



EKONOMETRIK MODELLASHTIRISHNING O'ZBEKISTON YENGIL SANOATI SAMARADORLIGINI OSHIRISHDAGI O'RNI

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Annotatsiya. Maqolada yengil sanoat ishlab chiqarish tarmog'idagi muammolar jahon miqyosida hamda O'zbekiston Respublikasi misolida tahlil qilingan. Jahonda, hususan O'zbekiston iqtisodiyotida yengil sanoat tarmog'ining ahamiyati, tarmoqni rivojlantirish zaruriyati asoslab berilgan. Yengil sanoatni rivojlantirishda mavjud asosiy muammolari, ularning vujudga kelish manbasi ilmiy tavsiflanadi hamda ularni yechish mexanizmi taklif etiladi. Tadqiqot natijasi sifatida mamlakatda yengil sanoatni rivojlantirishning ustuvor yo'nalishlarini belgilashda, ularni ilmiy asoslash va aniqlash mezonlari tadqiq etiladi. Bunda sohada samaradorlikga erishishda ekonometrik modellashtirish zaruriyatining birlamchi tadbiriq etilish shart sharoyitlari asoslanadi. Shuningdek, yengil sanoatni rivojlantirishda ekonometrik modellashtirish ahamiyati aniq faktlarda keltirilgan.

Kalit so'zlar: yengil sanoat, rivojlantirish yo'nalishlari, iqtisodiy samaradorlik, iqtisodiy muammolar, ekonometrik modellashtirish, ekonometrik mezon.

РОЛЬ ЭКОНОМЕТРИЧЕСКОГО МОДЕЛИРОВАНИЯ В ПОВЫШЕНИИ ЭФФЕКТИВНОСТИ В ЛЕГКОЙ ПРОМЫШЛЕННОСТИ УЗБЕКИСТАНА

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Аннотация. В статье анализируются проблемы в производственной сети легкой промышленности в мировом масштабе и на примере Республики Узбекистан. Обосновано значение сети легкой промышленности в мире, особенно в экономике Узбекистана, и необходимость развития сети. Научно описаны основные проблемы в развитии легкой промышленности, источник их возникновения, предложен механизм их решения. В результате исследования исследуются критерии их научного обоснования и выявления при определении приоритетов развития легкой промышленности страны. На этом основываются предпосылки первоочередного применения необходимости ekonometricheskogo modelirovaniya dlya dostizheniya effektivnosti v dannoy oblasti. Takzhe na konkretnykh faktax predstavlena vazhnost' ekonometricheskogo modelirovaniya v razvitiy lehkoy promyshlennosti.

Ключевые слова: легкая промышленность, направления развития, экономическая эффективность, экономические проблемы, ekonometricheskoe modelirovaniye, ekonometricheskyye kriteriyy.

THE ROLE OF ECONOMETRIC MODELING IN IMPROVING EFFICIENCY OF UZBEKISTAN LIGHT INDUSTRY

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Abstract. The article analyzes the problems in the light industry production network on a global scale and on the example of the Republic of Uzbekistan. The importance of the light industry network in the world, especially in the economy of Uzbekistan, and the need to develop the network have been justified. The main problems in the development of light industry, the source of their emergence are described scientifically, and a mechanism for solving them is proposed. As a result of the research, the criteria for their scientific justification and identification are researched when determining the priorities for the development of light industry in the country. In this, the prerequisites for the primary application of the need for ekonometric modeling to achieve efficiency in the field are based. Also, the importance of ekonometric modeling in the development of light industry is presented in concrete facts.

Key words: light industry, development directions, economic efficiency, economic problems, ekonometric modeling, ekonometric criteria.

Introduction. Light industry plays an important role in Uzbekistan's economy. It is the sector responsible for the production of consumer goods such as textiles, clothing, footwear, leather goods, and household appliances.

Uzbekistan's textile industry is particularly significant and is the largest contributor to the country's light industry. The country has a long tradition of producing high-quality cotton, which is a major input for the textile industry. The government has made significant efforts to modernize and

develop the textile industry, attracting foreign investment and promoting the export of finished textile products [1].

In recent years, the government has also focused on developing the leather and footwear industry, with the aim of increasing domestic production and reducing the country's reliance on imports.

The light industry sector in Uzbekistan employs a significant portion of the country's workforce and contributes to the country's GDP. It also plays a

role in the country's efforts to diversify its economy and move towards a more balanced and sustainable economic model.

Light industry refers to the production of consumer goods that are typically low-cost and have a short lifespan, such as clothing, footwear, household items, and small electronic devices. The development of light industry is important for economic growth, as it provides employment opportunities and generates revenue from exports.

There has been a significant amount of research on the development of light industry in various countries around the world. Some of the key areas of research include:

Technology and innovation: Researchers have explored new manufacturing technologies and processes that can increase efficiency, reduce costs, and improve quality in light industry production. This includes the use of automation, artificial intelligence, and robotics in the manufacturing process.

Supply chain management: The efficient management of the supply chain is critical for the success of light industry. Researchers have examined various strategies for improving supply chain management, including just-in-time production, lean manufacturing, and agile supply chains.

Environmental sustainability: The development of light industry also needs to consider the environmental impact of production processes. Researchers have explored ways to reduce waste, improve energy efficiency, and develop sustainable materials for use in production.

Workforce development: A skilled workforce is essential for the success of light industry. Researchers have examined ways to improve training and education for workers in the industry, as well as strategies for attracting and retaining talent.

Overall, the research on the development of light industry is ongoing, as countries continue to seek ways to improve efficiency, reduce costs, and meet the changing demands of consumers.

Literature review. In "Communication and Localization: Research on Monitoring Solutions for Industry 4.0 and Operator 4.0", researcher Lukas Danyš assesses innovative development in the industry as the most desirable direction [2].

Researcher Chenchen Wang's work "Embodied carbon emissions generated by international trade of China's light industry sector based on global supply chains perspective" highlights the importance of econometric methods in the development of industrial production [3].

Researcher R. Suresh in his work "An overview on light assisted techniques for waste-derived hydrogen fuel towards aviation industry" states that the criteria for the development of light industry can be improved based on econometric models [4].

Researcher H.Wang in his work "A combined light regime and carbon supply regulation strategy

for microalgae-based sugar industry wastewater treatment and low-carbon biofuel production to realize a circular economy" states that the role of economic factors in industrial production can be evaluated based on econometric models [5].

There is also the contribution of the scientists of our country who developed scientific proposals for the development of industry, especially light industry. For example, N.Q. Yoldoshev, B. Kattakshiyev, I. Mamayusupov, Sh. Abdurakhmonova and other scientists can be mentioned [6].

The method proposed by S.M. Stepanova and N.N. Rogojina for assessing the economic potential of light industrial enterprises is very important. In particular, they assess the economic potential of industrial enterprises as follows: financial; proprietary; personnel; material; information; proposed the composition of innovative and energetic potentials. Also, separate indicators are given for each component [7].

The approach given by O.A. Jigunova to the economic potential of the enterprise deserves attention. In determining the concept of the economic potential of the enterprise, it puts the stable operation of the enterprise, its ability to withstand unfavorable situations, as well as the development tasks of the enterprise [8].

M.Q. Pardayev, B.A. Hasanov, J.I. Israilov, A.N. Kholikulov defined that "Economic potential of an enterprise is assessed by its material resources, labor resources and intangible assets" [9].

Research methods. The research used methods such as econometric analysis, comparison, analysis and synthesis, factor evaluation.

Analysis and results. Light industry refers to the production of consumer goods that are typically less expensive and easier to manufacture than heavy industry products. While there are various challenges faced by light industry production, some of the main problems include:

- **Cost of Raw Materials:** One of the biggest problems in light industry production is the cost of raw materials. The cost of materials like cotton, wool, silk, and synthetic fibers can fluctuate widely and impact the overall profitability of the industry.

- **Quality Control:** Light industry products are typically mass-produced, which can make quality control a significant challenge. Ensuring that each product meets a specific quality standard can be time-consuming and expensive, and any defects or inconsistencies can harm the brand reputation [4].

- **Technology:** Technology advancements have transformed the industry, and light industry production needs to keep up with the latest technology. However, the cost of investing in new technology can be prohibitive for many manufacturers.

Labor Costs: Labor-intensive production processes, low-skilled workers, and low wages are all characteristic of light industry production. As a

result, labor costs can be a significant challenge, especially for manufacturers in developed countries.

- Environmental Impact: The light industry is known for producing a large volume of waste, including scraps, offcuts, and unused materials. These wastes can have a significant environmental impact if they are not properly managed.

- Competition: Competition is high in the light industry sector, and manufacturers need to produce products that are unique, high-quality, and affordable to stay ahead of the competition.

Overall, these challenges can impact the productivity, profitability, and sustainability of the light industry sector. Addressing these challenges requires innovation, investment in technology, and a focus on sustainability to ensure long-term growth and success.

There are several challenges facing the development of light industry in Uzbekistan. Here are some of the key issues:

1) Outdated infrastructure: The country's light industry sector is hampered by outdated infrastructure, which makes it difficult to increase productivity and efficiency. The lack of modern machinery and equipment also limits the ability to produce high-quality products [5].

2) Limited access to finance: Many businesses in the light industry sector struggle to access the finance they need to grow and expand. This is partly due to a lack of investment in the sector and the reluctance of some banks to lend to small and medium-sized businesses.

3) Shortage of skilled workers: There is a shortage of skilled workers in the light industry sector, which makes it difficult for businesses to meet production targets and maintain high quality standards.

4) Lack of innovation: The light industry sector in Uzbekistan has been slow to adopt new technologies and innovative production methods. This limits the ability to develop new products and compete with other countries in the global market.

5) Inefficient supply chains: The country's supply chains are often inefficient, which makes it difficult to source raw materials and distribute finished products. This increases costs and reduces competitiveness.

Addressing these challenges will require significant investment in the sector, improvements to infrastructure and supply chains, and efforts to develop the skills of the workforce. It will also require a greater focus on innovation and the adoption of new technologies [6, 10].

Uzbekistan has been working to develop its light industry sector in recent years, with a focus on modernizing production processes and improving the quality of goods. Here are some of the priority

directions for the development of light industry in Uzbekistan:

- Improving the textile industry: The textile industry is one of the largest components of Uzbekistan's light industry, and the government is investing heavily in modernizing production facilities and improving the quality of textile products. This includes increasing the use of automated production processes and improving the skills of workers.

- Developing leather and footwear production: Uzbekistan has significant potential for the development of its leather and footwear industry, and the government is working to attract foreign investment to support this growth. The focus is on improving the quality of leather and footwear products, increasing exports, and expanding the domestic market.

- Developing the garment industry: Uzbekistan has a long history of garment production, and the government is working to modernize production facilities and improve the quality of garment products. The focus is on increasing exports and expanding the domestic market, with a particular emphasis on developing high-value-added products [11, 12].

Developing the light industry cluster: The government is promoting the development of a light industry cluster in the country, which will bring together different components of the industry, such as textiles, leather, and footwear, under a single umbrella. This will help to promote collaboration and efficiency within the industry and support the growth of small and medium-sized businesses.

- Promoting innovation and technology adoption: The government is encouraging the adoption of new technologies and innovative production processes in the light industry sector. This includes the use of automation and digital technologies, as well as the adoption of sustainable production practices.

- Overall, the Uzbekistan government is prioritizing the development of the light industry sector, with a focus on modernizing production processes, improving product quality, and expanding both domestic and international markets.

Econometric modeling can play an important role in improving efficiency in Uzbekistan's light industry. Econometrics is a branch of economics that uses statistical methods to analyze economic data and test economic theories. By applying econometric methods to data from Uzbekistan's light industry, researchers can identify factors that affect efficiency and develop models that predict how changes in those factors will affect output and costs [13, 14].

One important area where econometric modeling can improve efficiency in Uzbekistan's light industry is in identifying the most efficient

production processes. By analyzing data on inputs and outputs, researchers can identify the production methods that result in the highest output for the lowest cost. This information can then be used to optimize production processes and reduce waste, leading to increased efficiency.

Another area where econometric modeling can improve efficiency is in predicting demand for products. By analyzing historical sales data and other economic factors, researchers can develop models that predict how changes in the economy, consumer preferences, and other factors will affect demand for specific products. This information can be used to optimize production schedules and reduce the risk of overproduction or stock shortages.

Econometric modeling can also be used to analyze the impact of policy changes on the industry. For example, researchers could develop a model that predicts how changes in tax policy or trade agreements would affect the industry's output and profitability. This information can then be used to make more informed policy decisions that support the growth and efficiency of the industry [15, 16].

In summary, econometric modeling can play a valuable role in improving efficiency in Uzbekistan's light industry by identifying the most efficient production processes, predicting demand for products, and analyzing the impact of policy changes. By using econometric methods to analyze economic data, policymakers and industry leaders can make more informed decisions that lead to increased efficiency and economic growth.

Discussion. Econometric modeling of labor resources can be highly valuable for the development of light industry in Uzbekistan. Econometric models are statistical models that use mathematical equations to describe and predict the relationship between different economic variables. In the case of labor resources, econometric modeling can help policymakers understand the factors that affect the supply and demand of labor, and how changes in these factors can impact the labor market.

In the context of light industry in Uzbekistan, econometric modeling can provide insights into how labor resources are being utilized and identify areas where improvements can be made. For example, econometric models can be used to estimate the labor demand for specific types of skills, which can inform education and training programs to ensure that the workforce is equipped with the necessary skills to support the growth of the industry. Similarly, econometric models can be used to estimate the impact of labor market policies such as minimum wage laws, labor regulations, and social welfare programs, which can help policymakers design more effective policies to promote

growth and development [17, 18].

Econometric modeling can also help forecast future trends in the labor market, allowing policymakers and industry leaders to plan for changes in labor supply and demand. This can be particularly useful in the context of light industry in Uzbekistan, which is currently undergoing significant growth and expansion. As the industry grows, demand for labor is likely to increase, and econometric models can help policymakers plan for this growth by identifying potential bottlenecks in the labor market and developing strategies to address them [19].

In summary, econometric modeling of labor resources is an important tool for policymakers and industry leaders in Uzbekistan to support the development of light industry. By providing insights into labor supply and demand, identifying areas for improvement, and forecasting future trends, econometric models can help ensure that the labor market is able to support the growth and expansion of the industry, leading to economic growth and development in the country.

Conclusion. In general, econometric models can be a useful tool for policymakers and businesses to analyze data and make informed decisions about economic development strategies [20, 21].

When developing econometric models, it is essential to carefully select the variables and data sources used to ensure accuracy and reliability. Moreover, the models assumptions and limitations should be acknowledged and accounted for to avoid erroneous conclusions.

Econometric models can be particularly useful in analyzing the factors that drive the growth of the light industry, such as consumer demand, technological innovation, and government policies. By identifying these factors, policymakers can design effective policies and incentives to promote the sector's development.

Overall, the use of econometric models in the development of the light industry in Uzbekistan can be beneficial if applied appropriately and with careful consideration of the models' assumptions and limitations.

The strategy for the development of light industry covers the most priority directions structurally. Taking into account that productivity is directly related to the most basic factors, management of information flow by factors is influenced by economic laws. Therefore, the determination of each task depends on the correct assessment of the econometric implementation possibilities. In this case, we would like to emphasize that the use of econometric models as an execution mechanism is effective.

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