

**TRENDS AND PROSPECTS FOR THE DEVELOPMENT OF LIGHT INDUSTRY
IN KAZAKHSTAN: ANALYSIS AND CHALLENGES
ON THE PATH OF MODERNIZATION***

**ТЕНДЕНЦИИ И ПЕРСПЕКТИВЫ РАЗВИТИЯ ЛЕГКОЙ ПРОМЫШЛЕННОСТИ
В КАЗАХСТАНЕ: АНАЛИЗ И ВЫЗОВЫ НА ПУТИ МОДЕРНИЗАЦИИ**

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The light industry of Kazakhstan plays a key role in the country's economy, producing a wide range of goods from textiles and footwear to food products. Despite positive development trends, the light industry of Kazakhstan faces a number of challenges, including competition in the global market and the need for additional investment in innovation. The article carried out a SWOT analysis of the light industry of Kazakhstan, where its strengths and weaknesses were identified. Strengths include rich resources, significant stocks of cotton, wool and leather, location between Europe and Asia facilitating export opportunities and integration into international supply chains. Growing demand for high-quality domestic goods in the domestic market stimulates the development of the industry. The light industry of Kazakhstan still experiences a shortage of modern technologies and equipment, which limits productivity and product quality. The industry lacks highly qualified specialists, which complicates the implementation of innovations and improving product quality. Modernization of the light industry is a key factor in increasing its competitiveness and sustainable development in the global economy.

Легкая промышленность Казахстана играет ключевую роль в экономике страны, обеспечивая производство широкого спектра товаров от текстиля и обуви до пищевой продукции. Несмотря на положительные тенденции развития легкая промышленность Казахстана сталкивается с рядом вызовов, включая конкуренцию на мировом рынке и необходимость дополнительных инвестиций в инновации. В статье проведен SWOT-анализ легкой индустрии Казахстана, где выявлены ее слабые и сильные стороны. Сильными сторонами являются богатые ресурсы, наличие значительных запасов хлопка, шерсти и кожи, расположение между Европой и Азией способствует экспортным возможностям и интеграции в международные цепочки поставок. Растущий спрос на высококачественные отечественные товары на внутреннем рынке стимулирует развитие отрасли. Легкая промышленность Казахстана по-прежнему испытывает дефицит современных технологий и оборудования, что ограничивает производительность и качество продукции. В отрасли

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ощущается нехватка высококвалифицированных специалистов, что затрудняет внедрение инноваций и повышение качества продукции. Модернизация легкой промышленности является ключевым фактором повышения ее конкурентоспособности и устойчивого развития в мировой экономике.

Keywords: light industry, leather industry, analysis, perspectives, Kazakhstan.

Ключевые слова: легкая промышленность, кожевенная промышленность, анализ, перспективы, Казахстан.

Introduction

Many scientists in this direction are engaged in the development of light industry. So, in the research of Aimen A., and others. [1] modern trends in the development of light industry in Kazakhstan, features of integration of production processes and the influence of macroeconomic factors on the development of the industry are considered. Analysis of current challenges was carried out and strategies were proposed for the modernization of light industry based on digitalization and integration of production. In the scientific work of Dikhanbaeva D. [2], a detailed analysis of the development of small and medium-sized enterprises of the textile industry of Kazakhstan in the conditions of industry 4.0 was carried out. The issues of introducing modern technologies and digital solutions to increase the efficiency and competitiveness of enterprises are considered. In the research of Nurlanova N, Omarova A. [3], regional features of the location of light industry enterprises in Kazakhstan are considered. Factors affecting the development of production infrastructure and the distribution of industrial facilities by region are analyzed. Muratova R. [4] in her study analyzes the prospects for the development of light industry in Kazakhstan from the point of view of strategic planning. The main challenges, such as lack of investment and qualified personnel, are considered, and ways to overcome them are proposed. Also, the authors Abdrakhmanov A., Shakirova A. [5] describe the current state of Kazakhstan's light industry and analyze the prospects for its development. Economic and technological trends affecting the growth of the industry are considered, and measures are proposed to

modernize it. These works offer a versatile analysis and present the view of various authors on the development and modernization of light industry in Kazakhstan, as well as on the challenges facing the industry.

The light industry of Kazakhstan consists of shoe, textile, food and many other industries that are associated with the production of consumer goods. To date, innovative and technological aspects also play an important role, for example, the use of modern technologies in the production and development of e-commerce [6].

Kazakhstan's economic strategy, focused on diversification, pushes the development of light industry. This sector contributes to the reduction of dependence on raw materials and the creation of new jobs. In recent years, the introduction of modern technologies in the light industry of Kazakhstan has been observed. Automation of production, the use of artificial intelligence and digital technologies helps improve the efficiency and quality of products. Despite the positive trends, there are challenges. These include competition in the global market, the need to improve product quality, as well as issues of production stability and energy consumption [7]. State programs and investments are aimed at supporting the development of light industry. This includes financial support, personnel training, and assistance in promoting products on the global market.

The prospects for the development of light industry in Kazakhstan are connected with the diversification of the product range, the introduction of environmentally friendly technologies, the development of high-tech industries,

as well as the strengthening of positions in world markets [8, 9]. It should be noted that light industry in Kazakhstan is going through a period of active development, and thanks to state support, the introduction of modern technologies and a diversification strategy, it can become an important incentive for economic growth and increasing the country's competitiveness on a global scale.

Methodology

The theoretical and methodological basis of the study is the scientific works of domestic and foreign scientists, regulatory documents of the Republic of Kazakhstan, decisions and decisions of the Government on industrial policy issues. The work used statistical materials of the Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan, reporting data on individual enterprises of the Turkestan region. In the process of research, in the development of organizational, economic, methodological materials and provisions, general scientific methods and principles of cognition, traditional methods of economic analysis were used: logical and system-structural analysis and synthesis, classification and typology, as well as economic and mathematical statistical methods of data processing and modeling, expert method.

Results and discussion

Light industry is an important export segment for Kazakhstan. The country actively participates in international trade relations, exporting its products to various regions of the world. This contributes to strengthening Kazakhstan's position in the world market and provides additional sources of income [10].

After studying the material on the development of light industry in the regions of Kazakhstan and analyzing the development trends, we considered the volume of production of light industry in Kazakhstan for the period 2010-2021 (Fig. 1)

The fig. 1 shows that the volume of production of light industry in Kazakhstan has a positive trend from 2010 to 2021. Thus, the volume of production of light industry increased from 34,23 billion KZT to 129,16 billion KZT or growth amounted to 55%, the

volume of production in 2022 also increased - by 460 million tenge compared to 2021 [11].

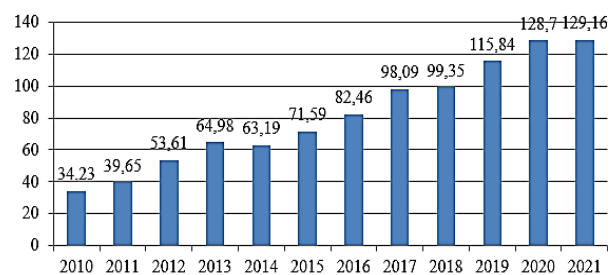


Fig. 1

Light industry as an industry is a collection of enterprises that produce goods that compete with each other and meet similar needs. The need for light industry products is constantly growing. Buyers increasingly prefer high-quality goods, although in the recent past the price determining when choosing products was. The indicators of production concentration (the company's share in the total production of goods of one group) and market concentration (the share of enterprises in the volume of production dominant in the market of this industry) as well as indicators of industry supply and industry demand are used. The industry involves free entry and exit.

Entry into the industry is determined by extracting more than normal economic profits. Leaving the industry is determined by profit-making below normal. Light industry represents a powerful diversified complex, both for the production of consumer goods and industrial goods. Light industry carries out both primary processing of raw materials and production of finished products.

In the material, we considered the volume of light industry production, for a detail analysis of light industry, it is necessary to study the share of light industry in the total production volume in Kazakhstan (Fig. 2).

Fig. 2 shows that light industry's share of total output is positive from 2010 to 2021, or growth was 0.24 during the period under review. Also, growth dynamics is observed from 2019 to 2021. It should be noted that in 2011 the share of light industry has the lowest share of the analyzed period [12].

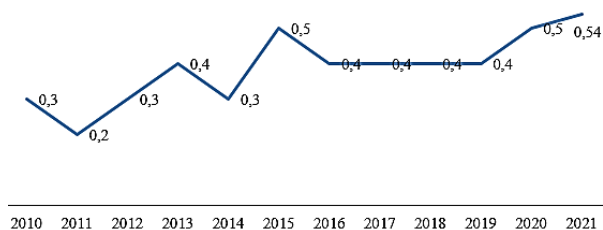


Fig. 2

Light industry products intended for industrial purposes are used in other industries in the form of raw materials and auxiliary materials (in furniture, aviation, automobile, chemical, electrical, food, etc.). A wide range of production, technical and strategic products meets the needs of law enforcement agencies and departments in clothing property, in related products for military equipment, in technical textiles and personal protective equipment against extreme and man-made environmental impacts, industrial injuries, and fires. The industry produces over 40% of all non-food products. Industry enterprises are located in almost every country and region, and the scales of production provide not only the needs of the region, but, as a rule, are exported outside it. Depending on the structure of the economy of each country, about 10% of the total industrial and production potential of industry and up to 5% of the cost of fixed capital are concentrated in industry enterprises. The share of light industry in the GDP of developed countries began to decline from the mid-1980s due to the movement of production to countries with cheap labor (India, China, Bangladesh, Pakistan and others). The size of light industry enterprises is usually small and does not require so much energy and water as metallurgical production, which allows them to be placed in areas without large energy, water and other resources [13].

Light industry is connected with many related industries and serves the entire national economic complex. The main feature of the light industry is a fairly quick return of funds invested in production, and a quick change in the range of products that are produced, with “minimal” costs.

Light industry as a branch of the economy is directly involved in the formation of state budgets. It unites a large number of industries,

among the main ones can be distinguished such as sewing, shoe, textile, leather, fur. The largest share in the structure of light industry is occupied by the products of the garment and textile industries.

Light industry is investment-attractive, as investments pay off quickly, thanks to:

- Rapid return of invested funds, which allows efficient use of borrowed and subsidized funds due to rapid turnover (3-4 times a year).

- Insignificant terms of production and sale of products;

- High mobility of production and technological capabilities of enterprises, which makes it possible to carry out a quick change in the range of products in case of market changes related to seasonal changes in demand and fashion, without reducing production volumes and, accordingly, sales volumes, without reducing tax deductions;

- Availability of local raw materials (wool, flax, leather);

- Potential Sales Area Capacity.

The efficiency of the industry depends on the rational placement of its enterprises. Light industry is characterized by a less pronounced territorial specialization compared to other industries, since almost every region has certain enterprises. Often, light industries are complementary to the economic complex of the regions, providing only the internal needs of the regions.

For example, the global textile industry has five main regions: East Asia, South Asia, the CIS, foreign Europe and the United States. In each of them, the production of cotton fabrics and fabrics from chemical fibers prevails, while the rest of the industries (woolen, linen, silk) are less important. Among the world leaders in the production of fabrics as part of the leading five are China, India, Russia, USA, and Japan [14].

The factors for the location of light industry enterprises in the world are diverse, but the main ones include:

- Raw material factor, which mainly affects the location of enterprises for primary processing of raw materials (for example, flax processing factories are located in the areas of flax production, woolen washing enterprises - in the areas of sheep breeding, enterprises for

primary processing of leather near large meat processing plants). Light industries, as a rule, do not need significant one-time supplies of raw materials, so there is no need to place enterprises near railway highways. This reduces the outflow of population from villages due to the constant decline in agricultural employment. In addition, most of the supplies of raw materials and transportation of finished products can be carried out by road, which corresponds to the trend of expanding the road network:

- Consumer factor, since finished products of light industry are less transportable compared to semi-finished products. For example, it is cheaper to supply pressed raw cotton than cotton fabrics.

- Factor of labor resources, providing for their significant size and qualification, since all sectors of light industry is labor-intensive. Historically, the light industry uses mainly women's labor, so it is necessary to take into account the possibilities of using both women's and men's labor in the regions.

- Green light industry - in general, the industry is environmentally friendly, since the source of energy is mainly electricity, and harmful waste and atmospheric pollution are minimal. Therefore, industry enterprises are often located near residential areas, thus providing ready-made jobs in the immediate vicinity of workers' housing [15].

For a deeper analysis, it is necessary to study the volume of investments aimed at the development of light industry in Kazakhstan. The figure shows the volume of investments in the country's light industry over the past 11 years, that is, from 2010 to 2021 (Fig. 3).

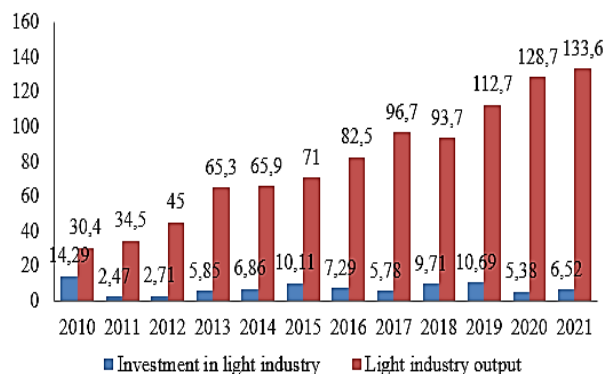


Fig. 3

It follows from Fig. 3 that the volume of investments in light industry in 2010 amounted to 14, 29 billion KZT, but in 2021 the volume of investments in this industry decreased by 8 billion KZT or 2,2 times during the analyzed period. It should be noted that the decrease in investment in the industry did not affect the development of light industry and the volume of production [16]. Thus, the volume of production is increased by 23% during the period under review.

For a detailed analysis of the development of light industry in Kazakhstan, the SWOT analysis method is applicable to identify the weaknesses and strengths of light industry (Table 1).

Table 1

Strengths	Weaknesses
<ul style="list-style-type: none"> - rich raw material resources; - geographical location; - government support; - domestic market development. 	<ul style="list-style-type: none"> - lack of modern technology; - lack of qualified personnel; - high production costs; - limited opportunities for research and development.
Opportunities	Threats
<ul style="list-style-type: none"> - growth of export opportunities; - integration with neighboring markets; - development of ecotechnologies; - digitalization of production. 	<ul style="list-style-type: none"> - competition with foreign manufacturers; - economic instability; - environmental and regulatory requirements; - lack of investment.

It follows from table 1 that the strengths are the country's rich resources, that Kazakhstan has significant reserves of cotton, wool and leather, which ensures a stable supply for the textile and leather industries. The strategic location between Europe and Asia promotes export opportunities and integration into international supply chains. The growing demand for high-quality domestic goods in the domestic market stimulates the development of the industry. Light industry in Kazakhstan is still experiencing a shortage of modern technologies and equipment, which limits productivity and product quality. There is a shortage of highly qualified specialists in the industry, which makes it difficult to introduce innovations and improve product quality. It

should be noted that production costs remain high due to the relatively low level of automation and high energy costs. At the same time, there are a number of threats affecting the development of light industry. For example, cheap imports from China and other countries create strong competition for local producers. Economic instability implies that fluctuations in prices for raw materials and energy resources can negatively affect the cost of production and the competitiveness of the industry.

Thus, Kazakhstan's light industry has significant potential for development given its abundant natural resources and growing domestic market. However, to realize this potential, it is necessary to overcome a number of challenges, such as the modernization of production facilities, advanced training of personnel and the development of export potential. Successful integration of modern technologies and sustainable development can help Kazakhstan become a significant player in the international arena of light industry [17].

Modernization of light industry is a key factor for improving its competitiveness and sustainable development in the global economy. In this regard, it is necessary to analyze the ways of modernization that can be applied in Kazakhstan. Modernization in light industry can be achieved through the introduction of advanced technologies, digitalization, improving the availability of financing, human development, the development of logistics infrastructure, etc. (Fig. 4).

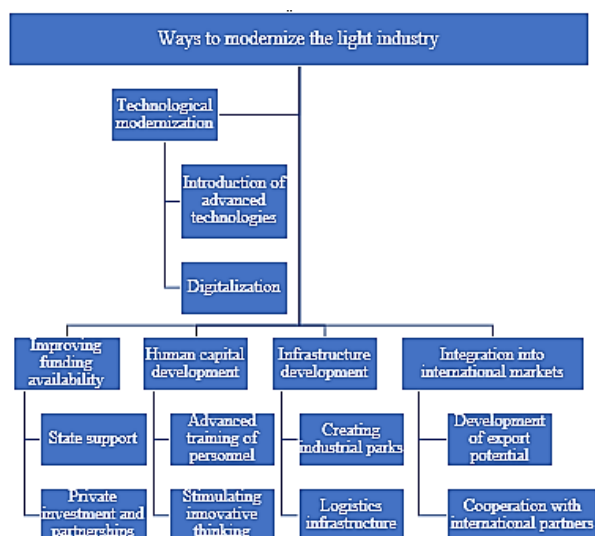


Fig. 4

Fig. 4 shows the main ways of developing the light industry through the modernization of this industry. Technological modernization implies the introduction of advanced technologies and digitalization of light industry. Many enterprises in Kazakhstan use outdated equipment, which reduces their productivity and product quality. Investing in modern equipment and technologies, such as automation of production processes and the use of intelligent production management systems.

Improved funding availability can be achieved through public support and private investment in industry. In this direction, there is a lack of available long-term financing for the modernization of production [18]. The solution may be to supplement the concessional lending program for the light industry, grant support for innovative projects, tax incentives for enterprises investing in modernization. The development of human capital is achieved through advanced training of personnel and stimulation of innovative potential. It should be noted that there is an insufficient level of qualifications of workers in the light industry. To solve this problem, it is necessary to develop professional educational programs in universities and colleges. Also, the modernization of light industry can be achieved through the development of infrastructure. To do this, it is necessary to develop industrial parks and techno parks that provide enterprises with access to modern production facilities and services. Investing in the development of transport and logistics infrastructure, improving the conditions for exporting products. Development of warehouse complexes and transport corridors, creation of specialized logistics centers. Integration into international markets will significantly modernize light industry through the development of export potential. There are limited opportunities for exporting light industry products. The solution may be the development of export infrastructure, support and promotion of Kazakhstani goods in international markets.

The development of light industry can be carried out in different directions, depending on specific conditions, market requirements and technological capabilities. Below are some common ways to develop light industry:

1. Introduction of new technologies:
 - Automation of production processes.
 - Use modern management techniques such as ERP (Enterprise Resource Planning) systems to optimize production, inventory management, and distribution.
2. Research and development:
 - Investment in R&D to create new products and improve existing ones.
 - Application of innovative materials and technologies in production.
3. Environmental sustainability:
 - Introduction of energy-efficient technologies.
 - Development and production of environmentally friendly products.
 - Waste and resource management to reduce the negative impact on the environment.
4. Globalization and international cooperation:
 - Development of international partnerships and cooperation with other companies.
 - Export of products to world markets.
5. Development of digitalization:
 - Adoption of digital technologies such as the Internet of Things (IoT) to monitor and manage production processes.
 - Use data analytics to make business decisions.
6. Standardization of production:
 - Develop and implement quality standards to ensure product reliability.

CONCLUSION

In conclusion, light industry in Kazakhstan has significant potential for development and making a significant contribution to the country's economy. The growth of domestic demand, integration into international markets, the introduction of innovative technologies and the development of infrastructure create favorable conditions for the expansion and modernization of the industry. However, to achieve sustainable growth, it is necessary to overcome a number of challenges, such as a shortage of qualified personnel, lack of investment and competition with imported products. An integrated approach to solving these problems, including government support, attracting investments and developing

human capital, will be the key to the successful development of light industry in Kazakhstan in the coming years.

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