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# Improvement of Cluster System and Cost Accounting in Textile and Knitting Enterprises

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**Abstract:** A research investigates the improvement of cost accounting and cluster system implementation within Uzbekistan's textile and knitting enterprise sector. The nation seeks to increase textile output by 2 times and exports by 3 times by 2030 while requiring all financial reports to comply with international financial reporting standards (IFRS). Current accounting systems do not align with modern cluster-based production therefore they fail to provide sufficient tracking and management of production costs across related manufacturing stages. The study implements comparative analysis together with financial-statistical evaluation supported by international experiences to develop an advanced cost accounting model. Traditional cost categorization systems fail efficiently and cluster-based companies lack dedicated management systems for their expenses. The research presents a dual approach which includes separate cost sub-accounts for time-based recognition and goal costing based on target and Kaizen practices. Analysis performed within various industries reveals that the proposed cost reduction approach has the power to cut overall costs by up to 20% while enhancing financial clarity and meeting IFRS standards. Organizational performance will improve substantially when management implements strategic cost planning while using econometric forecasting methods along with updated Chart of Accounts. The proposed approach functions as the base for textile sector resource optimization that leads to profit improvements and management accounting system modernization.

**Keywords :** target costs, target cost, accounting and the accounting process, manufacturing costs, cost recognized during the period, cost recognized at a specific point in time, cost adjustment.

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## 1. Introduction

Developed countries of the world are achieving the stability of the national economy based on innovative development and diversification of production, strengthening their competitiveness in the world market through the production of export-oriented products. The annual growth rate for the period 2022-2030 is expected to be 4.0 percent. Currently, the organization of accounting and auditing in accordance with international standards in light industry enterprises in the process of accounting for production costs, determining the cost of production, and attracting foreign investment has been identified as a priority task[1].

In accordance with the Development Strategy of New Uzbekistan for 2022–2026, the task of increasing the efficiency of foreign investments directed to light industry enterprises, which are considered one of the important sectors of the development of our economy, and increasing the production volume of textile industry products by 2 times and leather and footwear products by 3 times based on the use of modern equipment and

technologies has been set[2]. Based on these tasks, a strategy for the development of light industry enterprises of our republic has been selected to reduce production costs, increase profits and achieve financial stability. For this purpose, special attention is paid to organizing and increasing the efficiency of the accounting and audit system based on international standards in order to modernize the activities of light industry enterprises and diversify the product range[3].

Ensuring the implementation of these tasks requires increasing the export potential of light industry in our country, in particular, textile and sewing-knitting enterprises. Development of the production infrastructure of light industrial enterprises and the introduction of innovative technologies require the creation of scientific bases for the large-scale production of competitive products. In this regard, improvement of the organizational and economic mechanisms of increasing the efficiency of management of diversification of production in light industrial enterprises of our country based on foreign experiences is one of the urgent issues of today[4].

Reforming accounting in light industry enterprises in accordance with international financial reporting standards, developing a new sectoral chart of accounts to record the financial and economic activities of sewing and knitting enterprises, and eliminating methodological decisions that do not meet its modern principles from the accounting system remain urgent issues.

In order to further increase the competitiveness of industry enterprises, it is urgent to apply in practice the cluster model that combines the processes of cotton raw material production, primary processing, processing of products at textile and sewing and knitting enterprises, and the production of knitted products with high added value, to increase the production and export volume of high-quality and competitive products by introducing new innovative technologies, know-how and developments into the production process, as well as to widely promote national product brands in world trade markets. The tasks set include increasing the volume of textile exports to 7 billion US dollars by 2025[5].

2. Literature review. In the conditions of the digital economy, light industry sectors are making widespread use of clusters not only as raw material producers, but also directly in the sale of finished products on an industrial basis. The work on the organization of clusters in the system of sewing and knitting enterprises is currently at the initial stage and is being organized in a pilot form. Some theoretical, organizational and methodological aspects of the problems associated with improving the methodology for accounting and auditing income and expenses at enterprises have been covered by our country's and foreign scientists. However, their scientific research did not deeply and specifically consider the issues of accounting for costs, their distribution between cost objects and calculation objects, depending on the technologies of textile production[6].

foreign scientists Dragišić and Obadić, the positive impact of clusters is measured by the following indicators: production volume, costs, sales volume, number of jobs created, wages, productivity, prices, added value, number of enterprises, innovations, etc. Clustering has had an impact on the growth of efficiency. Modern competitiveness depends not on the availability of wages or the volume of enterprises, but on productivity. The characteristics of clusters are constantly being improved and updated in order to maintain an advantage over competitors. The cluster allows each member to be useful in expanding the scope of business and other activities associated with others, since each participant gives up its own flexibility[7].

Therefore, the development of clusters in certain sectors, regions or countries is of great importance. Indeed, clusters not only increase competitiveness in an industry or region, but also provide employment and increase mutual trust among cluster participants.

American scientists - M. Porter - "Theory of competitive advantage", - M. Enright, S. Resenfeld, P. Maskell and M. Lorensen created the "Concept of regional clusters", A.

Marshall "Theory of industrial areas", P. Becatin "Theories of Italian industrial districts", M. Storper "Ideal regional cluster" theories. The concepts of value added and cluster chain integration, regional training are also included in this group.

The theories of these scientists emphasize that clusters are highly effective in increasing the competitive advantage of manufacturers, and their system is coordinated with the activities of educational, scientific, technological, economic, and other service entities in the region.

The theory of clusters is also studied by the scientists of the CIS Yu.S. Artamonova, B.B. Khurustaliev and others, and projects for its implementation are being developed. The creation of the above theories and their practical importance imply increasing the competitiveness of the economy of countries, sectors and enterprises and achieving high efficiency[8].

Among the scientists of our republic, M. Rakhmatov, B. Zaripov, Ch. Murodov, Sh. Hasanov, M. Murodova and a number of others conducted scientific research. If we pay attention to the dictionary meaning of the word cluster, the term "cluster" is a French word, and its Uzbek translation means "bundle", "group", "aggregation".

A. Avlakulov emphasizes that "the transparency of information depends on the correct application of economic categories. A deep analysis of the categories "output", "expenditure" and "expense" is one of the important issues in accounting. Because these categories play an important role in the correct formation of the cost of production, which is one of the main indicators of the activities of economic entities." (6). For example, D. Azlarov believes that "...in the industry, general production costs are distributed to each type of product in proportion to the wages of workers in the main production. This leads to an increase in cost of production in enterprises with a high level of manual labor." (7). For example, M. Obidov expressed the opinion that "...when classifying and accounting for costs in clusters, it is necessary to ensure their occurrence and compliance with their economic content, to form complete and reliable information about the costs of enterprises in the cluster system, and to correctly determine the cost of products..."[9].

We agree with the above ideas and propose to implement the goal-costing method, which is a modern method of reducing product costs by dividing costs into target costs and setting target costs. From this point of view, the specifics of accounting in the cluster system require a serious discussion of issues related to the accounting of costs incurred in their activities.

## 2. Materials and Methods

The research method combines qualitative research with quantitative methods to evaluate textile and knitting enterprise cost accounting systems and cluster model implementation development. The research conducts theoretical analysis combined with empirical observations and statistical evaluation for studying present practices while suggesting methodological upgrades. Accounting procedures in the "Uztextile Industry" system received first priority for evaluation through inspections of how production costs are classified and allocated. The research used comparative analytical approaches to evaluate how well cluster-based accounting performed by comparing traditional methods to new models primarily regarding their impact on cost recognition throughout production stages. Data published by official industry reports and strategic documents served as the foundation for analyzing financial and economic indicators from 2020 to 2025 through Excel-based econometric modeling and published strategic documents. The development of the new cost structure utilized international standards and academic literature to establish two specific sub-accounts: "cost recognized at a certain point in time" and "goal costing." The team sought and presented recommendations which resulted from both practical findings from domestic enterprises and benchmarking methods that used international best practices as references. The adaptation process of the Model Chart of

Accounts matches IFRS principles to boost the transparency while standardizing and making financial reports comparable to international practices. The research incorporates both practical aspects and theoretical elements through this comprehensive method which leads to a standardized and effective cost accounting system proper for Uzbekistan's textile and knitting industry evolution.

### 3. Results and discussion

The reforms being implemented in the textile and garment industry are aimed at creating favorable conditions for the rapid development and diversification of the sector, investing in deep processing of semi-finished products in the textile industry, and increasing the volume of exports of finished products. Many practical works are being carried out to support them. We can see that enterprises in the system of the "Uztextile Industry" association, looking at the planned reforms for the next decade, i.e. 2020-2030, will also contribute to the further development of the economy of our republic, including textile and sewing and knitting enterprises (Table 1).

From the table, we can see that in the next 10 years, increasing the share of the light industry system in the annual growth of added value by 5 percent, increasing the growth of textile and knitwear products by almost 9 times, and increasing the number of small manufacturers in the light industry system by 30 percent will directly lead to a corresponding growth of the economy.

Table

Changes in some economic indicators in the system of the "Uztextile Industry" association in 2020-2030

№	Indicators name	Base (2020 (y.)	Goal by year		
			2021	2025	2030
1.	Annual growth of added value in the industrial system (in % of the base)	14 billion US dollars	3	5	5
2.	Increase in the volume of exports of industrial and food products (billion US dollars)	2.3	3.5	10	20
3.	Export share of textile and knitting industry products (%)	2	15	23	30
4.	Growth of the total volume of investments involved in the industrial and food business (in % compared to the base)	650 mln US dollars	20	40	80
5.	Increase in the number of textile and knitting industry enterprises that have implemented the international quality management system (%)	2	5	10	20
6.	Growth of the total number of small producers (micro-firms) in the light industry system (in % compared to the base)	129 221	10	20	30

Enterprises in the "Uztokimachilik sanoati" system are not only engaged in the production of raw materials, but also plan to use clusters directly in the production, processing, and sale of finished products of textile and knitwear products [10].

These works can be said to be at the initial stage. That is, the formation of clusters has already been established in the light industry system. Our studies have shown that the introduction of clusters in the light industry system, along with the liquidation of textile enterprises, has led to objections from entrepreneurs who have been operating in the sector for many years. However, taking into account this situation, clusters formed with the

complete liquidation of enterprises in the system are being formed on the basis of low-efficiency organizations. That is, today, in our country, instead of using only one type of clusters, some regions and enterprises are working with clusters on the basis of cooperation agreements and producing products. In recent years, great attention has been paid to the implementation of market relations and experiences that have been tested in international practice and are of great importance in the development of the economy[11].

One of them is the system of clusters, and now the issues of establishing the activity of this system in the field of cotton production, textile and light industry of our economy are a priority.

In order to establish the activity of clusters in the field of textiles and sewing and knitting, it is important to formulate a business plan and reflect all costs of the cluster in it, to manage costs for this technology and raw cotton processing technologies, and to develop measures to reduce the cost of products[12].

In the business plan of the cluster, organization of a continuous chain of the production process, from the cultivation of cotton raw materials to its sale as a finished product, the calculation of the costs of these processes and its control;

Secondly, to manage the expenses spent on the technology of processing raw cotton raw materials and the development of industrial products from semi-finished products in the process section and control its correct expenditure, develop measures to reduce the cost of products;

Thirdly, identifying sources of financing for investment projects and the commissioning of new production capacities and taking into account the actual expenditure of expenditures with forecast indicators are urgent issues.

According to investment projects for 2021-2025, it was determined that each new garment and textile enterprise must sell products of famous international brands and create at least 1,000 jobs.

The main activity of enterprises in the light industry system characterizes a very wide range of sold products (works, services), which affects the composition and volume of costs. Their reduction per unit of output, the correct use of material and labor resources based on scientifically based planning, and increasing the efficiency of cost accounting, analysis and management are one of the main conditions for increasing the efficiency of cost accounting[13].

In the system of textile and garment and knitwear enterprises, material costs account for the majority of the main costs. Based on the deep processing of raw materials in the industry, a forecast of target parameters for the production and export of high-value-added textile and garment and knitwear products for 2020-2025 has been developed, based on market demands. This, in turn, is a source of important economic indicators for determining the future strategic prospects of enterprises in the sector.

Table 2

Production of textiles and sewing-knitting products  
forecast of target parameters by volume

№	Product name	Size unity	Past eras			Pending status	Forecast			By 2025 growth
			2019	2020	2021		2022	2023	2024	
1.	Textile industry and sewing and knitting products work to release volume	million dollars	4325.5	5861.6	8058.2	11319.3	12514.1	13764.6	15028.5	3.5 times
1.	Rope , <i>from that painted and mixed</i>	thousand tn	623.7	770.3	921.4	930.2	974.3	990.3	1,032.5	2.7 times
			182.5	223.6	248.5	276.0	413.0	463.8	470.5	2.6 times
2.	Ready threading , total : <i>... technical, special (textiles )</i>	million sqm.	471.0	963.4	1,061.9	1,237.9	1,253.4	1,364.2	1,425.9	3 times
			130.3	223.6	248.5	276	413.6	463.8	470.5	3.6 times
3.	Ready-made knitted fabric	thousand tn	174.8	227.5	350.0	406.8	520.0	540.0	546	3.1 times
4.	Sewing and knitting products	million pieces	790	1070.6	1680	2850	2248.3	3080.0	3205.3	4.1 times
5.	Textile industry haberdashery	billions soums	72	106.5	156.8	191.6	221.3	278.1	360.5	5 times
6.	Socks products	million pairs	260.8	312.4	325.9	409.3	415.1	421.8	427	1.6 times
1.	Textile industry and sewing and knitting products export volume	million dollars	2156.4	2703.3	3130	3908.3	4760.00	5731.9	7075.00	3.3 times

It has been scientifically proven that it is possible to develop and implement long-term forecasts using econometric modeling, using the capabilities of the currently widely used programs "E-views", "Stata" and "Excel".

In our opinion, in determining the cost of goods sold in the light industry system, it is necessary to regroup the cost of goods sold by opening subaccounts called "Cost of goods sold recognized at a certain point in time", "Cost of goods sold recognized during the period", "Adjustment to cost of goods sold" within the synthetic account "Cost of goods sold recognized during the period" and "Goal costing" and to use the Goal costing method of calculating the cost of goods and services. It is appropriate to use it [14].

Goal costing is a method of calculating the cost of products (works, services), which is based on determining the target cost as the difference between the market price of the product and the gross profit. This method is a combination of the "Target Costing" and "Kaizen Costing" methods. Because if "Target Costing" includes innovative costs for research and development, the "Kaizen Costing" method is designed to gradually reduce costs, which involves reducing the difference between the budget (estimate) and the target cost.

By defining the term "cost", the main issues of cost accounting and its scope of activity are clarified. Instead of the term "calculation", we justified the introduction of the

concept of "costing". The implementation of this development is of great importance in the correct organization of cost accounting in enterprises.

According to international ACCA expert Ken Garrett, if a business is divided into several departments or divisions, internal economic prices based on cost, that is, transfer prices, are necessarily necessary. Usually, goods or services move between divisions, and each of them reports on its activities separately. The accounting system usually records goods or services that move between divisions. For this, it is necessary to use some monetary value measure. This monetary value is the transfer price. We propose that, based on the above international experience, if an average profit margin of 20 percent is set when forming the cost of each business division, the material interest of product manufacturers in the results of their activities and the transparency of management would increase[15].

According to the current resolution "On approval of the Regulation on the composition of costs of production and sale of products (works, services) and the procedure for forming financial results", accounting and tax accounting information must be consistent with each other. However, the absence of such consistency requires the re-incorporation of costs into the taxable base. Therefore, we consider it appropriate to introduce these changes in the calculation, valuation, documentation and chart of accounts of work in progress in practice.

In this regard, it is proposed to introduce new sub-accounts and accounting entries for their interconnection into the Model Chart of Accounts recommended by the Ministry of Finance of the Republic of Uzbekistan to assess the balance of work in progress. In particular, it is justified to move the 2020 Model Chart of Accounts - "Work in progress account" - to section 7 of this Chart of Accounts.

7010 - " Cost recognized at a certain point in time",

7020 - " Cost recognized during the period",

7030 - Expenses reflected in the "Cost Adjustment" subschemes are categorized.

In this case, if temporary expenses are invested, that is, equipment, they will be put into operation in three years, and these expenses will be included in the operating expenses of the enterprise. In addition, the Model Chart of Accounts consists of 5 parts and 9 sections, three of which have reserve accounts. The Model Chart of Accounts includes active, passive counter-active, counter-passive and transit accounts. In the following table, we have presented the proposed new chart of accounts for the classification of expense accounts by type of activity in accordance with international accounting standards.

Recommendations were made to adapt the calculation and contract accounts included in the section "Expenses" in the current accounting chart of accounts to IFRS. Taking into account the industry characteristics of cost management accounting, cost accounting, and financial results auditing, the need to divide costs into financial accounting, management accounting, and tax accounting in the practice of cost accounting and their description were introduced into the activities of enterprises affiliated with the "Uzbek Textile Industry" association system. As a result, dividing costs into groups led to an increase in the efficiency of cost accounting and auditing, ensuring the accuracy of information.

#### 4. Conclusion

In this article Scientific research also shows that today, great attention is being paid to the textile and garment industry to turn it into a driver of our economy. It is precisely by involving clusters in the network system that production volumes will increase.

In our opinion, this system has its own advantages:

Firstly, it allows for sufficient minimization of costs and their correct distribution. When accounting for them, it creates the opportunity to transform the IFRS to international standards by using the proposed new chart of accounts.

Secondly, it is possible to determine using econometric modeling methods in the implementation of the cost calculation, in making the correct management decisions and in defining the development prospects of the industry.

It also allows you to control costs and determine target prices in advance, in line with market requirements, as well as determine the timing and quality of products produced based on market demand and customer expectations. This industry has the opportunity to reduce product costs by 20 percent by applying the modern goal costing method.

Fourth, it ensures the maximization of the financial results of organizations by maximizing prices, planning, and selling product volumes, as well as reducing the cost of manufactured products.

In conclusion, it should be said that while the development of our country's economy is the most important issue, the application of foreign experience and the introduction of a cluster system in the sector are also of great importance in the development of enterprises in the textile and garment and knitwear industries and the further development of the production of export products.

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