INDUSTRY 4.0 AS A FACTOR IN THE MODERNIZATION OF MARKETING STRATEGIES OF TEXTILE CLUSTERS IN UZBEKISTAN

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Abstract. *The article examines the role of Industry 4.0 in the development of marketing strategies of textile clusters in Uzbekistan within the context of digital economic transformation. The study also analyzes the importance of big data and digital platforms for personalized marketing, demand forecasting, and optimization of interaction with international buyers. A system for evaluating the effectiveness of digital marketing strategies of textile clusters is proposed, including website metrics, B2B platform indicators, international exhibition participation metrics, and digital branding indicators. The study concludes that the adoption of digital marketing tools significantly enhances the competitiveness of textile clusters in Uzbekistan and expands their export potential in global markets.*

Keywords: *Industry 4.0, digital marketing, textile clusters, export strategy, production digitalization, big data, branding.*

Introduction

Within the framework of the Digital Uzbekistan 2030 program, a number of reforms are being implemented that include measures aimed at developing digital skills among the population, supporting startups, and fostering the growth of the digital industry as a whole. These initiatives are designed to stimulate digitalization across various sectors of the economy.

According to the International Telecommunication Union, by the end of 2025 approximately 6 billion people worldwide use the Internet, which represents about 73% of the global population. However, more than 2 billion people still remain unconnected. The growth in the number of Internet users and the development of digital infrastructure have a direct impact on the advancement of Industry 4.0 in Uzbekistan, forming the fundamental conditions for the modernization of textile clusters.

Considering the functioning of textile clusters under conditions of global competition, it is important to emphasize that widespread global Internet connectivity provides the technological foundation for the implementation of such technologies as the Internet of Things, cloud platforms, digital value chains, and cyber-physical systems (for example, digital twins, QR codes, and RFID tags). Without these technologies, the implementation of Industry 4.0 would not be possible.

At present, there is no official information regarding the number of textile clusters in Uzbekistan that have implemented Industry 4.0 in their production processes. Nevertheless, based on industry reports, it can be noted that approximately 60% of manufacturers in the textile industry are either implementing or planning to implement elements of digitalization and production automation. According to the strategy of Digital Uzbekistan 2030, the share of digital technologies in industrial production is expected to increase by 50%. This, in turn, will contribute to improving

productivity, enhancing the efficiency of natural resource utilization, and increasing the quality of textile products produced by Uzbekistan's textile clusters.

The Role of Industry 4.0 in the Marketing Strategies of Textile Clusters in Uzbekistan

1. Product Transparency and Traceability

Production digitalization and the use of technologies such as the Internet of Things, Blockchain, QR codes, and RFID tags make it possible to track the path of raw materials and finished products up to the final consumer. This becomes a powerful marketing tool, as consumers can see the real origin of the fabric and compliance with quality standards. As a result, this increases trust in the brand and supports export-oriented marketing strategies.

2. Personalized Marketing and Data Analytics

The use of Big Data and platform-based solutions enables textile clusters to analyze buyer behavior, forecast demand for specific products, and adapt their offerings to individual preferences. Consequently, this enhances the effectiveness of digital marketing and optimizes interaction with customers both in the domestic market and in international markets.

3. Branding and Positioning in the Global Market

The application of Industry 4.0 technologies within marketing strategies allows companies to create the image of an innovative and technologically advanced manufacturer, which is particularly important for export-oriented textile clusters in Uzbekistan. Digital tools help demonstrate product quality, environmental responsibility, and compliance with international standards. Overall, this strengthens the brand and increases competitiveness in global markets.

4. Production and Logistics Efficiency

Automation and the integration of digital technologies into production processes reduce production and logistics time. This allows marketing strategies to respond more quickly to market trends and consumer demands.

System for Evaluating the Effectiveness of Digital Marketing Strategies of Textile Clusters

Under the conditions of Industry 4.0, the marketing strategies of textile clusters are becoming increasingly digital and data-driven. The use of websites, online trading platforms, and digital communication tools not only helps promote products but also makes it possible to measure the effectiveness of marketing activities through digital metrics.

1. Website Metrics

Website Traffic – number of website visitors

Conversion Rate – proportion of visitors who submit a cooperation request

Lead Generation – number of B2B inquiries from potential buyers

Average Session Duration – time spent on the website

Geography of Visitors – geographical distribution of potential buyers

2. B2B Platform Metrics

Product Page Views – number of product page visits

Inquiry Rate – number of inquiries from buyers

Buyer Conversion Rate – conversion from inquiry to signed contract

Supplier Ranking – supplier's position on the platform

3. International Exhibition Participation Metrics

Number of Business Contacts – number of business connections established

Qualified Leads – potential clients with high purchase probability

Contracts Signed After Exhibition – contracts concluded after the exhibition

Cost per Lead – cost of acquiring one business contact

4. Digital Branding Metrics

Brand Visibility Index

International Buyer Engagement

Export Inquiry Growth

The use of digital marketing metrics enables textile clusters in Uzbekistan to move from traditional, largely subjective evaluation methods toward analytically driven marketing strategies.

Conclusion

The conducted analysis demonstrates that the introduction of digital tools enables textile clusters to significantly expand the geographical scope of their export supplies. Unlike traditional promotion methods, which are mainly based on participation in international exhibitions, intermediary channels, and personal business contacts, digital marketing provides opportunities for systematic analysis of potential buyer behavior and for evaluating the effectiveness of marketing activities.

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