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CONTACTS

Phone: **+998 50 737 87 88**

Website: <https://ist-journal.uz>

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SPECIFIC ASPECTS OF ENHANCING INDUSTRIAL PRODUCTION COMPETITIVENESS

Olimov Maksudjon Komiljon ugli

Associate Professor, PhD

Tashkent State University of Economics

E-mail: m.olimov@tsue.uz

ORCID: 0000-0002-2620-7048

Habibullayev Oybek Asliddin ugli

PhD Researcher

Tashkent State University of Economics

E-mail: oybek27091996@gmail.com

ORCID: 0009-0007-9409-3760

Abstract. The specific aspects of enhancing the competitiveness of industrial production are examined. The key factors contributing to increased competitiveness in industrial production are identified and analyzed. In addition, the main indicators characterizing the development of the industrial sector of the Republic of Uzbekistan are analyzed.

Keywords: competitiveness, production, industry, industrial products, industrial structure, innovation, modernization.

Annotatsiya. Sanoat ishlab chiqarishi raqobatbardoshligini oshirishning o'ziga xos jihatlari yoritilgan. Sanoat ishlab chiqarishi raqobatbardoshligini oshirishga ta'sir etuvchi asosiy omillar o'rganilgan va tahlil qilingan. Shuningdek, O'zbekiston Respublikasi sanoat tarmog'ining rivojlanishini tavsiflovchi asosiy ko'rsatkichlar tahlil qilingan.

Kalit so'zlar: raqobatbardoshlik, ishlab chiqarish, sanoat, sanoat mahsulotlari, sanoat tuzilmasi, innovatsiya, modernizatsiya.

Аннотация. Рассмотрены специфические аспекты повышения конкурентоспособности промышленного производства. Исследованы и проанализированы основные факторы, способствующие повышению конкурентоспособности промышленного производства. Кроме того, проанализированы основные показатели, характеризующие развитие промышленного сектора Республики Узбекистан.

Ключевые слова: конкурентоспособность, производство, промышленность, промышленная продукция, структура промышленности, инновации, модернизация.

INTRODUCTION

The acceleration of globalization processes in the world economy, the intensification of competition in international markets, and the changing demands of consumers require enterprises to ensure the competitiveness of their products. For industrial enterprises, in particular, the production of competitive products is not only a key factor in increasing corporate profits but also an important condition for ensuring sustainable national economic development.

Competition involves the actions of two or more participants striving to surpass one another in a specific activity or market. It entails rivalry among these participants, with each attempting to succeed by capturing a larger market share, achieving higher profits, or offering superior products or services to customers. Healthy competition fosters innovation and efficiency and leads to the provision of higher-quality products or services.

Competitiveness refers to the ability of an enterprise, industry, or country to compete in a specific market or sector. It is the capacity to produce goods or services that satisfy consumers while generating sustainable profits over time. Competitiveness is influenced by a range of factors, such as resource utilization, technology, a skilled workforce, infrastructure, and institutional frameworks.

Competitiveness is the result of effective competition. Effective competition among firms within an industry often leads to increased overall competitiveness in that industry or market. When firms compete vigorously, they are driven to innovate, optimize operations, and offer better products or services to consumers.

The competitiveness of industrial products is determined by product quality indicators, price, technological level, innovative characteristics, and the ability to satisfy consumer needs. Issues related to the evaluation and study of competitiveness represent one of the important scientific directions in economics and have been widely researched by both domestic and foreign scholars.

LITERATURE REVIEW

A number of research studies have been conducted in foreign countries regarding ways to enhance the competitiveness of pharmaceutical enterprises amidst intense competition. In particular, the scholarly works of figures such as R. Nelson, B. Lundvall¹, M. Porter², B. Richman³, J. Love, T. Hubbard⁴, H.R. Rasekh, and H. Xiong are of particular significance in this regard.

Issues regarding the enhancement of the competitiveness of industrial enterprises in Uzbekistan are reflected in the scholarly work of researchers such as I. Khotamov⁵, R. Khasanov⁶, A. Ortikov⁷ can be particularly recognized. Their research addresses topics such as the effective use of marketing strategies to boost competitiveness, the financing of sectoral activities, the management of innovation processes, and the improvement of investment attractiveness.

RESEARCH METHODOLOGY

The methodological basis of the research is a systematic approach, which made it possible to study the research problem in detail. In the process of this research, general scientific and special research methods were used, including dialectical methods, methods of economic process analysis, and comparative and statistical analysis methods.

ANALYSIS AND RESULTS

Competitiveness, as an economic category, reflects the degree of superiority of a product compared to similar products available on the market. This concept is primarily assessed from the consumer's perspective.

In turn, enhancing industrial production competitiveness depends on a number of crucial factors (Figure 1).

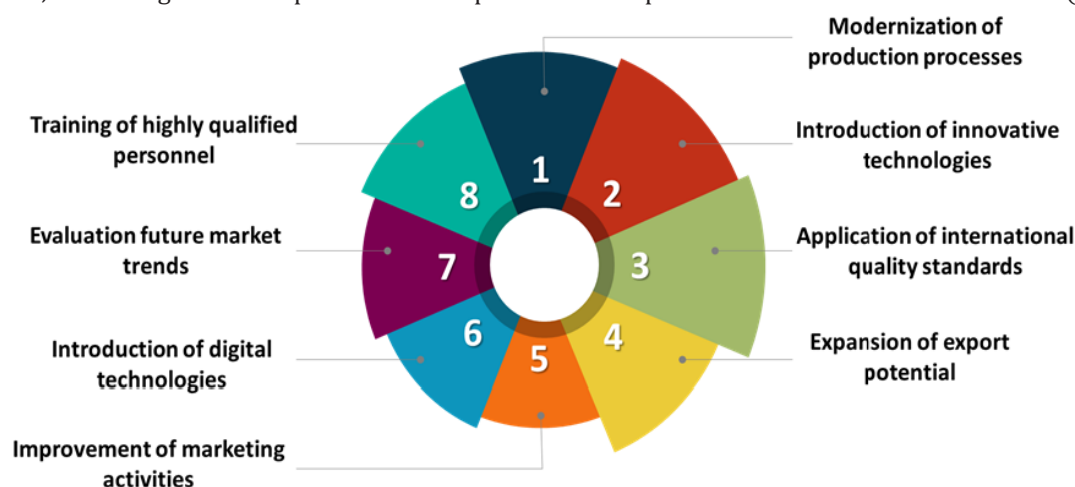


Figure 1. Main Factors in Enhancing Industrial Production Competitiveness⁸

- 1 Lundvall, B.Å., and Nielsen, P. (2007). "Competition and transformation in the learning economy: Illustrations from the perspective of Danish and Norwegian innovation policy" *Industry and Innovation*, vol. 14, no. 3, pp. 253-277.
- 2 McGraw-Hill. Porter, Michael E. *Competitive Advantage of Nations: Creating and Sustaining Superior Performance*. Great Britain: Free Press, 2011.
- 4 McGraw-Hill. Porter, Michael E. *Competitive Advantage of Nations: Creating and Sustaining Superior Performance*. Great Britain: Free Press, 2011.
- 5 Barak Richman. (2006). "Competition Policy and the Pharmaceutical Industry: The European and American Approaches Compared." *International Journal of the Economics of Business*, 13(2), 161-177.
- 6 James Love and Tim Hubbard. (2014). "Competition Policy, Innovation, and Access to Medicines." *Health Affairs*, 33(8), 1468-1477.
- 7 Rajabov Nazirjon, Khayrilla Kurbonov, Shaturaev Jakhongir, Khotamov Ibodullo, Adilova Marguba, and Qalandarova Gulshoda. *Econometric Analysis of Economic and Ecological Aspects of Sustainable Development of Regions in Terms of Digital Economy*. ©TheAuthor(s), under exclusive license to Springer Nature Switzerland AG 2024 Y. Koucheryavy and A. Aziz (Eds.): NEW2AN/ruSMART 2023, LNCS 14543, pp. 152–165, 2024. https://doi.org/10.1007/978-3-031-60997-8_14 https://link.springer.com/chapter/10.1007/978-3-031-60997-8_14
- 8 R. Khasanov, X. Asatullaev, A. Suvonkulov, Kh. Khakimov (2017). *Real sector economy and its forecasting*. Handbook. T.: "Iqtisod-Moliya".

As shown in the figure above, enhancing the competitiveness of industrial production is achieved through a series of important measures.

In this context, it is appropriate first to assess the country's industrial potential by analyzing the volume and composition of its industrial production.

Uzbekistan is a rapidly developing country. This sector of the economy employs more than one million workers and accounts for 40% of production. The sector's share in the formation of the country's gross domestic product is 35%.

The leading industries include cotton ginning, machine building, textiles, gas, precious metals, electronics, tool making, oil refining, automotive production, and agricultural product processing. Other sectors, including the chemical and petrochemical industries, energy, metallurgy, construction materials, and light industry, are also developing rapidly.

Table 1
Main Indicators of Industry in the Republic of Uzbekistan⁹

Indicators	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Industrial production volume, bln soums	111869.4	148816.0	235340.7	322535.8	368740.2	456056.1	553265.0	658991.7	880198.5	1101130.8
Index of physical volume of industrial production, % compared to the previous year	105.4	105.2	110.8	105.0	100.9	108.8	105.3	106.3	106.5	106.8

Considering the statistics for the last ten years, in 2025, enterprises of the republic produced industrial products worth more than 1 quadrillion soums. The physical volume index of industrial production was 106.8%. The industry accounting for the largest share in the structure of industrial production represented 82% of total industrial production.

Table 2
Growth Rates of Industrial Production by Main Types of Economic Activity¹⁰

Indicators	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Index of physical volume of industrial production, %	105.4	105.2	110.8	105.0	100.9	108.8	105.3	106.3	106.5	106.8
Mining and open-pit operations	100.8	117.6	126.5	99.4	78.0	110.8	101.9	99.5	103.9	104.7
Manufacturing industry	106.7	104.2	107.9	106.6	107.9	108.3	105.4	107.4	107.0	107.8
Electricity, gas, steam supply, and air conditioning	103.6	95.5	103.1	105.1	106.8	111.8	113.5	109.5	105.7	106.3

The growth in the physical volume of total industrial production was supported by changes across the main types of economic activity. In particular, the physical volume index amounted to 104.7% in mining and open-pit operations, 107.8% in the manufacturing industry, and 106.3% in electricity, gas, steam supply, and air conditioning.

Industrial production in the region contributes to increasing income levels. The creation of employment opportunities leads to an increase in household income, which helps improve the standard of living of citizens and families. An increase in income levels also leads to an increase in consumer spending, which helps stimulate economic growth. Another significant benefit of industrial production is the development of infrastructure in the region. Industrial growth requires infrastructure development, such as roads, airports, and ports, which helps improve the overall connectivity of the region. The development of infrastructure not only supports industrial growth but also helps improve the quality of life of the region's population. Industrial production also contributes to the development of skilled personnel in the region. Industrial growth requires a range of skills and experience,

⁹ A. Ortikov, M. Isakov (2019). Industrial economy. Handbook. T.: "Iqtisodiyot".

¹⁰ Prepared by author based on the data of National statistics committee of the Republic of Uzbekistan

leading to the development of a skilled workforce. Developing a skilled workforce can help attract new industries to a region, as companies are more likely to invest in areas with a skilled workforce.

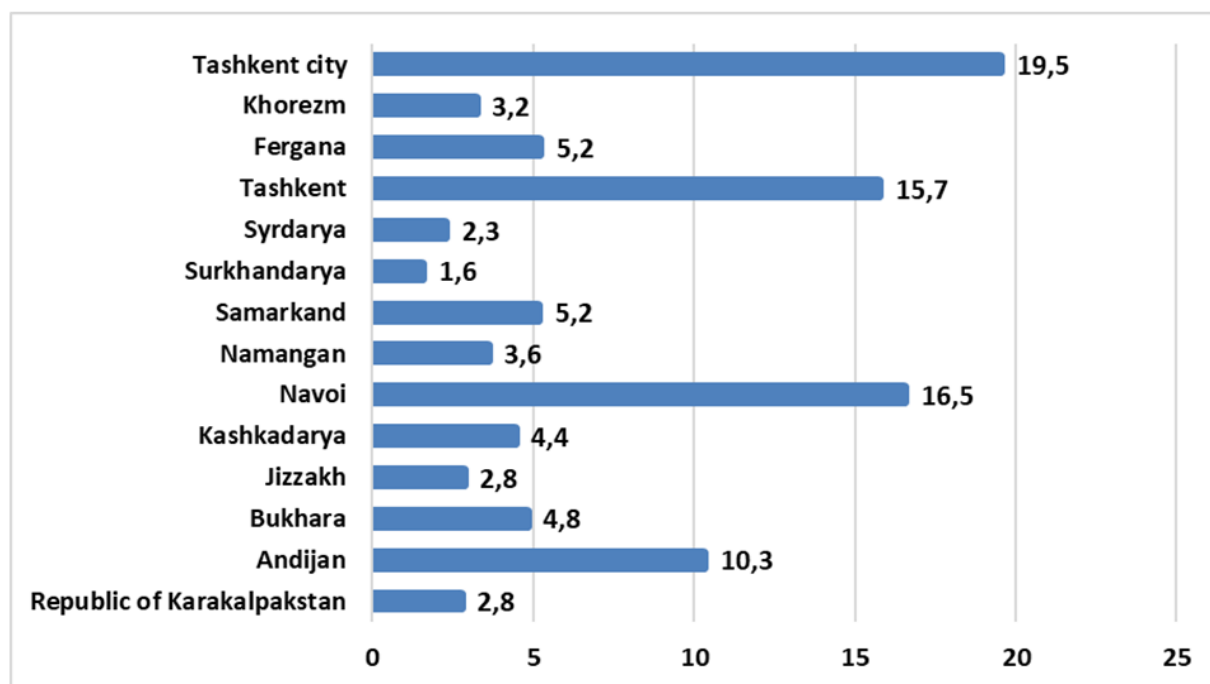


Figure 2. The Share of Regions in the Structure of the Republic's Industrial Production, %, 2024¹¹

In 2024, Tashkent city (19.5%), Navoi region (16.5%), Tashkent region (15.7%), and Andijan region (10.3%) accounted for the largest shares in the production of industrial products in the republic. Syrdarya region (2.3%) and Surkhandarya region (1.6%) accounted for relatively smaller shares in the republic's industrial output.

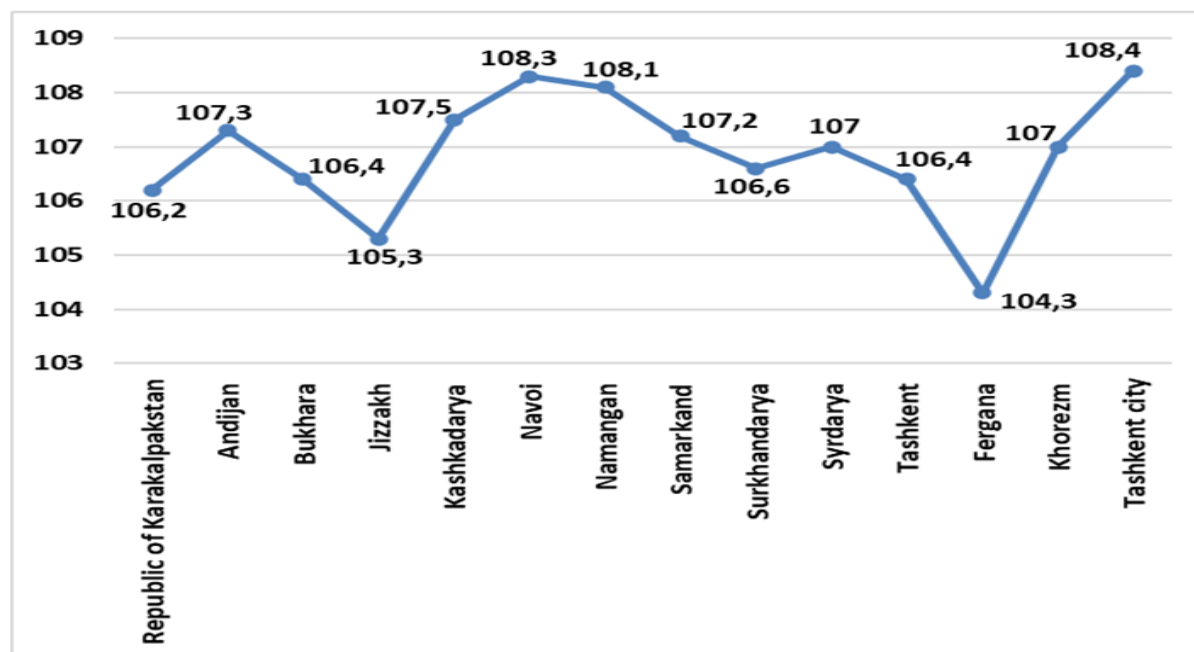


Figure 3. Growth Rates of Industrial Production by Region in 2024 (% Compared to the Previous Year)¹²

The consistent implementation of measures to increase the industrial potential of the regions has contributed

¹¹ Prepared by author based on the data of National statistics committee of the Republic of Uzbekistan

¹² Prepared by author based on the data of National statistics committee of the Republic of Uzbekistan

to steady growth in industrial production across most regions of the republic. In particular, the regions with relatively high industrial production growth rates in 2024 were Tashkent city – 108.4%, Navoi region – 108.3%, and Namangan region – 108.1%. In Fergana region, the growth rate amounted to 104.3%.

In addition to economic benefits, industrial production also contributes to social development in the region. Industrial growth contributes to the development of social amenities such as schools, hospitals, and community centers, which help improve the overall quality of life of residents. Industrial production can foster innovation by stimulating research and development and creating opportunities for collaboration among businesses, universities, and academic institutions. This can lead to the development of new products and technologies, which can further support regional development. Industrial production can also support the development of industrial clusters, which can create synergies among enterprises and facilitate the growth of related industries. This can lead to increased competitiveness and innovation and further support regional development.

CONCLUSION AND RECOMMENDATIONS

The competitiveness of industrial products is an important economic indicator that determines the successful operation of enterprises under market conditions. Product quality, price, innovative characteristics, and marketing strategies are the main factors shaping competitiveness.

According to the research findings, one of the key factors in ensuring sustainable economic development in Uzbekistan is increasing industrial production while simultaneously stimulating investment processes and adopting technological innovations.

In order to effectively implement the programs adopted for the sustainable development of the country's economy and to develop and improve mechanisms for enhancing the competitiveness of industrial production, we consider it appropriate to implement the following measures:

Embrace Technological Advancements. The integration of cutting-edge technologies, including automation, robotics, and artificial intelligence (AI), into manufacturing processes can significantly increase efficiency and output. These advancements enable manufacturers not only to accelerate production processes but also to ensure the consistent delivery of high-quality products.

Lean Manufacturing Principles. Lean manufacturing principles focus on achieving greater efficiency with fewer resources. This methodological approach to manufacturing focuses on eliminating unnecessary processes, reducing waste, and making operations more agile.

Strengthen Supply Chain Resilience. Enhancing supply chain resilience involves strategic planning and proactive management to mitigate risks and adapt swiftly to disruptions. A key strategy is the diversification of the supplier base.

Focus on Quality and Compliance. High-quality products that meet or exceed regulatory standards can significantly strengthen a manufacturer's market position, creating a strong brand identity associated with trust and reliability.

Cultivate a Skilled Workforce. Investing in the continuous training and development of employees is a cornerstone strategy for manufacturers seeking to strengthen their competitiveness.

The essence of the state's medium-term economic policy lies in strengthening the country's industrial potential to stimulate economically efficient and competitive production and to create a foundation for implementing social programs and state functions in the social sphere. The country's economic growth and social stability are directly linked to enhancing the competitiveness of economic entities within market relations, improving social protection and the population's well-being, and financing priority areas for the development of scientific, technological, and industrial capabilities, all of which contribute to ensuring the republic's sustainable economic development.

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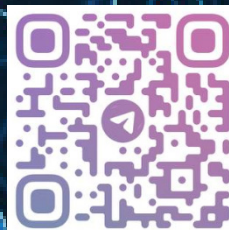
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