than of the district economies; separating the two requires the estimation procedure, which is not published.

Conclusion. The tourism economy of Samarkand region is organised around a steep core–periphery gradient: a 7.2-fold range in enterprise density, a Gini coefficient of 0.374 against population, and only three of sixteen districts over-represented. Family enterprise partially reverses that gradient, but only within a middle ring of ten districts, where its quotient reaches 0.96 against 0.69 for enterprises overall; in the four outer districts it is more under-represented than enterprises in general (0.37 against 0.46). The structure is concentric and three-zoned rather than dichotomous, and corresponds to district unemployment in the 2025 cross-section on the descriptive terms set out above.

For policy it follows that assessing territorial balance by enterprise counts alone understates participation in the middle ring, where family enterprises compensate, and conceals the outer zone, where nothing does. Instruments intended to improve territorial balance should be specified by organisational form rather than by aggregate enterprise numbers, since the two yield different maps of the same region.

References

1. Britton S.G. The political economy of tourism in the Third World // Annals of Tourism Research. 1982. Vol. 9, No. 3. P. 331–358.

2. Christaller W. Some considerations of tourism location in Europe: The peripheral regions – under-developed countries – recreation areas // Papers of the Regional Science Association. 1964. Vol. 12, No. 1. P. 95–105.

3. Friedmann J. Regional Development Policy: A Case Study of Venezuela. Cambridge, MA: M.I.T. Press, 1966. 279 p.

4. Getz D., Carlsen J. Characteristics and goals of family and owner-operated businesses in the rural tourism and hospitality sectors // Tourism Management. 2000. Vol. 21, No. 6. P. 547–560.

5. O’zbekiston Respublikasi Milliy statistika qo’mitasi. Ishsizlik darajasi. Indikator kodi 2.02.01.2200. Ochiq ma’lumotlar portali. URL: https://stat.uz

6. O’zbekiston Respublikasi Prezidentining 2025-yil 15-maydagi PF-87-son Farmoni. URL: https://lex.uz/docs/-7531559

7. Safarov B. et al. Forecasting the volume of tourism services in Uzbekistan // Sustainability. 2022. Vol. 14, No. 13. Art. 7762.

8. Samarqand viloyatining statistik axborotnomasi: 2025-yil yanvar–dekabr. Samarqand, 2026. 148 b.

9. Scheyvens R., Biddulph R. Inclusive tourism development // Tourism Geographies. 2018. Vol. 20, No. 4. P. 589–609.

Research on the Development Path of Smart Tourism in Uzbekistan under the Background of Digital Transformation

Wei Na
"Silk Road”International University of Tourism and Cultural Heritag
Samarkand, Uzbekistan

Abstract:*As a core hub of the Silk Road in Central Asia, Uzbekistan boasts abundant historical-cultural and natural tourism resources. In recent years, it has continuously promoted digital reform in the tourism industry, including establishing national-level digital tourism platforms, popularizing smart scenic-spot services, and optimising cross-border digital customs clearance systems for tourists. Taking the current situation of Uzbekistan’s tourism industry as the entry point, this paper adopts literature analysis and situational investigation methods to analyse the practical value, development achievements and existing problems of its smart-tourism construction. This study aims to facilitate high-quality and sustainable development of smart*

tourism in Uzbekistan and offer references for the digital transformation of cultural-tourism industries among inland Central Asian countries.

***Keywords**: Uzbekistan; smart tourism; digital transformation; cultural-tourism industry; Silk Road tourism*

Introduction. Located in the hinterland of Central Asia, Uzbekistan serves as a key node on the ancient Silk Road. It hosts world-famous historical and cultural cities such as Samarkand, Bukhara and Khiva, and possesses superior endowments of tourist resources including historical relics, folk customs and natural landscapes. According to data from the State Committee of Statistics of Uzbekistan, the country received 10.1 million foreign tourists in 2024, 2.7 times the figure of 2017, while domestic tourist arrivals exceeded 22 million, reflecting growing comprehensive benefits of its cultural-tourism industry[7].

By 2024, the application penetration rate of smart-tourism technologies in Uzbekistan had reached 30 %[8], driving the national cultural-tourism market size to exceed 1.5 billion US dollars, representing a year-on-year increase of 12 %. Nevertheless, industrial upgrading is constrained by weak digital infrastructure, single-faceted technology application and prominent regional development gaps. Based on the national reality of Uzbekistan, this paper systematically explores the practical significance, achievements and core challenges of smart-tourism construction, and optimises its development paths, so as to help Uzbekistan build a benchmark destination for smart tourism across Central Asia.

2. Practical Significance of the Research. At the national level, digital channels can expand tourist source markets, enhance the brand influence of Silk Road cultural tourism, accelerate the shift of tourism from resource-driven growth to digitally-driven innovation, and advance the optimisation and upgrading of the national economic structure. At the industrial level, smart transformation mitigates pain points of traditional tourism such as low service efficiency, poor visitor experience and extensive management, and improves the core competitiveness of the tourism sector. For tourists, functions including online booking, digital audio guides, contactless ticket verification and multilingual digital services greatly enhance cross-border travel experiences. Moreover, the optimisation paths proposed in this research can provide operable references for policy-making and industrial upgrading of cultural-tourism authorities in Uzbekistan.

3. Discussion Results. 3.1 Achievements of Smart-Tourism Development in Uzbekistan. To visualise the development status and industrial scale of Uzbekistan’s smart tourism, core cultural-tourism statistics for 2024-2025 are compiled in Table 1 below.

Table 1 Core statistical indicators of smart tourism and cultural-tourism industry in Uzbekistan (2024-2025)

No.	Core Indicator	Specific Data	Year of Data	Data Source
1	Total foreign tourist arrivals	10.10 million arrivals, 2.7-fold increase compared with 2017	2024	State Committee of Statistics
2	Total domestic tourist arrivals	22.00 million arrivals	2024	State Committee of Statistics
3	Market size of cultural-tourism industry	1.5 billion USD	2024	People’s Daily

[7] UZBEKISTAN STATE COMMITTEE OF STATISTICS. Development of Tourism and Recreation in the Republic of Uzbekistan for 2024[R]. Tashkent: State Committee of Statistics, 2024.

[8] Yue H B, Niu Y. “Attractive, Visitor-friendly and Highly Convenient”[N]. People’s Daily, 2025-12-31(016).

4	Penetration rate of basic smart-tourism technologies	30 %	2024	People’s Daily
5	Inbound tourist arrivals and growth rate	7.9572 million inbound tourists	2024	Zenodo Academic Database
6	Chinese tourist arrivals to Uzbekistan	250 000 Chinese visitors from January to November 2025	2025	Eurasian Journal of Economic and Policy Research
7	Share of inbound tourists in core cities	Tashkent, Samarkand and Bukhara receive over 70 % of national inbound tourists	2024	UNESCO
8	Smart-scenic-spot coverage rate in Fergana Region	Less than 15 %	2024	UNESCO[15]
9	Penetration rate of in-depth digital technologies in tourism	Less than 8 %, below the Central-Asian regional average[9]	2024	Sabar Academic Journal
10	Tourism service export value and growth rate	2.4 billion USD, year-on-year growth of 164 %	First half of 2025	International Journal of Applied Innovation
11	Overall growth rate of inbound tourists	Year-on-year growth of 13 %[10]	Jan-Sep 2025	UN Tourism

As illustrated in Table 1, Uzbekistan’s cultural-tourism industry keeps expanding with remarkable opening-up outcomes. Basic smart-tourism infrastructure has been implemented, yet structural problems persist including superficial technology empowerment and large regional disparities.

3.2 Existing Problems of Uzbekistan’s Smart-Tourism Development. Smart tourism in Uzbekistan remains at the preliminary digital-development stage, featuring emphasis on foundational construction rather than in-depth operation. Several major bottlenecks are summarised as follows.

First, prominent regional development imbalance. Smart-tourism resources are highly concentrated in three core cities: Tashkent, Samarkand and Bukhara, which attract more than 70 % of national inbound tourist flows and digital cultural-tourism service traffic[11]. By contrast, remote cultural-tourism zones such as Khiva and Fergana lag far behind in digital transformation.

Second, superficial application of digital technologies. Current smart-tourism practices are mostly limited to basic digital services such as online ticket purchasing, QR-code verification and information display. Advanced technical applications including big-data passenger-flow analysis, AI-powered customer service, targeted marketing, smart security monitoring and ecological monitoring are largely absent.

Third, imperfect supporting mechanisms and service systems. On one hand, insufficient inter-departmental coordination exists among cultural-tourism, telecommunication and administrative authorities. On the other hand, smart services lack adequate adaptability: services for tourists with special needs are insufficient, while multilingual services and personalised customised tourism offerings remain inadequate.

[9] HIDAYAT T, SAPUTRA R. Digital Systems in Tourism Management and International Practices: A Comparative Perspective with Uzbekistan[J]. Sabar Journal, 2025.
[10] UN TOURISM. Fastest Growth in International Tourism Ranking 2025[R]. Madrid: UN Tourism, 2025.
[11] UNESCO. Share of inbound tourists in core cities. In: PERMANENT DELEGATION OF UZBEKISTAN TO UNESCO. Fergana Regional Tourism Development Report 2025[R]. Paris: UNESCO, 2025.

3.3 Opportunities and Challenges for Development. Cultural-tourism cooperation across Central Asia has been deepening, alongside growing China-Uzbekistan cultural and tourist exchanges. The Digital Silk Road brings technical, capital and channel support for Uzbekistan’s smart tourism and expands overseas tourist markets. Nevertheless, Uzbekistan faces intensified digital-tourism competition from neighbouring Central-Asian countries. Restricted by domestic shortages of skilled labour, technology and infrastructure, it must overcome multiple bottlenecks to realise smart-tourism upgrading[12].

4. Conclusion. Uzbekistan should pursue a differentiated and sustainable smart-tourism development path grounded in its resource endowments and national conditions. First, allocate resources across the whole territory, increase infrastructure investment for remote cultural-tourism regions, narrow regional digital gaps and promote coordinated development of territory-wide smart tourism[13]. Second, deepen technology empowerment by introducing big-data, artificial intelligence, virtual reality and other emerging digital technologies, and expand diversified service scenarios such as intelligent security management, targeted marketing, intelligent operation-maintenance and virtual cultural-tourism experiences[14]. Third, improve supporting institutional frameworks: establish cross-departmental collaborative governance, unify digital-construction standards, optimise barrier-free and multilingual smart services, and perfect tourist feedback and quality-supervision mechanisms. Through multi-dimensional upgrading, Uzbekistan can transform itself from a traditional resource-driven tourist destination into a modern, smart, international and sustainable cultural-tourism landmark and build a benchmark for smart-tourism development in Central Asia.

References

[1] Yue H B, Niu Y. “Attractive, Visitor-friendly and Highly Convenient”[N]. *People’s Daily*, 2025-12-31(016).

[2] ABDULLAEV S. Smart Tourism Transformation in Uzbekistan: Sustainable Digital Strategies[J]. Zenodo, 2025.

[3] HIDAYAT T, SAPUTRA R. Digital Systems in Tourism Management and International Practices: A Comparative Perspective with Uzbekistan[J]. *Sabar Journal*, 2025.

[4] KARIMOV A. The Role of Digital Technologies and Innovations in Tourism[J]. Arxiv Universal Publishings, 2025.

[5] YUSUBOVA M. Integrating ESG Dimensions through Digital Technologies for Sustainable Tourism Development: Evidence from Heritage Destinations in Uzbekistan[J]. *Frontiers in Sustainability*, 2026.

[6] RAKHIMOV S. Modern Trends in the Development of Uzbekistan's Tourism Potential[J]. *International Journal of Applied Innovation*, 2025.

[7] UMAROV B. Ways and Solutions to Enhance Service Quality in Developing Domestic and International Tourism in Uzbekistan[J]. *Eurasian Journal of Economic and Policy Research*, 2025.

[8] KHODJAEVA Z. Smart and Inclusive Tourism in Bukhara: Towards Accessibility in Heritage City[J]. *Frontiers in Sports and Active Living*, 2025.

[9] NORMATOV J. Metaverse Tourism in Uzbekistan[R]. Prezi Academic Report, 2026.

[10] UZBEKISTAN NATIONAL AGENCY FOR MASS MEDIA. Tourism Development Potential of Uzbekistan[R]. Tashkent: UZINFOCOM, 2025.

[11] Anonymous. Destination Marketing and Brand-building of Uzbekistan Tourism 2025[R]. Docin, 2025.

[12] UN TOURISM. Fastest Growth in International Tourism Ranking 2025[R]. Madrid: UN Tourism, 2025.

[12] KARIMOV A. The Role of Digital Technologies and Innovations in Tourism[J]. Arxiv Universal Publishings, 2025.

[13] YUSUBOVA M. Integrating ESG Dimensions through Digital Technologies for Sustainable Tourism Development: Evidence from Heritage Destinations in Uzbekistan[J]. Frontiers in Sustainability, 2026.

[14] NORMATOV J. Metaverse Tourism in Uzbekistan[R]. Prezi Academic Report, 2026.