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Revitalizing Textile Enterprises: A Holistic Approach to Value-Added Economical Production

Menghidupkan Kembali Perusahaan Tekstil: Pendekatan Holistik terhadap Produksi Ekonomis Bernilai Tambah

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Abstract

This study delves into the economic characteristics governing the value-added chain's formation within the framework of economical production in textile enterprises. The primary goal was to optimize material resource usage, increase product volume, boost profits, and enhance customer satisfaction through strategic reorganization and innovative technological implementation. Comparative analysis, statistical evaluation, logical thinking, and other scientific methodologies were employed to illustrate the correlation between the value-added chain and production costs in textile businesses. Findings suggest that economical production at these enterprises hinges on both organizational and methodological components, including forward tasks, employee quality, and the technology in use. The implications highlight that effective utilization of material resources, coupled with strategic changes in understanding cost-effective production, could lead to increased profitability and quality of goods. This approach serves as a progressive model for textile enterprises, offering promising potential for economic stabilization at a macro level.

Highlights:

- Resource Optimization: Efficient use of raw materials in textile production.
- Strategic Reorganization: Importance of organizational elements in value-added, economical production.
- Macroeconomic Impact: The potential of enterprise efficiency for macroeconomic stabilization.

Keywords: Textile Enterprises, Economical Production, Value-Added Chain, Resource Optimization, Profitability.

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Introduction

The textile industry is one of the sectors that most require material expenditure. In the cost of production, the yield of raw materials and materials is 65-80%. Material resource savings can be achieved by establishing the norm of rational raw material consumption at the enterprise, reducing the amount of waste by technological transitions, applying advanced technologies that allow you to reduce raw material consumption, preventing the production of poor-quality products, establishing the use of secondary resources in production. As a result, the enterprise will be able to produce a larger amount of products from the raw materials presented to it than is provided for in the plan. This is an internal possibility of increasing the volume of production, profit and efficiency of the enterprise at the expense of rational use of material resources at the enterprise, organization of resource "economical production".

The goal of economical production in textile enterprises is not only to make a profit, but also to create a product or service that satisfies the consumer at a high level, which is beneficial to him, which he needs, which is valuable to him.

The use of economical means of production in textile enterprises also depends on the organizational components of the company's activities (forward tasks, quality of employees, organizational structure, technologies used). The listed components are inextricably linked with the level of understanding of economical production. Forward tasks have a local nature at the level of tools. The quality of employees is determined, first of all, by their professional qualifications. Changes in the structure are reflected in the fact that employees are assigned new tasks within the framework of daily work. The organizational component "technology" means mastering new means of economical production.

And at the methodological level of understanding of cost-effective production, changes in technology necessitate changes in production methods. The quality of employees is assessed by how involved the Labor team is in the process of changes. In the organizational structure, however, changes in inter-functional coordination may be necessary. Tasks defined at this level can relate to an integrated approach to the implementation of changes.

At the philosophical level of understanding of cost-effective production, tasks are strategically important, special attention is paid to the new value system of the company aimed at cost-effective production, the structure of organization management is restructured, the entire system of business processes of the company develops.

The scale of the changes required puts a requirement on the representation of the tasks to be set, which means that cost-effective production is associated with both organizational elements and levels of understanding of cost-effective production. It can be strategic and operational. In strategic changes, a vision of what the activity will be like in the future is formed, and this determines the need for economical production and the use of even higher levels of understanding of the entire system of organizational components.

Literature Review

Based on summing up the results of foreign and domestic studies on the introduction and development of economical production in textile enterprises and the research of various scientists aimed at the development of economical production, the sequence of development of economical means of production is described from the discovery of the first tool to the current state of the means.

The classic groups of cost-effective production principles form its foundation, while these principles are implemented thanks to a certain set of cost-effective means of production. The sequential clarification of the development of cost-effective production tools makes it possible to characterize the composition of modern cost-effective production system tools.

The first to introduce the concept of economy in production was John Krafcik ([1] by "thrif" (Lean), the author understood that there would be nothing superfluous in the production of the new copy at all. The term "Lean" is understood to mean "work and being able to work effectively" (J.Vumek and Dn.Jones). In books on cost-effective production, it has in Uzbek the meanings of "correct", "flat" or "economical" production.[2]

Most authors (Dennis P.Hobbs[3], Stefan Ruffa, George alukal [4], Laurie Koskela[5] and others) characterize frugal production as a philosophy of Enterprise Management based on frugal production principles. Berezovsky E. from CIS scientists.E.[6], Adler Yu.P. and Shper V.L.[7], Lapidus E.A characterizes "cost-effective manufacturing" as a means of survival for the enterprise and a factor in increasing the competitiveness of the product produced.[8]

However, scientists and practitioners in one thing are largely unanimous - cost-effective production is aimed at dealing with losses at all stages of product production and service. To ensure efficient operation of the system, it is necessary to correctly select economical production tools. The value of the product and service is created by the company's employees at each stage, so it is necessary to carefully prepare industry professionals who will be loyal and useful to the company.

D.Woomek and D.Jones noted that "cost - effective production " is a management concept, created in the Toyota automotive corporation and based on the desire to eliminate all types of losses without deviations. Within the framework of the concept, it is envisaged to involve each employee in the business optimization process and direct all processes to the consumer as much as possible. [9]

E.A.Bashkardin believes that "cost-effective production" is a complex production system that covers the organization of the workplace, production areas, Service and repair, Logistics, Accounting and other administrative and auxiliary services, that is, the planning of the company as a whole. [10]

The business system approach is mostly used by large enterprises and corporate business structures. According to this concept, it is planned to apply the methods and tools of management of production systems to all processes and structures of the enterprise. The business system approach is used in conjunction with several other concepts, models, and approaches, such as the Lean system. It should be noted that Lean system and TOC, Lean system and 6 Sigma, Lean system, TOC and Kaizen, Lean system, TOC and 6 Sigma combinations are used in the management and organization of production systems. Thus, the company management tries to take into account the advantages of each approach. However, a single approach is deeply mastered before moving to a format that uses a combination of multiple approaches. [11]

Lean Production allows you to get an advantage in cost and price only if the domestic enterprise is on an equal footing with foreign competitors and operations on a relatively identical technical platform. No methods of modern business management will be able to ensure the growth of an enterprise's market share if the supplied products do not satisfy the consumer in terms of their functional characteristics and high technology. On the other hand, having significant investment opportunities for the modernization of an enterprise, you can lose them if the production system, along with the production of products, multiplies losses, which great increase costs and cannot compete with foreign counterparts. [12]

According to the statistical indicators analyzed on the production of products of the textile industry, Uzbekistan as a weak point in the competition of the textile industry spiritual obsession of weaving machines, lack of qualified engineering and technical personnel, low specialization in the production of gauze, fabric products, it was found that the production of domestic fabrics aimed at sewing and knitting did not develop, the level of fiber assimilation in some regions was low, and the number of enterprises that introduced Quality Management in accordance with international standards was low. [13]

The experience of introducing cost-effective technologies shows that no matter how much employees improve the process, no matter how "economical" it is, new ways of eliminating losses are emerging. The process of improvement and value creation is accomplished through the efforts of employees. Employees are the main asset of the enterprise and the owners of the cultural value of economical production. [14]

Based on the experience of foreign companies, it can be concluded that the introduction of lean production technologies to ensure an increase in the efficiency of the production system will significantly reduce costs, increase labor productivity, improve the production process, achieve high financial performance, increase the competitiveness of the enterprise and achieve many other qualitative and quantitative changes. [15]

One of the basic principles of lean manufacturing and the first stage of its implementation is to define the qualities that make the manufactured product value for the consumer. This is where the implementation of lean manufacturing begins. Activities performed in the enterprise that do not create value for the customer are waste. Consequently, even the very initial stage of implementation of lean manufacturing already has an impact on increasing competitiveness. [16]

Improving the model of efficient use of production capacity, increasing labor productivity, enhancing corporate spirit and corporate culture in textile enterprises through the use of cost-effective means of production (Lean production) - 5S system. Substantiate the effectiveness of the introduction of the organizational system "5S" (sorting, compliance, cleanliness, standardization, improvement) of the concept of cost-effective production to manage the use of production capacity as an element of improving process quality and production culture in textile enterprises. [17]

Based on summing up the results of foreign and domestic studies on the introduction and development of cost-effective production and the research of various scientists on the development of cost-effective production, a sequence of development of cost-effective means is described, from the discovery of the first tool to the current state of the means.

The classic groups of cost-effective production principles form its foundation, while these principles are implemented thanks to a certain set of cost-effective means of production. The sequential clarification of the development of cost-effective production tools made it possible to characterize the composition of modern cost-effective production system tools.

Thus, "cost-effective production" is a management philosophy based on identifying regular non-production losses and improving the production process.

Methods

The article makes extensive use of comparative comparison of the state of value-added chain formation in the organization of cost-effective production in textile cookhouses, comparison and analysis of statistical data, logical thinking, scientific abstraction, analysis and synthesis, induction and deduction methods.

Result and Discussion

In textile enterprises, the formation of a chain of value added to production costs is important in the formation of the cost of the produced product. Production capacity is calculated for the type of assortment specified in the product development program, since if the type of assortment changes, the power also changes. The production capacity of the enterprise is not a variable size. The introduction of new techniques, the improvement of the technological process, the improvement of production and the organization of Labor, and other activities necessitate the revision of power on their own. A generalized indicator that determines the use of the enterprise's production capacity is the coefficient of use of production capacity.

The most important component of the economic changes taking place in Uzbekistan is the reform of the national economy and its transition to the path of innovation development, one of which is the introduction of a cluster system.

According to local economists, nowadays Uzbekistan's textile and sewing and knitting industry is one of the dynamically developing sectors of the country's economy, which is greatly facilitated by the presence of its own raw material base and the growing demand for manufactured products. Due to its competitive potential, it occupies one of the leading places in the organization of new enterprises, ensuring employment, attracting foreign investments in the export of products, and is also studied as one of the strategically important directions in the Universal specialization of the country's national economy.

The composition of the modern system of economical means of production in textile enterprises has three aspects: the fulfillment of the terms of delivery, the desire to ensure quality, the reduction of production costs.

The use of economical means of production depends primarily on what changes are required in the activities of the enterprise and how deeply economical production is introduced at the enterprise. As a result of research into the theory and practice of using cost-effective production, the cost-effective production apparatus should be understood to a large extent (philosophical, methodological and instrumentalist).

Activities aimed at the implementation of strategic priorities for the development of the textile industry of Uzbekistan, including: increasing the share of the textile industry in the economy, the introduction of advanced management technologies, as well as the development of a cluster model, which, starting from the cultivation of raw cotton, ended with the production of final textiles of high added value, are constantly carried out.

In textile industry enterprises, a system of direct purchase of cotton raw materials from their local producers was introduced experimentally. This made it possible to create a single production chain covering the process, from the cultivation of cotton to the production of finished products and its sale both in the domestic market and to exports. One of the most important advantages of including such is that the costs of all business entities involved in the chain have been reduced.

The share of textile exports in the total volume of Uzbek export operas reached its highest value in the period 2010-2021 (Figure 1).

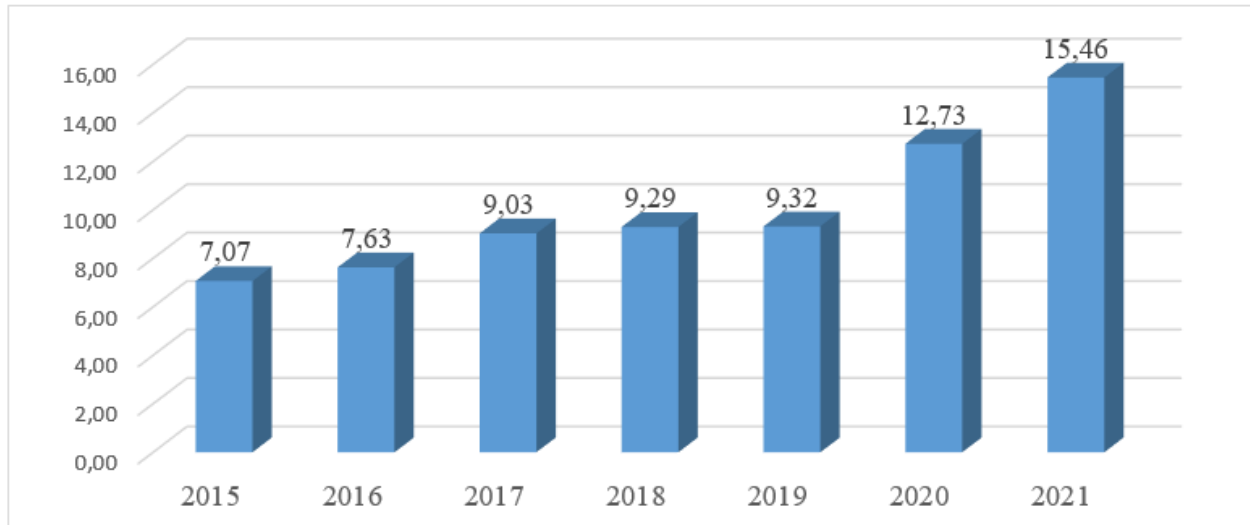


Figure 1. Share of exports of textile products of Uzbekistan in the total export volume of the country (in 2015-2021, in percentage)

The introduction of a cluster system in Uzbekistan has shown its relevance and economic efficiency during the period of its existence. It is known that in 2020, more than 90% of the total cotton crop in our country was harvested in clusters. Studies confirm that due to the introduction of cluster initiatives, the yield of cotton in our Republic increased by 6.2 centners in 2020 compared with 2017. The main thing is that the volume of products produced in the textile industry has grown significantly - three times-, as well as the share of the textile industry in the country's gross product exceeds 5%, reaching a record high of 12.4% at the beginning of 2021. Due to the transition to the production and sale of finished products, it can be noted that positive structural changes have occurred in the production of textiles and clothing itself.

Thus, the introduction of cluster initiatives that envisage the formation of a common production chain with high added value made it possible to transform the industry from a raw material industry into a final consumer and export-oriented industry.

2005 year	2010 year	2015 year	2019 year	2020 year	2021 year
Cotton fiber	1 033,3	1 572,7	736,1	281,6	300,1
Semi-finished thread-gauze	120,7	386,8	545,9	926,1	950,1
Finished textiles and clothing	20,8	116,5	184,0	354,5	578,1
Knitted products	4,5	31,2	46,1	84,8	97,9
Strip gauze	28,3	42,0	33,8	69,2	77,8
Other finished textiles	6,9	12,9	15,4	51,9	65,8
Carpets	0,1	7,3	13,6	32,0	36,7

Cotton wool, felt and non-woven materials	9,4	17,0	16,4	108,1	100,1
Total cotton processing products	190,7	613,7	855,2	1 626,6	1 887,3

Table 1. Exports of Textiles 2005-2021 (Mt. Soum)

From the data presented in Table 1, it can be seen that in 2021, exports of Textiles increased by almost 9 times compared to 2005, and by more than 2 times during the existence of cluster structures.

The textile value creation chain represents a chain managed by suppliers of raw materials and materials (manufacturers) (Figure 2).

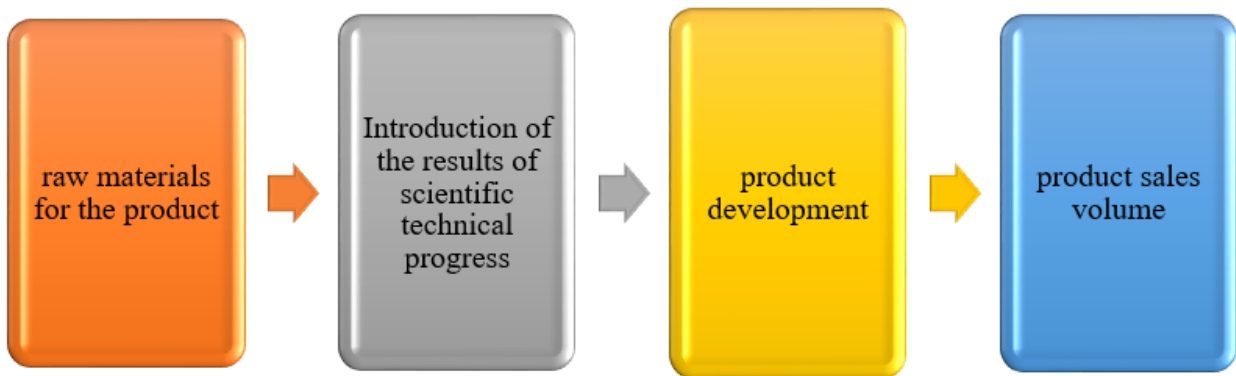


Figure 2. The process of forming the value of textile products

In the textile sector, the value-added chain is divided into 4 main stages. The first stage is the most labor-intensive and represents the cotton itself, that is, the cultivation of acorns and raw materials (raw cotton). The second stage consists in primary cleaning of raw cotton and removing cotton fibers. The next two stages are related to the textile and sewing industries (Figure 3).

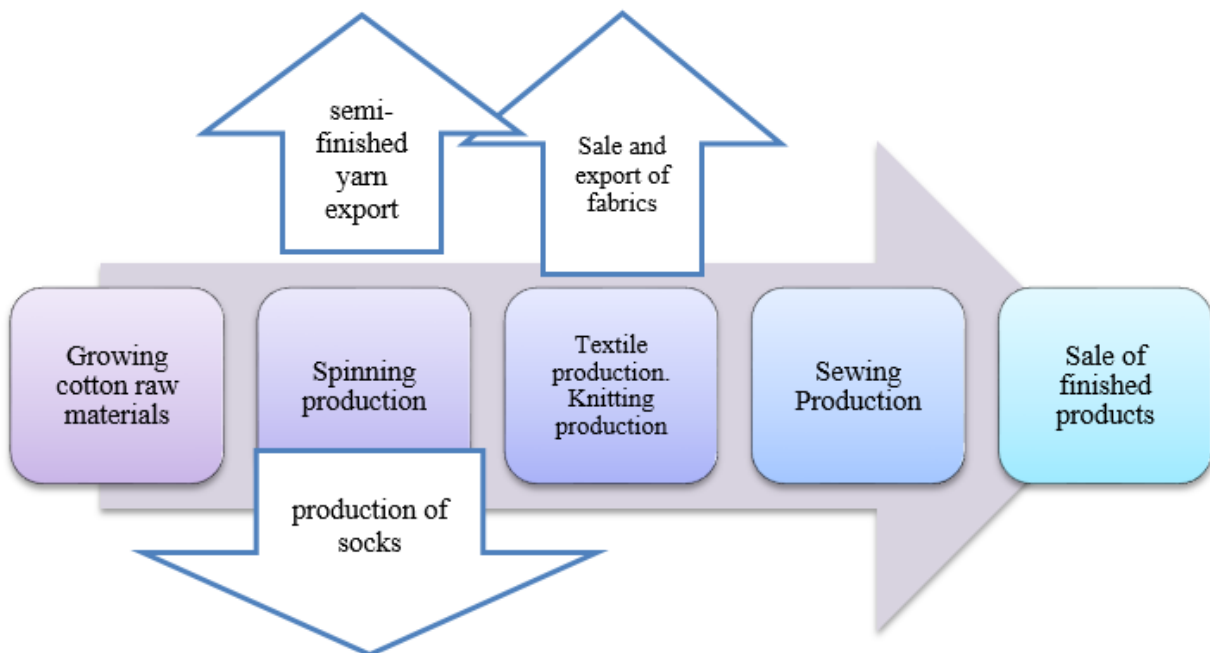


Figure 3. Value-added chain in the textile industry

Research conducted by scientists from our country confirms that a kilogram of cotton fiber, which was previously exported as a result of the cluster system at an average price of 1.5 US dollars, becomes a ready-made knitted and textile product with a high added value and costs 10-20 times more. This increases revenues, replenishes the state budget.

Thus, the introduction of clustering in the textile industry of Uzbekistan made it possible to achieve high results, in particular, production improved qualitatively, the export potential of the network increased, and the competitiveness of textile products increased significantly. The export potential of the textile industry of Uzbekistan is now on the rise. The country has tremendous opportunities for further promotion. Most importantly, the world-class market conjuncture almost coincides with the comparative advantages of Uzbekistan, now it is necessary to turn them into competitive advantages for the textile network.

Conclusion

In a market economy, textile enterprises' paramount focus is on minimizing production costs through efficient use of material resources, effective deployment of technologies, and diligent labor practices, ultimately enhancing profitability. Given the heavy reliance of textile industry on raw material consumption, the judicious utilization of these resources, including raw materials, electricity, fuel, and lubricants, throughout the year is crucial.

Enterprises independently plan their demand for these resources, aiming to decrease the average production cost, enhance product quality, and extend product lifespan. Material resources significantly influence the execution of the production plan, impacting cost reduction, profit increment, product assortment, and quality enhancement.

Therefore, assuring material resource provision based on long-term business plans is imperative for textile enterprises, as a deficiency or untimely acquisition of these resources can halt production. Comprehensive economic development and progress of these enterprises hinge upon the simultaneous provisioning of material resources in required quantities and qualities, coupled with their rational usage.

Such enterprises then become progressive and economically vigorous, laying a foundation for economic stabilization of the republic. Implications of this study emphasize the need for further research into innovative strategies for resource optimization and risk mitigation related to resource acquisition, to ensure continued growth and profitability of textile enterprises.

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