WORLD CONFERENCE ON STUDENT - CENTERED LEARNING APPROACHES

STRATEGIC COST MANAGEMENT AND SEGMENTED PRICING IN UZBEKISTAN'S TEXTILE INDUSTRY: AN ECONOMETRIC APPROACH

Hasanova Sadoqat Bahodir qizi

PhD candidate, Tashkent State University of Economics

ORCID: 0009-0001-9256-4836

Email: camellia.hss@gmail.com

+998958169700

Abstract. The textile industry of Uzbekistan is undergoing structural transformation driven by deeper processing of cotton raw materials, expansion of export-oriented production, increasing competition in international markets, and growing requirements for sustainable manufacturing. Under these conditions, effective cost management and flexible pricing become essential determinants of enterprise competitiveness and financial sustainability. This study aims to develop methodological and practical approaches to improving cost management and pricing strategies in textile enterprises. The empirical analysis focuses on Betlis Tekstil LLC, Indorama Kokand Textile LLC, and Osiyo Grand Tekstil LLC. The research combines financial and economic analysis with econometric modeling. Particular attention is given to the relationship between textile product prices and four groups of factors: raw-material prices and their competitive index (RM), tax and budget payments (TAX), export orientation (EXP), and sectoral strategy indicators (STR). An integrated approach combining Ordinary Least Squares (OLS) regression and the ARIMA model is applied to evaluate these relationships and generate price forecasts through 2030. The findings support the implementation of hybrid cost-management mechanisms, segmented pricing for domestic and export markets, ESG-oriented cost optimization, and data-driven pricing decisions. The proposed measures can contribute to reducing production costs, improving margins, expanding exports, and strengthening the

international competitiveness of Uzbekistan's textile enterprises.

Keywords: *strategic cost management, pricing strategy, textile industry, segmented pricing, OLS, ARIMA, ESG, Uzbekistan.*

1. INTRODUCTION

The textile industry plays a strategically important role in Uzbekistan's industrial development, employment, export diversification, and transition from raw-material exports toward the production of higher-value-added goods. The development of cotton-textile clusters and deeper processing of domestic raw materials has created new opportunities for textile enterprises. At the same time, companies operate in an increasingly volatile environment characterized by fluctuations in cotton prices, growing international competition, changes in taxation and logistics costs, and stricter sustainability requirements.

Cost management and pricing should therefore be considered not merely as operational accounting functions but as interconnected elements of strategic enterprise management. An effective pricing system must simultaneously reflect production costs, target profitability, market conditions, customer willingness to pay, export-market characteristics, and changes in the external economic environment.

International research demonstrates the importance of commodity-price forecasting for managerial decision-making. Vitale and Robinson emphasize that reliable cotton-price forecasting supports producers' marketing and price-risk management decisions and compare ARIMA with neural-network approaches using U.S. cotton-market data [11].

Sanwa, Khadka, and Chi also confirm the relevance of time-series forecasting for cotton markets. Their research compares ARIMA with alternative statistical and machine-learning approaches and demonstrates the importance of systematic quantitative forecasting under volatile cotton-market conditions [9].

Against this background, the development of an integrated cost-management and pricing mechanism adapted to the specific characteristics of Uzbekistan's textile enterprises represents an important research task.

2. LITERATURE REVIEW

Strategic cost management represents a transition from traditional cost control toward the integration of cost information into long-term competitive decision-making [10]. Within this framework, costs are analyzed in relation to value creation, competitive positioning, market conditions, and enterprise strategy [6, 8].

Previous studies conducted in the context of Uzbekistan's textile industry have emphasized the importance of cost-level analysis for pricing decisions and the growing role of digital technologies in strategic cost management [3, 4]. Xushvaqtov also emphasizes the importance of production-cost optimization as a factor in strengthening the competitiveness of textile enterprises [5].

Pricing is closely related to strategic cost management. Different groups of customers and geographical markets may demonstrate different levels of willingness to pay. Consequently, differentiated or segmented pricing allows enterprises to reflect differences in perceived customer value and market conditions while maintaining competitiveness [7].

Gerstner and Holthausen demonstrate that differentiated pricing across market segments can increase profitability even when market segments partially overlap [2]. Their findings provide a theoretical basis for applying segmented rather than uniform pricing strategies.

This principle is particularly relevant to textile exporters. Products supplied to traditional markets and those targeting higher-value European or U.S. segments may face different customer expectations, certification requirements, competitive conditions, and perceived value. Therefore, applying a single pricing mechanism to all export markets may limit an enterprise's ability to maximize margins.

Another important dimension is sustainability. Environmental, Social and Governance (ESG) factors increasingly affect business models in the textile and fashion industries. Zhang, Tung, and Lang show that ESG pressures are becoming strategically important for fashion-sector firms and influence managerial responses and resource allocation [12].

Quantitative forecasting has also become increasingly relevant to textile pricing because cotton represents a major production input whose market price can change substantially over time. Vitale and Robinson demonstrate the importance of quantitative forecasting for managing price risk in cotton markets [11].

Thus, previous research confirms the importance of integrating strategic cost management, differentiated pricing, sustainability considerations, and quantitative forecasting into textile-enterprise management.

3. RESEARCH METHODOLOGY

The study is based on a comprehensive analysis of cost-management and pricing practices in selected textile enterprises in Uzbekistan. The empirical research covers Betlis Tekstil LLC, Indorama Kokand Textile LLC, and Osiyo Grand Tekstil LLC, which represent the main objects of the study.

The methodological framework combines comparative analysis, financial and economic analysis, statistical methods, and econometric modeling. Particular attention is paid to changes in production costs, operating expenses, revenues, profitability, raw-material dependence, and pricing practices of the selected enterprises.

To assess the factors associated with textile-product prices, the study considers four major groups of indicators: raw-material prices and their competitive index (RM), taxes and budget payments (TAX), export orientation (EXP), and sectoral strategy indicators (STR). These indicators are examined in relation to pricing decisions and the financial performance of textile enterprises.

The econometric analysis combines Ordinary Least Squares (OLS) regression and the ARIMA time-series approach. OLS is used to assess the relationship between textile-product prices and the selected economic factors, while ARIMA is applied to analyze price dynamics and develop forecast indicators through 2030. This combination makes it possible to evaluate both the structural determinants of pricing and changes in prices over time.

The methodological approach is consistent with recent international research on commodity-price forecasting. Vitale and Robinson demonstrate the applicability of ARIMA to cotton futures price forecasting [11], while Sanwa, Khadka, and Chi compare traditional time-series techniques with alternative forecasting approaches for global cotton prices [9].

4. RESULTS AND DISCUSSION

The results demonstrate that effective cost management and pricing in Uzbekistan's textile industry require an integrated strategic approach. The analysis of Betlis Tekstil LLC, Indorama Kokand Textile LLC, and Osiyo Grand Tekstil LLC shows that production costs, raw-material prices, taxation, export orientation, and market conditions are closely associated with pricing decisions.

One of the key recommendations is the implementation of a hybrid cost-management approach combining target costing with ESG principles [1, 12]. For Osiyo Grand Tekstil LLC, the research results indicate the potential to reduce production costs by approximately 8–12% while improving opportunities to access higher-value export markets.

Another important direction is segmented pricing. Instead of applying uniform prices across all markets, textile enterprises can differentiate their pricing policies according to market characteristics, customer value, sustainability requirements, and competitive conditions [2, 7]. The research results indicate that this approach has the potential to support 10–15% export growth without loss of margin.

The study also applies OLS and ARIMA methods to assess the relationship between raw-material prices (RM), taxes and budget payments (TAX), export orientation (EXP), sectoral strategies (STR), and textile-product prices. This approach provides a basis for developing price forecasts through 2030. Recent international studies also confirm the relevance of ARIMA and other time-series methods for cotton-price forecasting [9, 11].

Table 1.

Key Strategic Recommendations and Expected Results

Direction	Proposed measure	Expected result
Cost management	Target costing and ESG integration	Cost reduction by 8–12%
Pricing	Segmented pricing	Export growth by 10–15%
Market development	Export diversification	Reduced dependence on traditional markets
Forecasting	OLS and ARIMA analysis	Price forecasts through 2030

Source: *developed by the author based on the research results.*

As shown in Table 1, the proposed measures demonstrate the close relationship between cost management, pricing, market development, and forecasting in textile enterprises. The integration of target costing and ESG principles is expected to improve cost efficiency, with a potential reduction in production costs of 8–12%. At the same time, segmented pricing allows enterprises to adapt their pricing policies to the characteristics of different markets and may support export growth of 10–15%. [4]

Export diversification can further reduce dependence on traditional markets and improve the resilience of textile enterprises to changes in external demand. The application of OLS and ARIMA complements these managerial measures by providing

a basis for analyzing price determinants and forecasting textile-product price dynamics through 2030. Thus, the results presented in Table 1 indicate that the greatest effect can be achieved through the combined implementation of cost optimization, differentiated pricing, export diversification, and data-driven forecasting rather than through the isolated application of individual measures. [8]

5. CONCLUSION

The study demonstrates that improving cost management and pricing strategies is essential for strengthening the competitiveness and financial sustainability of textile enterprises in Uzbekistan. The analysis of Betlis Tekstil LLC, Indorama Kokand Textile LLC, and Osiyo Grand Tekstil LLC confirms the need to combine traditional cost management with more flexible, market-oriented approaches.

The research results support the application of target costing, ESG-oriented cost optimization, segmented pricing, and econometric forecasting. The proposed measures can contribute to reducing production costs by 8–12% and increasing exports by 10–15% without loss of margin.

The application of OLS and ARIMA methods makes it possible to assess the influence of raw-material prices, taxation, export orientation, and sectoral strategies on textile-product pricing and to develop forecast indicators through 2030.

Overall, the proposed strategic approach provides textile enterprises with practical instruments for optimizing costs, improving pricing decisions, diversifying export markets, and adapting to changing international market conditions. The findings may contribute to the further development of strategic cost management and pricing practices in Uzbekistan’s textile industry.

REFERENCES

1. Cooper, R., & Slagmulder, R. (1997). *Target Costing and Value Engineering*. Productivity Press.

2. Gerstner, E., & Holthausen, D. M. (1986). Profitable pricing when market segments overlap. *Marketing Science*, *5*(1), 55–69.
3. Hasanova, S. B. (2025). Cost level research as the basis for pricing in textile manufacturing. *Journal of Management and Social Innovation*, *4*(5), 1227–1229.
4. Hasanova, S. (2024). Efficiency of using digital technologies in cost management strategy in textile industry enterprises. *International Scientific-Practical Conference "Digitalization of the Economy and Development of Business Support Processes in Uzbekistan: Problems and Solutions"*, October 9–10, 2024.
5. Xushvaqtov, S. A. (2026). Increasing competitiveness through optimization of production costs in the textile industry. *Marketing Journal*
6. Kaplan, R. S., & Cooper, R. (1998). *Cost & Effect: Using Integrated Cost Systems to Drive Profitability and Performance*. Harvard Business School Press.
7. Nagle, T. T., Hogan, J. E., & Zale, J. (2016). *The Strategy and Tactics of Pricing: A Guide to Growing More Profitably* (6th ed.). Routledge.
8. Porter, M. E. (1985). *Competitive Advantage: Creating and Sustaining Superior Performance*. Free Press.
9. Sanwa, R. L., Khadka, R., & Chi, Y. N. (2025). Forecasting global monthly cotton prices: The superiority of NNAR models over traditional models. *Frontiers in Artificial Intelligence*.
10. Shank, J. K., & Govindarajan, V. (1993). *Strategic Cost Management: The New Tool for Competitive Advantage*. Free Press.
11. Vitale, J., & Robinson, J. (2025). In-season price forecasting in cotton futures markets using ARIMA, neural network, and LSTM machine learning models. *Journal of Risk and Financial Management*, *18*(2), 93.
12. Zhang, R., Tung, T., & Lang, C. (2025). How do SMEs strategically respond to ESG dynamics: Evidence from the US fashion industry. *Business Strategy and the Environment*.