

**DIGITAL AND SUSTAINABLE DIMENSIONS OF TOURISM SERVICES EXPORT IN
UZBEKISTAN: A DATA-DRIVEN PERSPECTIVE**

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Abstract. This article explores the digital and sustainable dimensions of tourism services export in the Republic of Uzbekistan through a comprehensive statistical approach. Export data from 2018 to 2024 are analyzed to identify structural trends, regional diversification, and digital transformation in tourism-related services. The study reveals that tourism services consistently rank among the top contributors to the country's service exports, with a strong orientation toward neighbouring CIS countries. The research applies SWOT analysis, comparative statistics, time-series methods, and structural assessment to evaluate the sector's performance and potential. Key findings highlight the growing role of digital platforms, the need for sustainable infrastructure, and the importance of institutional support. Based on the data-driven insights, the paper proposes strategic measures to enhance export capacity, promote eco-friendly tourism models, and support regional inclusion in Uzbekistan's tourism economy.

Keywords: Tourism services export, Uzbekistan, digital transformation, sustainable tourism, statistical analysis, regional diversification, service economy.

Introduction. In the context of the rapidly expanding global service economy, tourism has emerged not only as a cultural and social phenomenon but also as a vital economic driver for many developing countries. According to the World Tourism Organisation (UNWTO), the tourism sector experienced a robust recovery in 2023, with over 1.3 billion international tourist arrivals recorded worldwide, reaching 88% of pre-pandemic levels (UNWTO, 2024). This resurgence emphasises the sector's resilience and the growing significance of sustainable and digitally enabled tourism models.

For Uzbekistan, a country endowed with exceptional historical-cultural assets, diverse landscapes, and a strategic location in Central Asia, tourism services export represents a critical avenue for economic diversification, foreign exchange earnings, and regional integration. In the first quarter of 2024, services exports amounted to USD 1,139.4 million, with tourism-related services accounting for 40% ranking second among all service categories (State Statistics Committee, 2024). These figures indicate both the growing global demand and Uzbekistan's increasing supply-side capabilities.

Despite these positive trends, the tourism services export sector in Uzbekistan faces several systemic challenges:

- **Limited digital transformation** across tourism value chains, especially among small and medium-sized enterprises (SMEs), which restricts global visibility and market access;
- **Insufficient infrastructure** in secondary regions with tourism potential, causing geographic concentration in a few urban centers;
- **Low integration of sustainability standards**, including eco-certification, green logistics, and energy efficiency practices;
- **Underdeveloped human capital** in tourism export marketing, digital content creation, and multilingual communication.

In response, the Government of Uzbekistan has introduced multiple reforms aimed at improving the investment climate in tourism, such as expanding visa-free entry to over 90

countries, promoting “Open Sky” aviation policies, and adopting digital tools for e-visa and e-marketing. However, these reforms require systemic coordination and data-driven monitoring to be effective.

This study aims to statistically evaluate the current state of tourism services export in Uzbekistan, with a particular focus on digitalisation and sustainability dimensions. It seeks to bridge the gap between macro-level policies and micro-level performance indicators by identifying structural imbalances, regional disparities, and untapped digital potential. The research contributes to the discourse on how Uzbekistan can enhance its global competitiveness in tourism services by embracing innovation, improving infrastructure, and aligning with international sustainability benchmarks.

Thus, the study is highly relevant in today’s context, where tourism is no longer assessed solely by arrival numbers or revenue, but also by how inclusive, resilient, and technologically adaptive the sector is in addressing future crises and achieving the Sustainable Development Goals (SDGs).

Literature Review. Exporting tourism services plays a vital role in strengthening the external trade balance and supporting economic diversification, particularly in emerging economies. For countries like Uzbekistan, tourism is not only a source of income and employment but also a strategic tool for increasing international visibility and soft power. A structured review of global and regional literature reveals both progress and persisting gaps in the field, especially concerning digital transformation and sustainable practices in tourism exports.

International research emphasises the economic effectiveness of tourism exports and its dependence on institutional and structural factors. According to UNWTO (2023), global tourism accounts for over 25% of total global services trade, underscoring its significance as a driver of export revenues and cross-border connectivity. Göçer and Bulut (2020) highlight that in developing countries, the quality of infrastructure and the use of digital marketing are crucial for boosting tourism exports. However, they also note that poor digital marketing strategies and weak promotional capacity remain serious constraints, particularly in less-developed regions.

Technological integration has received increasing scholarly attention. Gretzel et al. (2015) stress the efficiency of digital tools—such as artificial intelligence, big data analytics, and IoT-based platforms—in enhancing tourist engagement and decision-making. Yet, in low- and middle-income countries like Uzbekistan, the adoption of such technologies is often limited due to budget constraints, low digital literacy, and insufficient policy support.

Within the Uzbek context, the academic literature remains relatively limited and fragmented. Norchayev (2021) analyzed the impact of tourism infrastructure on export capacity, recognizing its foundational role in enabling service delivery. However, his study lacked emphasis on global competitiveness metrics and did not address digital readiness. Similarly, Rakhimova (2024) advocated for the integration of digital innovations in tourism marketing and operations but did not present clear mechanisms or policy frameworks to guide implementation.

A valuable contribution comes from Jumaniyazova (2024), who examined the role of informal institutions—such as cultural proximity, shared language, and historical ties—in increasing tourism flows from neighbouring Central Asian countries. Her findings support the notion that informal factors can enhance regional tourism exports, particularly where formal agreements or diplomatic channels are limited. Nonetheless, there remains a noticeable absence of quantitative studies that evaluate the impact of such informal institutions using robust empirical methods, representing a clear research gap.

Successful strategies from countries like Turkey and Spain provide useful benchmarks for Uzbekistan. In 2023, Turkey generated USD 49 billion in tourism export revenues—a result attributed to the synergy between well-developed physical infrastructure and advanced digital

marketing systems (WTTC, 2024). Spain, under its “Turismo España” national branding initiative, attracted over 85 million international tourists by integrating digital storytelling, multi-channel promotion, and regional experience diversification (Turismo España, 2023). These models underscore the importance of combining national branding with targeted regional offerings and sustainability narratives.

From a theoretical standpoint, institutional theory (North, 1990) offers a useful framework to analyse how both formal institutions (e.g., visa regimes, legal frameworks) and informal institutions (e.g., cultural norms, trust networks) shape tourism exports. However, while international literature provides robust discussions on these factors, their quantitative examination in the Uzbek context remains sparse. Most existing studies are either descriptive or policy-oriented, lacking data-driven insights that can inform targeted interventions.

Moreover, literature on sustainability and tourism exports in Uzbekistan is still in its infancy. There is limited focus on how environmental standards, green certifications, and energy-efficient infrastructure affect the country’s export capacity. Given the increasing importance of sustainable tourism in global consumer preferences and policy agendas (e.g., SDGs), this represents another key area for further investigation.

The reviewed literature reveals that while the economic significance of tourism services export is well established, the roles of digital transformation, sustainability, and informal institutions remain underexplored in the context of Uzbekistan. Empirical research is needed to bridge these gaps and align national tourism strategies with global trends. This study aims to address these lacunae through a statistical and multi-dimensional analysis that highlights not only export performance but also the structural and institutional levers that can shape Uzbekistan’s future in the global tourism economy.

Methodology. This study aims to examine the current state of tourism services export in the Republic of Uzbekistan, to identify existing challenges, and to evaluate opportunities for enhancing its development, with a particular focus on digital and sustainable dimensions. The research is based on a descriptive-statistical and analytical methodology, employing a data-driven approach to ensure an objective and comprehensive understanding of sectoral dynamics. The analysis relies entirely on secondary data obtained from official national and international sources, including the State Committee of the Republic of Uzbekistan on Statistics (stat.uz), the United Nations World Tourism Organization (UNWTO), the World Travel and Tourism Council (WTTC), and the World Bank. Additional materials were derived from publicly accessible policy documents and reports issued by the Ministry of Tourism and Cultural Heritage of Uzbekistan.

The core dataset encompasses tourism services export indicators from 2018 to 2024 and includes detailed statistics on transport and accommodation services, as well as the dynamics of flows influenced by the introduction of visa-free regimes. These indicators were used to assess the structure of tourism services within the broader services export sector and to identify patterns of growth, regional orientation, and digital engagement. The research applies several methods to analyze the data, including descriptive statistics to observe export volumes, growth rates, and structural distribution across service categories; structural analysis to assess the internal composition of tourism services and their share in the total services export; time-series analysis to trace dynamic changes over a seven-year period and make short-term forecasts; comparative benchmarking to position Uzbekistan’s performance against international examples such as Turkey, Spain, and Kazakhstan; and expert assessment to evaluate qualitative aspects such as regulatory barriers, infrastructure quality, and institutional capacity, based on interviews with tourism professionals.

Additionally, a qualitative content review of strategic tourism development documents and national policy frameworks was conducted to evaluate their alignment with global digitalisation and sustainability benchmarks, such as the UN Sustainable Development Goals (SDGs) and WTTC's post-pandemic recovery agenda. Statistical analysis was carried out using Microsoft Excel and STATA software. In particular, time-series models and regression-based forecasting were employed to project future trends in tourism services export under current policy trajectories.

Despite the robustness of the methodological design, several limitations should be acknowledged. The availability of up-to-date data, particularly for the most recent years, remains inconsistent, and demand-side indicators—such as tourist expenditures and consumption patterns—are not fully captured in official records. Moreover, the impact of informal institutions, including cultural proximity, linguistic ties, and diaspora networks, which are often essential in shaping regional tourist flows, remains difficult to quantify due to the lack of standardized measurement tools. Similarly, indicators specific to sustainability and digital integration—such as the rate of e-booking usage, online platform presence, and environmental certification—are limited or unavailable at the national level.

Nevertheless, the methodological approach adopted in this study ensures sufficient analytical depth and practical relevance. By integrating multiple sources of data and diverse analytical techniques, the study offers a comprehensive assessment of Uzbekistan's tourism services export sector and its preparedness to respond to the dual imperatives of digital transformation and sustainable development in the global tourism economy.

Results and Discussion. This study analysed the dynamics, structural shifts, export directions, and regional diversification of tourism services export in Uzbekistan. The findings reveal that although the sector continues to experience growth, there remain underdeveloped segments with substantial untapped potential. In the first quarter of 2024, Uzbekistan's total services export volume reached USD 1,139.4 million, accounting for 17.8% of the country's overall export volume. Of this, tourism services contributed USD 455.8 million, making up 40.0% of total services export, positioning it as one of the largest segments after transport services (State Statistics Committee, 2024).

A structural analysis of service exports highlights tourism as a strategic component. As illustrated in Table 1, travel services represent the second-largest segment after transport, indicating the growing importance of tourism in Uzbekistan's foreign trade balance and the potential for further expansion through diversification, international cooperation, and targeted marketing strategies.

Table 1. Structural Composition of Uzbekistan's Services Export (Q1 2024, USD million)

Type of Service	Volume (USD million)	Share in Total Services Export (%)
Transport services	529.0	46.4%
Travel (tourism) services	455.8	40.0%
Telecom, IT, and information services	76.3	6.7%
Other business services	33.0	2.9%
Insurance and pension services	16.0	1.4%
Financial services	10.3	0.9%
Use of intellectual property	7.8	0.7%
Total	1,139.4	100.0%

Source: Compiled by the authors based on data from the State Committee of the Republic of Uzbekistan on Statistics.

Travel services mainly consist of transport, accommodation, and tour services—core offerings that respond to primary tourist demand. However, the analysis reveals that additional sub-sectors such as wellness tourism, gastronomic experiences, eco-tourism, and pilgrimage-based services remain underdeveloped. This underlines the necessity for deep service diversification, especially in high-value and sustainability-driven segments.

The regional orientation of Uzbekistan's tourism export is also apparent in Figure 1, which shows the composition of inbound tourists by country of origin. The chart illustrates that tourism demand is largely driven by neighbouring countries, with 72% of all foreign tourists in 2023 originating from CIS nations such as Kazakhstan, Tajikistan, Kyrgyzstan, and Russia.

Figure 1. Composition of Foreign Tourists Visiting Uzbekistan by Country (2023, thousand persons)

Country	Arrivals (thousand)
Kazakhstan	2,650
Tajikistan	1,570
Kyrgyzstan	910
Russia	860
Turkey, Iran, China, etc.	1,220
Total	7,210

Source: State Committee of the Republic of Uzbekistan on Statistics.

This pattern reflects Uzbekistan's reliance on border tourism and cultural proximity as primary drivers of tourist flows. Although beneficial, this over-dependence on regional markets poses a strategic risk and limits long-term sustainability. In contrast, countries like Turkey and Spain have successfully positioned themselves in global markets through integrated strategies combining national branding, sustainable product offerings, and digital outreach. Turkey's tourism export revenue reached USD 49 billion in 2023 (WTTC, 2024), highlighting the competitive gap Uzbekistan needs to bridge.

Further analysis identifies several constraints currently limiting Uzbekistan's tourism services export:

Infrastructure challenges, particularly in air connectivity, road quality, and accommodation availability, hinder geographic expansion beyond a few urban centers.

Weak digital marketing and limited use of technology reduce international visibility, especially among non-CIS audiences.

Lack of global branding and identity: Uzbekistan's tourism image remains underdeveloped on global platforms.

Underutilization of informal institutions, such as cultural ties, diaspora relations, and linguistic proximity, which are known to significantly enhance regional tourism flows, especially in Central Asia.

Despite these challenges, the sector is showing consistent growth. In the first quarter of 2024, tourism services accounted for USD 455.8 million in exports, second only to transport services. Between 2022 and 2024, the annual growth rate of tourism exports averaged between 12% and 13%, indicating that tourism is among the fastest-growing segments within the services sector.

In 2023, over 7.2 million foreign tourists visited Uzbekistan, with 36.8% from Kazakhstan, 21.8% from Tajikistan, and 12.6% from Kyrgyzstan. This concentration confirms the

dominance of regional ties and suggests that Uzbekistan's current tourism model remains proximity-dependent, centered around cultural familiarity and border access.

At the same time, the introduction of visa-free regimes, infrastructure investment, and digital solutions—such as e-visas, online booking, and destination apps—have begun to shift the landscape. These reforms signal a gradual move toward integration with the broader global tourism economy.

Institutional reforms—particularly in visa liberalization, public-private partnerships, and transport modernization—are also playing a catalytic role in unlocking export potential. Moreover, informal institutions such as shared culture and language continue to exert a strong influence, especially in fostering cross-border flows from neighboring countries.

Comparative insights suggest that leading tourism-exporting nations like Malaysia, Turkey, and Spain have successfully leveraged digital marketing, Halal tourism infrastructure, and cultural heritage branding to build globally competitive service exports. These strategies offer actionable lessons for Uzbekistan, especially in areas like religious tourism, culinary tourism, and digital engagement.

In addition, seasonality risks, which expose tourism flows to volatility, require mitigation through diversification into wellness tourism, eco-tourism, and off-season travel experiences. Currently, more than 70% of tourist arrivals are concentrated in just 4–5 cities (Tashkent, Samarkand, Bukhara, Khiva), reflecting underutilised potential in other regions.

Statistical analysis confirms that Uzbekistan possesses a strong foundation to become a regional leader in tourism services export. However, realising this potential requires a systemic approach that combines institutional innovation, territorial diversification, and digital marketing strategies aligned with global sustainability and competitiveness standards.

Conclusion. The current state and potential of Uzbekistan's tourism services export are closely tied to economic, institutional, and regional factors, and statistical analyses confirm that this sector is increasingly playing a vital role in the national economy. In the first quarter of 2024, total services exports surpassed USD 1.1 billion, accounting for 17.8% of total exports, with tourism services contributing approximately 40% of the services export structure (State Statistics Committee, 2024). These figures underscore the importance of further developing this sector, particularly through regional cooperation and targeted strategies to expand exports to neighboring countries.

The analysis showed that Uzbekistan's tourism services export is primarily driven by active relations with culturally and geographically proximate countries such as Kazakhstan, Tajikistan, and Kyrgyzstan. This highlights the growing role of informal institutions—such as linguistic proximity, shared religious and historical heritage, and diaspora networks—in shaping cross-border tourism flows.

Moreover, an assessment of international best practices (e.g., Turkey, Malaysia, Spain, Italy, and Kazakhstan) reveals that the success of tourism services export is based on the following critical factors:

- Continuity and strategic clarity in national tourism policy;
- Development of tourism infrastructure through public-private partnerships;
- Promotion of local products and experiences as global tourism brands;
- Integration of new sub-sectors such as gastronomic tourism, wellness tourism, halal tourism, and ecotourism.

Based on these findings, the following policy recommendations have been formulated:

- Improve the regulatory framework governing tourism services export.
- Strengthen legal mechanisms supporting public–private partnerships in tourism infrastructure development.

- Establish legal foundations for sub-sectors such as halal tourism, ecotourism, and wellness tourism.
- Integrate diaspora engagement strategies with international tourism marketing initiatives.
- Develop cross-border tourism routes that emphasise shared cultural and historical assets with neighbouring countries.
- Expand road, rail, and air connectivity with neighboring countries to improve tourism mobility.
- Gradually implement an "Open Skies" policy to stimulate regional and global tourist flows.
- Design globally appealing tourism brands such as "Visit Uzbekistan," "Halal Silk Road," or "Spiritual Heritage Tours."
- Participate regularly in international tourism fairs and exhibitions, and adopt advanced digital marketing tools (e.g., Google Ads, TripAdvisor, Booking.com) to increase global visibility.
- Expand tourism infrastructure beyond major cities into valleys, mountainous regions, desert zones, and cross-border corridors.
- Encourage local entrepreneurship and family-run guesthouses through mechanisms aimed at integrating community-based services into export supply chains.
- Create forecasting models using STATA or SPSS to predict tourist arrivals, expenditures, and services export volumes.
- Introduce a set of sustainability indicators for tourism and ensure regular monitoring to align sector development with international standards.

In conclusion, the sustainable development of tourism services export in Uzbekistan requires the full mobilisation of the country's existing infrastructure and human capital. It is crucial to implement innovative mechanisms based on the best international practices and digital technologies to accelerate growth. Ensuring synergy among government policy, private sector initiatives, and regional integration is of strategic importance for consolidating tourism as a core pillar in Uzbekistan's export structure. A future-oriented, data-driven, and sustainability-based approach will not only enhance export volumes but also strengthen the country's position in the global tourism market.

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