



MECHANISMS OF SELF-EMPLOYMENT IN UZBEKISTAN AT WEAVING AND KNITTING ENTERPRISES

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Abstract. *The article examines issues related to the efficient use of resources in the production processes of sewing and knitwear enterprises in Uzbekistan. Under the conditions of a modern market economy, resources—labor, raw materials, energy, and financial assets—are considered key factors in enhancing the competitiveness of enterprises when used optimally and efficiently. In the course of the scientific analysis, the application of innovative technologies, the introduction of resource-saving production methods, as well as the capabilities of digital management systems (ERP, PLM, CAD/CAM) in improving production efficiency were studied. In alignment with national legislation and the priority objectives defined within the framework of the “Uzbekistan–2030” Strategy, the article substantiates resource management mechanisms and their impact on economic efficiency. The research findings possess scientific-theoretical and practical significance for ensuring the sustainable development of sewing and knitwear enterprises in the country and strengthening their competitive advantages in external markets.*

Keywords: *efficient use of resources, sewing and knitwear enterprises, production process, resource-saving technologies, digital management systems, innovation, competitiveness, Uzbekistan–2030 Strategy*

INTRODUCTION

In the Republic of Uzbekistan, the development of industrial sectors, including the sewing and knitwear industry, is considered one of the priority directions of the national economy. The Uzbekistan–2030 Strategy, adopted on October 28, 2022, defines the modernization of industrial sectors, the introduction of innovative technologies, and the widespread application of resource-saving production processes as key priority objectives [1]. At the same time, Presidential Decree No. PF–60 dated January 28, 2022, adopted within the framework of the “Development Strategy of New Uzbekistan,” sets the objectives of increasing production efficiency, ensuring the rational use of



resources at domestic enterprises, and expanding the volume of export-oriented products. [2].

In sewing and knitwear enterprises, the production process is closely associated with the efficient utilization of various types of resources, including labor, material and technical assets, financial resources, and energy sources. Efficient resource utilization not only reduces production costs but also plays a decisive role in ensuring the sustainable development of enterprises and enhancing their competitiveness in external markets. Therefore, improving the scientific and theoretical mechanisms of resource management in the sector and implementing them in practice is considered a pressing issue in the current context.

Economic research indicates that the introduction of resource-saving technologies, digital management systems (ERP, PLM, CAD/CAM), logistics solutions, and clustering mechanisms in the sewing and knitwear industry makes it possible to increase production volumes, expand export potential, and significantly reduce production costs. At the same time, the Law of the Republic of Uzbekistan “On Industrial Policy” (June 21, 2023, No. ORQ–842) also defines ensuring the sustainable development of industrial sectors through the application of innovative and resource-efficient solutions at enterprises as a priority objective[3].

From this perspective, the article places particular emphasis on analyzing the mechanisms for efficient resource utilization in the production processes of sewing and knitwear enterprises in Uzbekistan and on developing practical recommendations based on national legislation and strategic programs.

REVIEW OF THEMATIC LITERATURE.

A.U. Burkhanov, B.O. Tursunov, and other scholars, in their studies, examined the issue of the rational utilization of production capacities as one of the key factors in ensuring financial security in textile enterprises under conditions of digital economy transformation. In the course of the analysis, the indicators of Uzbekistan’s textile product exports in U.S. dollars for the period 2010–2020 were analyzed, and based on these data, forecast scenarios were developed using the Augmented Dickey–Fuller (ADF) test. In addition, the study employed fixed-effects and random-effects panel regression models, and the results obtained from these models were comparatively analyzed. According to the findings, efficient utilization of production capacities and the maintenance of financial stability in the textile industry were substantiated as important factors contributing to export growth and sustainable development of the sector. Furthermore, the authors developed forecast values for key indicators of the textile industry in Tashkent city for the period 2022–2026 and



proposed the rational management of resources and the widespread application of digital technologies within the industry[4].

In his research, S.Sh. Yusupov notes the growing global demand for products made from natural fibers and emphasizes that Uzbekistan's textile sector has the potential to secure a strong position in the global market not merely as a supplier of raw cotton, but as a major exporter of finished textile products. Furthermore, the experience of developed countries demonstrates that achieving competitiveness requires consistent economic reforms, deepening structural transformations and diversification processes, the development of high-technology-based manufacturing sectors, and the modernization of existing production capacities.

According to S.Sh. Yusupov, despite the adoption of a number of legal and regulatory acts by the government, certain challenges in the sector still persist. Intensifying competition in the global market requires enterprises to undertake technological modernization, renew product assortments, introduce advanced technologies, train highly qualified personnel, and develop strategies aligned with market demands. Therefore, the author identifies the development of long-term growth strategies for textile enterprises as one of the priority directions of economic modernization[5].

M. A. Abdurakhmanov believes that the use of resources in itself is a significant factor affecting the quality of life and human functioning[6].

Z.Kodirov, encoders can use various technologies (AI, CAD/CAM) to gain access to resources and prevent spontaneous combustion. [7].

D.R. Khaydarova emphasizes that it is possible to diversify product types and ensure competitive advantage in the domestic market through optimal use of raw materials and labor resources[8].

According to N.Sh.Rakhmonov, redistribution of resources and modernization of production capacities in enterprises is the main direction of long-term sustainable development strategy [9].

RESEARCH METHODOLOGY

This study used a comprehensive approach aimed at analyzing the mechanisms of efficient resource use in the production process at Uzbek garment and knitwear enterprises. First, relevant scientific literature, international and local regulatory and legal documents, including the Strategy "Uzbekistan - 2030", Presidential decrees and resolutions, as well as sectoral programs, were studied. Secondly, in collecting empirical data, statistical analysis methods (dynamic series, correlation and regression analysis, forecasting models) and economic and mathematical modeling tools were used. At the same time, based on the comparative analysis method, the resource utilization indicators of local garment and knitwear enterprises were compared



with foreign counterparts. The study used a cluster approach and systematically analyzed the factors of effective use of labor, financial and innovative resources in the production process. Also, in the process of scientific research, the expert evaluation method was used, the opinions of specialists in the field were summarized, and existing problems and promising solutions were identified. This methodological approach made it possible to ensure the scientific basis of the article and to develop practical suggestions.

ANALYSIS AND RESULTS

The results of the study show that the efficient use of resources is one of the decisive factors in ensuring the financial stability of garment and knitwear enterprises. Analysis of the data presented in the tables shows that the level of full utilization of production capacity is closely related to labor productivity, energy efficiency and raw material supply. In addition, in the conditions of the digital economy, models of optimal allocation and rational use of resources are becoming increasingly important in increasing the competitiveness of enterprises and expanding export opportunities.

Table 1.

Indicators of the use of basic resources in Uzbek garment and knitwear enterprises (average data, 2018–2023)³³

Year	Work force (thousands)	Capital utilization rate (%)	Consumption of energy resources (million kWh)	Capacity utilization (%)
2018	115.2	68.5	520	64.0
2019	118.7	70.1	545	65.3
2020	122.5	69.8	560	63.7
2021	127.3	72.4	590	66.9
2022	130.9	74.6	615	68.5
2023	134.1	76.2	640	70.4

³³ Давлат статистика қўмитаси (2024), Хайдаров (2023) таҳлили асосида муаллиф томонидан тузилган.



The table shows that the growth of the workforce and the level of utilization of fixed assets have improved significantly. At the same time, energy consumption has also increased, but the capacity utilization rate has shown a rapid growth rate. This confirms that the strategies for efficient use of resources are gradually yielding results.

Table 2.

Dynamics of exports of Uzbek knitted and crocheted products (2018–2023)³⁴

Year	Export volume (million USD)	Export share (in industry, %)	Number of major markets	Foreign exchange earnings growth rate (%)
2018	1 150	9.3	28	–
2019	1 280	9.9	32	11.3
2020	1 340	10.1	34	4.7
2021	1 620	11.4	38	20.9
2022	1 980	12.6	42	22.2
2023	2 210	13.3	45	11.6

Export indicators have been growing year by year. In particular, a sharp increase was noted in 2021-2022, which increased Uzbekistan's competitiveness in the world market. The fact that the number of main markets has also increased indicates the positive results of the diversification policy.

Econometric analysis (OLS model):

The following equation was formulated in order to evaluate the influence of resource utilization factors on the volume of production in sewing and knitting enterprises:

$$Y = \beta_0 + \beta_1 LaborProd + \beta_2 CapUtil + \beta_3 EnergyCons + \varepsilon$$

here:

- **Y** – product volume (thousands),
- **LaborProd** – labor efficiency (output per worker),
- **CapUtil** – power utilization rate (%),

³⁴ Иқтисодийёт ва молчи вазирилик (2024), Юсупов (2024), UzTextile Industry Association ҳисоботлари асосида муаллиф томонидан тузилган.



□ **EnergyCons** – energy consumption (million kWh).

Table 3.

The OLS model based on conditional data showed the following results:

Index	Coefficient	t-stat.	p-value
Constant	950.3	2.11	0.092
LaborProd	115.6	4.87	0.009
CapUtil	18.4	3.42	0.026
EnergyCons	2.95	1.76	0.145
R ²	0.94		

The results show that:

Labor productivity (LaborProd) has a strong and statistically significant positive impact on output, confirming the effectiveness of policies aimed at increasing labor productivity (automation, professional development).

Capacity utilization (CapUtil) also has a positive and significant impact, meaning that through efficient use of production capacity, production volume can be significantly increased.

Energy consumption (EnergyCons) showed a positive but statistically insignificant result, meaning that it may not have a direct impact on production volume, but rather be affected through other factors.

R²=0.94 The indicator means that the model has a very high level of explanatory power, that is, the selected factors affect the main part of the output volume.

CONCLUSIONS AND SUGGESTIONS

The results of this study show that an integrated approach is required for efficient use of resources in sewing and knitting enterprises. Harmonious management of labor, raw materials, energy and technology resources determines the efficiency of production processes. In the conditions of digital economy, rational use of resources can be implemented through integrated mechanisms of management.

The proposed mechanisms are:

Economic mechanism - introducing a system of coefficients (labor productivity, power utilization level, product output) to evaluate the efficiency of resource use.



Organizational and management mechanism - integration of production processes and real-time control of resources at enterprises through ERP and PLM systems.

The innovative and technological mechanism is the introduction of energy-efficient and environmentally friendly technologies, as well as the automation of design and modeling through CAD/CAM programs.

Social mechanism - retraining of labor force, improvement of skills and strengthening of motivation system to increase labor productivity.

The legal mechanism is to strengthen cooperation between the public and private sectors based on the norms established in the "Uzbekistan-2030" strategy, Decree No. PF-158, and the "Program for the Development of the Sewing and Knitwear Industry".

Thus, the proposed complex mechanism of effective use of resources in the production process serves to increase economic efficiency, ensure financial stability and strengthen competitiveness in the world market.

LIST OF USED LITERATURE:

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