bukhara Oil Refinery" is being modernized, increasing the production of high-value-added petrochemical products. In the textile industry, through the organization of new clusters, 210 million dollars of investment will be attracted, creating thousands of jobs.

In addition, 18 projects in the field of agricultural products processing are planned to be implemented, resulting in the creation of more than 3,200 jobs. Within the framework of development of the construction materials industry, new cement plants and ceramic tile production enterprises will be established, delivering millions of tons of products annually.

Also, large production clusters are being organized in Kagan, Romitan, and Bukhara cities in the machinery and metal processing industry. The pharmaceutical industry is being developed in the "Bukhara-pharm" free economic zone, establishing the production of medications and medical products.

For the innovative development of Bukhara region's industry, the "Bukhara-innovation" technopark is being established, which envisages the production of high-tech products and the implementation of 45 innovative projects. These measures are expected to give a great impetus to economic growth through diversification of the region's industry, increasing production efficiency, and introducing innovative technologies.

CONCLUSION

Bukhara region is one of the important industrial centers of the Republic of Uzbekistan, and the region's industry is distinguished by its multi-sectoral composition, export potential, and high investment attractiveness. The basis of the



region's industry is formed by the oil and gas, chemical, textile, food, and construction materials sectors.

The location of industrial enterprises in Bukhara region is being shaped under the influence of factors such as natural resources, transport infrastructure, labor resources, historical industrial centers, and industrial zones created by the state. Industrial production in the region is mainly concentrated in Kagan city, Bukhara city, Karaulbazar, Gijduvan, and Romitan districts, where large oil and gas, chemical, and textile enterprises are located.

In recent years, the following trends have been observed in the development of the region's industry: diversification of production, increasing innovative activity, increasing export potential, attracting new investments, and developing industrial zones. At the same time, there are also problems such as uneven territorial location of industrial enterprises, high dependence on the oil and gas sector, high levels of energy and raw material consumption, and shortage of qualified personnel.

A number of important measures need to be implemented for further development of industry in Bukhara region. First of all, it is important to develop industrial production proportionally in all districts of the region and eliminate territorial imbalances. At the same time, it is necessary to increase the share of high-value-added products through diversification of the industrial structure.

The widespread introduction of modern technologies serves to increase the efficiency of industry. In particular, accelerating the digital transformation of the economy and implementing Industry 4.0 technologies enable the automation of production processes, as well as more rational use of resources.

In order to increase export volume, special attention should be paid to deep processing of local raw materials. Along with this, the widespread introduction of the cluster approach and the formation of vertically integrated production chains contribute to the more efficient development of industry.

Increasing the energy and resource efficiency of industrial enterprises and implementing the principles of the "green economy" help ensure ecological sustainability, as well as reduce production costs. All of these are inextricably linked with increasing the potential of local personnel and strengthening the integration between educational institutions and industrial enterprises.



This comprehensive approach serves to further increase the industrial potential of Bukhara region, ensure employment of the population through the creation of new jobs, and sustainable development of the regional economy.

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