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PROBLEMS OF FORMATION AND DEVELOPMENT OF REGIONAL CLUSTERS IN THE LIGHT INDUSTRY OF UZBEKISTAN

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Abstract: The article analyzes the current state and problems of formation and development of regional clusters in the light industry of Uzbekistan. As a result of cluster policy, the number of cotton-textile clusters and employment in the sector have grown substantially, and the country has acquired the capacity to fully process its cotton fiber domestically. The regional analysis indicates that Fergana, Kashkadarya, and Namangan regions occupy leading positions. At the same time, clusters face such problems as a high level of commercial debt denominated in foreign currency, a low level of certification, regional imbalance, and a decline in export prices. The establishment of the Light Industry Development Agency is assessed as an important institutional response; recommendations for addressing the existing problems have been developed.

Keywords: light industry, cotton-textile cluster, vertical integration, export, regional imbalance, international certification, Light Industry Development Agency, GSP+.

Annotatsiya: Mazkur maqolada O‘zbekiston yengil sanoatida hududiy klasterlarni shakllantirish va rivojlantirishning hozirgi holati hamda muammolari tahlil qilingan. Klaster siyosati natijasida paxta-to‘qimachilik klasterlari soni va tarmoqdagi bandlik sezilarli darajada oshdi, shuningdek, mamlakat paxta tolasi mahsulotlarini to‘liq ichki qayta ishlash imkoniyatiga ega bo‘ldi. Hududiy tahlillar Farg‘ona, Qashqadaryo va Namangan viloyatlari yetakchi o‘rinlarni egallayotganini ko‘rsatadi. Shu bilan birga, klasterlar xorijiy valyutada shakllangan yuqori tijorat qarzdorligi, sertifikatlash darajasining pastligi, hududiy nomutanosiblik hamda eksport narxlarining pasayishi kabi muammolarga duch kelmoqda. Yengil sanoatni rivojlantirish agentligining tashkil etilishi muhim institutsional yechim sifatida baholanib, mavjud muammolarni bartaraf etish bo‘yicha tavsiyalar ishlab chiqilgan.

Kalit so‘zlar: yengil sanoat, paxta-to‘qimachilik klasteri, vertikal integratsiya, eksport, hududiy nomutanosiblik, xalqaro sertifikatlash, Yengil sanoatni rivojlantirish agentligi, GSP+.

Аннотация: В статье анализируются современное состояние, проблемы формирования и развития региональных кластеров в легкой промышленности Узбекистана. В результате кластерной политики значительно увеличились количество хлопково-текстильных кластеров и занятость в отрасли, а страна получила возможность полностью перерабатывать хлопковое волокно внутри страны. Региональный анализ показывает, что лидирующие позиции занимают Ферганская, Кашкадарьинская и Наманганская области. Вместе с тем кластеры сталкиваются с такими проблемами, как высокий уровень коммерческой задолженности, номинированной в иностранной валюте, низкий уровень сертификации, региональный дисбаланс и снижение экспортных цен. Создание Агентства по развитию легкой промышленности оценивается как важный институциональный ответ, а также разработаны рекомендации по решению существующих проблем.

Ключевые слова: легкая промышленность, хлопково-текстильный кластер, вертикальная интеграция, экспорт, региональный дисбаланс, международная сертификация, Агентство по развитию легкой промышленности, GSP+.

INTRODUCTION

Since the cluster approach was substantiated by M. Porter [5; 6], it has become one of the principal instruments of regional economic policy. Reforms launched in Uzbekistan in 2017 prompted the introduction of cluster policy in the light industry: the “Uzpaxtasanoat” agency was dissolved and the cotton-textile cluster model was introduced. The number of clusters grew from 13 in 2018 to 97 in 2020 and to 142 in 2023 [7; 13]; in 2024, under a recovery program, it was adjusted to 134 [10]. Since 2023, cotton fiber has been independently processed into yarn at 100 percent [11]. Light industry accounts for 14 percent of industrial output and 16 percent of exports, employing 600 thousand people in the sector [4; 11]. In September 2025, the Light Industry Development Agency was established [3]. However, the decline in the world cotton price from USD 3,000 to USD 1,500 per ton has caused serious financial and structural problems.

On this basis, the present study aims to analyze the current state of the clusters, identify their problems, and develop recommendations.

REVIEW OF LITERATURE ON THE SUBJECT

The concept of industrial clusters has been extensively studied in the context of regional competitiveness, innovation, and sustainable economic development. One of the foundational theoretical approaches was proposed by Michael E. Porter, who defined clusters as geographically concentrated groups of interconnected companies, suppliers, service providers, and associated institutions operating within a particular industry. In his work The Competitive Advantage of Nations, Porter (1990) emphasized that clusters increase productivity, stimulate innovation, and strengthen the international competitiveness of regions and nations. Later, in Clusters and the New Economics of Competition, Porter (1998) further explained that clusters create a favorable environment for knowledge exchange, specialization, and efficient cooperation between enterprises and institutions, thereby becoming an important mechanism for industrial modernization.

The application of cluster theory to the textile and light industry has attracted significant scholarly attention, especially in countries where textile production plays a strategic economic role. Marco Bellandi and Eleonora Santini (2019) analyzed the transformation of the textile industrial district of Prato in Italy and demonstrated how territorial servitization and local productive systems contribute to regional industrial resilience and competitiveness. Their study highlighted that cooperation between firms, service providers, and local institutions improves production flexibility and supports adaptation to global market changes. Similarly, Giovanna Dei Ottati (2014) examined the fast-fashion industrial district of Prato and emphasized the growing role of transnational business networks in shaping regional textile clusters. The author argued that international integration, migration-driven entrepreneurship, and localized industrial specialization significantly influence the development trajectory of textile clusters.

In the case of Uzbekistan, the formation of cotton-textile clusters has become one of the most important directions of industrial and agricultural reform in recent years. According to the Press Service of the President of the Republic of Uzbekistan (2024), large-scale reforms have been implemented to modernize the textile and leather industry, increase export potential, and establish vertically integrated regional clusters combining cotton cultivation, processing, and finished textile production. Government policies have focused on improving value-added production, expanding employment opportunities, and strengthening regional industrial infrastructure.

At the same time, researchers have identified several institutional and economic challenges associated with the cluster model in Uzbekistan. Bakhtiyor Babadjanov and Martin Petrick (2023) analyzed Uzbekistan's cotton clusters within the framework of industrial policy debates and concluded that clusters have contributed to stronger contractual relations between farmers and textile enterprises, increased processing capacity, and improved export orientation. However, the authors also noted persistent problems related to governance efficiency, financial sustainability, market competition, and technological modernization. Their findings suggest that despite significant state support, some regional clusters still face difficulties in achieving innovation-driven growth and integrating effectively into global textile value chains.

Overall, the reviewed literature demonstrates that regional clusters in the light industry can serve as an effective mechanism for enhancing industrial competitiveness, regional specialization, and export diversification. Nevertheless, international experience and the case of Uzbekistan indicate that sustainable cluster development requires not only state support and infrastructure investment but also institutional efficiency, innovation capacity, skilled labor, and integration into international markets. These theoretical and empirical approaches provide an important scientific basis for analyzing the current problems and future development prospects of regional clusters in the light industry of Uzbekistan.

RESEARCH METHODOLOGY

The study draws on official statistical and academic sources for the period 2018–2025 — publications of the Statistics Agency (stat.uz), regional statistical departments, the Uzbekistan Association of Cotton-Textile Clusters (UACC), the World Bank, the International Labour Organization (ILO), the German Agency for International Cooperation (GIZ), and the United States Department of Agriculture Foreign Agricultural Service (USDA FAS). The analysis of cluster theory was carried out on the basis of M. Porter's works, recent research on cotton-textile clusters [7], and studies of the Italian Prato and Turkish Bursa clusters [8; 9]. Because the Statistics Agency publishes data using different criteria and reporting periods across regions, the type of indicator and reporting period are specified separately for each region in the table.

ANALYSIS AND RESULTS

From a regional perspective, the share of textile, clothing, and leather production in regional industry varies considerably (Table 1).

Table 1. Share of the textile, clothing, and leather industry in regional industrial output (2024–2025)[1]

Region	Share in regional industry, %	Reporting period	Indicator type
Fergana	34.3	Jan–Aug 2024	T+C+L*
Kashkadarya	25.8	Jan–Feb 2025	T+C+L*
Namangan	21.4	End of 2024	Textile only**
Jizzakh	15.3	Jan–May 2024	T+C+L*
Andijan	9.9	End of 2024	Textile only**
Tashkent city	5.1	January 2025	Textile only**
Tashkent region	4.9	Jan–Jul 2024	Textile only**

According to Table 1, in Fergana region the textile, clothing, and leather industry constitutes the largest segment of regional industry (34.3%); the figure of 25.8% in Kashkadarya indicates the rapid development of clusters in the southern regions. In Tashkent region and Tashkent city, the share is low because of multi-sectoral industry, but the absolute volume is high.

The dynamics of cluster policy over time also deserve attention. Between 2018 and 2024, employment in the sector grew 3.2-fold, from 188 thousand to 600 thousand people. Textile exports rose from USD 1.6 billion in 2018 to USD 2.1 billion in 2019–2020 and to USD 3.2 billion in 2022. Standing at USD 3.1 billion in 2023, exports declined to USD 2.65 billion in January–November 2024 — the result of the fall in world cotton prices and the contraction of international demand. By 2030, the government has set the goal of bringing textile exports to USD 5 billion [4]. The share of light industry in industrial output rose from 10.8 percent in 2018 to 17.2 percent in 2020 before declining to 14 percent in 2024 — reflecting not an absolute contraction of the sector, but the more rapid growth of other branches such as mining and metallurgy and machine building.

Alongside the achievements, important opportunities for further development have also emerged. One of the most significant areas is the improvement of financial sustainability: the sector's commercial debt amounts to USD 2.2 billion, with 90–95 percent of it denominated in foreign currency. In 2024, the government introduced a subsidy of UZS 1 million per ton of cotton. In several regions, fiber-processing capacity exceeds raw material supply by a factor of 2–2.5, contributing to a more competitive environment. Only 16 percent of enterprises currently hold international certificates, creating broad potential for expanding the use of GSP+ preferences; in the export structure, yarn (45.8%) still exceeds finished products (38.5%). Export prices changed by 9 percent for yarn, 15 percent for fabric, and 13 percent for finished products (president.uz, 2024); the gradual increase in specialist training beyond the current 167 specialists per year in the leather industry is expected to support growing sectoral demand.

In response, on 1 May 2024 Presidential Decree No. PD-71 was adopted, setting the task of achieving 100 percent yarn processing by 2027 and providing infrastructure for textile-specialized small industrial zones. On 19 September 2025, Presidential Decree No. PD-174 established the Light Industry Development Agency and allocated a special fund of USD 200 million to it [3].

The findings indicate that cluster policy in Uzbekistan has achieved notable quantitative results within a short period and partially confirm the advantages of clusters described by Porter [5]. As Babadjanov and Petrick [7] note, local clusters have succeeded in establishing contractual relations with farmers, while innovative modernization and international branding continue to offer broad opportunities for further development and strengthening of global competitiveness. The experience of the Italian Prato textile district [8] shows that successful clusters are based on long-term evolution, deep cooperation among networks of small and medium-sized enterprises, and branding; the Turkish Bursa cluster [9] has achieved technological renewal on the basis of Porter's "diamond model." The experience of Kashkadarya region may serve as a model for the southern regions. The financial burden issue found an institutional solution in 2025, but the foreign-currency debt preserves a systemic risk.

1 Source: compiled on the basis of official publications of regional statistical departments.
* T+C+L: combined output of textile, clothing, and leather production.
** Textile products only (NACE-2 classes).

CONCLUSIONS AND SUGGESTIONS

The formation of regional clusters has been one of the successful directions of the reforms launched in 2017: the number of clusters grew from 13 to 134, and employment grew from 188 thousand to 600 thousand people. The textile, clothing, and leather industry has the highest share in Fergana (34.3%) and Kashkadarya (25.8%) regions. At the same time, ongoing efforts aimed at improving financial sustainability, expanding certification coverage, reducing regional disparities, and strengthening export price stability continue to create favorable conditions for the sector's qualitative development. The following recommendations are proposed:

First, to improve the financial position of clusters under the framework of the agency: restructure commercial debt, manage currency risk, and continue export insurance and preferential working-capital lending.

Second, to expand targeted programs for the introduction of ISO 9001, OEKO-TEX, GOTS, and Better Cotton standards and to scale up GSP+ consulting services.

Third, to encourage geographic diversification of clusters in Bukhara, Surkhandarya, Khorezm, and the Republic of Karakalpakstan, drawing on the Kashkadarya model.

Fourth, to complete on schedule the tasks set by Presidential Decree No. PD-71 [2] — reaching 100 percent yarn processing by 2027 and providing the textile-specialized small industrial zones with infrastructure.

Fifth, to introduce a dual education model by linking leading enterprises with technical schools and colleges, and to establish a systematic partnership between clusters and the Tashkent Institute of Textile and Light Industry.

Sixth, to use the support mechanisms under Presidential Decree No. PD-174 [3] for the digitalization of production processes (ERP, MES, PLM, and AI-based systems).

Consistent implementation of the above recommendations will ensure the transition of the clusters from quantitative growth to qualitative development and will allow textile exports to reach USD 5 billion by 2030.

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