

SHAPING THE FUTURE OF UZBEKISTAN'S TOURISM: AN IN-DEPTH ANALYSIS OF INFRASTRUCTURE INFLUENCE AND STRATEGIC PLANNING

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ABSTRACT

This article presents a comprehensive assessment of the impact of infrastructure on tourism, exploring its crucial role in shaping the tourism industry. Through expert methods and survey analysis, the study highlights the quality of infrastructure by assessing the development level of transportation, accommodation, tourist attractions, amenities, and tourism services in Uzbekistan's 14 regions. As a result, the classification of regions with regard to infrastructure development is proposed. In addition, an equilibrium equation in the tourism market concerning infrastructure facilities is suggested, which can be

used to assess the balanced development of general infrastructure. The findings underscore the need for policymakers and stakeholders to recognize the direct correlation between infrastructure and tourism success, providing insights to guide future infrastructure planning and development initiatives in the ever-evolving global tourism landscape.

Keywords: tourism; tourism infrastructure; places of interest; quality indicators; demand; supply; equilibrium

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INTRODUCTION

Tourism has emerged as one of the world's largest and most dynamic industries, driving economic growth and cultural exchange between nations. Infrastructure development and maintenance have long been recognized as critical components in facilitating tourism, ensuring that destinations remain accessible, comfortable, and appealing to travelers. As global travel continues to expand, it becomes increasingly important to understand and assess the impact of infrastructure on tourism.

As the global tourism industry is developing at an unprecedented pace, Uzbekistan is also trying to attract more international tourists. The number of foreign tourists in 2021 has increased almost twofold since 2017, from 2,8 million to 5.4 million people (Safarov 2022a), and it is projected to increase to 7 million tourists by 2025 (Safarov, 2022a). The government is also actively carrying out reforms directed at developing tourism infrastructure. Tourism has become a priority in regions such as Samarkand, Bukhara, and Khiva, where many historical places attract tourists. More than 8000 cultural heritage sites can potentially become hot spots (Statistics Agency, 2022). So, with this great potential, Uzbekistan aims to become a new mass tourism destination in the future.

Infrastructure development is a long-term process requiring an accurate assessment of resources and capacities, particularly, geographical locations. Because all tourism services occur in one of the elements of infrastructure, the sphere of tourism relies heavily on them. Developing tourism means developing infrastructure components, which is why the topic has gained traction in recent years.

The relationship between infrastructure and

tourism is multifaceted, encompassing various aspects such as transportation systems, accommodation facilities, public utilities, and cultural amenities. Efficient and modern transportation networks, including airports, highways, and public transit, play a fundamental role in connecting destinations to the rest of the world. Accessible and reliable transportation not only attracts a greater number of tourists but also enhances their overall travel experience.

Moreover, the availability of quality accommodation and well-maintained public facilities significantly influences tourists' satisfaction during their stay. Adequate infrastructure ensures that tourists can immerse themselves in the local culture and attractions without major disruptions, leading to positive reviews and encouraging repeat visits. Indeed, Madberger (2014) emphasized the importance of consumer reviews and ratings and outlined potential outcomes from positive and negative reviews. Seetanah et al. (2011) explored the impact of tourism infrastructure on tourism demand from a long-term perspective.

Understanding the intricate relationship between infrastructure and tourism is paramount for policymakers, governments, and stakeholders in the tourism industry. By gaining insights into the preferences and behaviors of tourists and the significance of well-planned infrastructure, decision-makers can develop effective strategies to boost tourism growth, create employment opportunities, and foster sustainable economic development in destination regions. Thus, infrastructure can be a significant factor in attracting international tourists (Nguyen, 2021).

Tourism infrastructure encompasses a wide range of physical and social components

essential for the functioning and development of tourism destinations (Liu et al., 2016), and tourism infrastructure and its significance in supporting the economy is huge (Hall, 2015). One also can outline the impact of digital technologies on delivering tourism services. Even though digital technologies might be considered an efficient means of delivering tourism services, they also may have some disadvantages, such as over-standardization and problems in producing customized products (Kurniati & Suryanto, 2023).

Infrastructure efficiency is vital for tourism as it significantly impacts on the overall travel experience and the attractiveness of a destination for potential visitors. First, efficient infrastructure enhances the convenience and accessibility of tourist destinations, making it easier for travelers to reach their desired locations. This accessibility is critical in attracting tourists to a destination (Ruhanen, 2013). Concerning time and cost savings, efficient transportation infrastructure reduces travel time and tourist costs. Shorter travel times between attractions and amenities allow visitors to maximize their time spent on leisure activities, increasing their overall satisfaction (Song & Li, 2008). Tourism infrastructure is also changing city architecture, focusing more on sustainability (Judd, 2015). Csagoly et al. (2017) pointed out that tourism in wild areas is developing quickly, but the wilderness infrastructure does not always follow eco-friendly standards. According to their findings, entrepreneurs are more focused on consumers than on sustainability.

Obviously, good infrastructure provides a seamless and comfortable travel experience for tourists. From smooth airport check-ins to efficient transportation options and well-managed attractions, efficient infrastructure contributes to a positive travel experience (Chon & Maier, 2010). Also, destinations with efficient infrastructure gain a competitive advantage in attracting tourists. Positive travel experiences are often shared through word-of-mouth and online reviews, which can attract more visitors and contribute to the destination's competitiveness in the tourism market (Beirman, 2003).

Efficient infrastructure helps manage the flow of tourists, especially in popular destinations. Properly designed and maintained infrastructure can prevent overcrowding and mitigate the

negative impacts of over-tourism (Gössling et al., 2012). A well-maintained infrastructure contributes to the safety and security of tourists. Properly constructed and maintained roads, well-lit streets, and efficient emergency services provide reassurance to travelers (Crotts & Litvin, 2003).

Moreover, efficient infrastructure positively affects the local economy (Tojiyeva & Ibragimov, 2021) by attracting more tourists and generating higher revenues from tourism-related businesses. This, in turn, supports job creation and economic growth in the destination (Smeral, 2008). In particular, the multiplier effect of tourism can be significant in some countries (Musayeva & Silinevica, 2016). Also, infrastructure efficiency is essential for sustainable tourism practices. When transportation, waste management, and water supply systems are efficient, the environmental footprint of tourism activities is reduced, and responsible travel is promoted (Sheldon & Var, 2009).

High infrastructure efficiency implies more repeat visits and destination loyalty (Suprina et al., 2023). Satisfied tourists are more likely to return to a destination in the future. Efficient infrastructure contributes to positive memories of a trip, increasing the likelihood of repeat visits and building destination loyalty among travelers (Getz, 2008). Ultimately, infrastructure efficiency directly influences tourist satisfaction. A well-organized and smoothly functioning destination leaves a positive impression on visitors, leading to higher levels of satisfaction and better overall travel experiences (Buhalis & Law, 2008).

In the face of rapid globalization and an ever-changing tourism landscape, this article aims to contribute to the body of knowledge surrounding infrastructure's role in tourism. Through this research, we hope to provide valuable guidelines and recommendations that can assist in shaping the future of tourism development, ensuring that infrastructure remains a catalyst for a vibrant and resilient tourism industry. The research will delve into both the positive and negative effects of infrastructure on tourism, highlighting the consequences of inadequate or poorly maintained infrastructure and the benefits of strategic investment and sustainable development practices.

LITERATURE REVIEW

Various studies and research articles that discuss the significance of tourism infrastructure, its impact on destination development, and the challenges associated with its planning and management have been examined.

Tourism infrastructure encompasses various components such as transportation, accommodation, attractions, amenities, and services that cater to the needs and preferences of tourists (Klochko et al., 2016). The first important component of the general infrastructure is transportation. Transport infrastructure, including airports, seaports, roads, railways, and public transportation systems, is a fundamental component of the tourism industry. Efficient transportation networks and connectivity significantly impact tourist mobility and accessibility, influencing destination choices and visitor experiences (Dwyer, Forsyth, & Spurr, 2006). Transportation infrastructure also affects the tourism industry's economic benefits and regional development (Li, Song, Witt, & Fei, 2016). Khadaroo and Seetanah (2008) used a gravity model to assess the impact of transportation networks on international tourist flow. They emphasized the need for collaboration among tourism stakeholders to boost a sector's development. For example, using social exchange theory, Kanwal et al. (2020) investigated the relationship between the perceived impact of transport infrastructure and perceived tourism benefits. They found that the development of transportation infrastructure strongly correlated with a better perception of tourism in the region.

Accommodation is also a core infrastructure facility for the tourism industry. The availability and quality of accommodation facilities greatly influence tourists' decisions and experiences. A well-developed accommodation infrastructure, including hotels, resorts, vacation rentals, and campsites, is vital for attracting and accommodating visitors, and it contributes to visitor satisfaction, length of stay, and destination competitiveness (Li et al., 2016). The quality and variety of accommodation options also can enhance a destination's appeal and competitiveness (Liu, Song, Li, & Witt, 2019).

Another element of tourism infrastructure can be considered attractions and tourism amenities. Attractions, natural or man-made, are key motivators for tourists to visit a destination.

Well-maintained cultural heritage sites, scenic landscapes, theme parks, and recreational facilities contribute to a destination's competitiveness and visitor satisfaction (Dredge & Jamal, 2013). Providing tourism amenities such as visitor centers, information services, public restrooms, and recreational facilities enhances the overall visitor experience and supports sustainable tourism development (Hall & Page, 2014).

Tourism services such as tour operators, travel agencies, restaurants, and retail outlets are essential components of the tourism infrastructure (Safarov et al., 2022a). The availability and quality of these services significantly impact tourists' experiences and overall satisfaction (Lohmann & Fesenmaier, 2018). Adequate infrastructure planning, considering carrying capacity, environmental sustainability, and local community needs, is crucial for managing tourism impacts and ensuring long-term benefits (Gössling, Scott, & Hall, 2013).

The impact of infrastructure on tourism is significant and multifaceted. A well-developed infrastructure can positively influence a destination's attractiveness, visitor experience, and overall tourism industry growth (Herman et al., 2022). First, efficient transportation infrastructure, including airports, roads, and public transportation systems, enhances a destination's accessibility. Improved connectivity makes it easier for tourists to reach and explore the location, contributing to increased tourist arrivals (Tchokogué et al., 2020). Also, adequate infrastructure supports tourism growth by attracting more visitors and increasing spending on accommodation, dining, shopping, and various tourist activities. This, in turn, stimulates economic development and job creation (Forsyth & Dwyer, 2018). Also, among factors that affect the efficiency of infrastructure, Thapa (2012) pointed out the need for continuous development of human resources.

Good infrastructure, such as well-maintained roads and tourist facilities, contributes to a positive travel experience and higher tourist satisfaction levels. Satisfied tourists are more likely to share positive experiences and return to the destination in the future (Litvin et al., 2008). Moreover, infrastructure planning and development that incorporate sustainable practices, such as eco-friendly transportation

options and waste management systems, can support the principles of sustainable tourism. Sustainable infrastructure helps preserve the destination's natural and cultural resources for future generations (Gössling & Scott, 2020). Shimizu & Okamoto (2022) investigated the effect of environmental regulations on tourism sector outcomes, such as welfare, industry performance, and domestic wage inequality. They found that environmental regulations did not always negatively affect industrial performance as was previously thought. Islam et al. (2020) investigated several small and medium-sized tourism companies' key determinants of sustainability practices, and they found that adopting sustainable policy positively affected the companies' competitive advantages.

Infrastructure development can create new tourist attractions and facilities (Yu et al., 2023). For example, the construction of leisure parks, convention centers, or cultural venues can diversify the destination's tourism offerings and attract different types of visitors (Piercy et al., 2019). A properly planned infrastructure can help manage visitor flows and avoid over-tourism. Adequate transportation and waste management systems and well-designed attractions contribute to a more sustainable and enjoyable tourism experience for tourists and residents (Dredge & Jenkins, 2007).

Efficient infrastructure enhances a destination's competitiveness in the global tourism market. Tourists are more likely to choose destinations with well-developed infrastructure and smooth travel experiences (Buhalis & Sinarta, 2020). Modern and well-maintained infrastructure can create a positive image of the destination and attract more tourists (Lickorish & Jenkins, 1997). Digital promotion and state-of-the-art marketing technologies also influence the sales volume of tourism products (Purwaningwulan & Ramdan, 2022). Adeola & Evans (2020) examined the relationship between information and communication technology (ICT) and tourism development using a panel gravity model, concluding that the effect of ICT on tourism development was significant. Shehzad et al. (2019) also explored the influence of ICT on tourism infrastructure development in the example of the Chinese economy and found a significant statistical relationship.

In general, tourism infrastructure comprising transportation, accommodation, attractions, amenities, and services plays a vital role in the development and success of the tourism industry. It influences tourist mobility, accessibility, satisfaction, and destination competitiveness. Adequate planning and Management of tourism infrastructure are essential for sustainable tourism development and maximizing economic benefits (Safarov et al., 2022b).

METHODOLOGY

In this research, we aimed to evaluate the quality of the current infrastructure by using a Likert scale. The data were obtained through interviews with 67 respondents (16 government officials, 15 journalists, and 36 entrepreneurs). All respondents were related to the tourism industry and often traveled throughout the republic. The Likert scale we developed can be interpreted as follows:

- 0 – there is no infrastructure, and there are no conditions for tourism;
- 1 – tourism infrastructure is in a very primitive stage or completely absent;
- 2 – the development of tourism infrastructure is in its early stage - some elements can be spotted;
- 3 – the infrastructure is moderately developed - it can serve a considerable number of tourists;
- 4 – the infrastructure is well developed, although some infrastructure elements should be improved;
- 5 – the infrastructure is very well developed and can compete with international competitors.

The accumulated assessments by respondents were analyzed by taking the average of each infrastructure component. These average values were then taken as weights for each component, and total infrastructure potential was calculated based on this weighted sum of all parameters. Calculating total infrastructure potential can be important to evaluate the performance of infrastructure components on a timely basis. Coordination centers responsible for tourism development might use this indicator to adjust long-term strategies and set feasible goals, taking into account infrastructure capacity.

In the circumstances of strong global competition, tourism destinations have to work out a strategy to use their advantages to reinforce their position in the global market (Safarov et al., 2023). It, therefore, is crucial to assess the demand for tourism infrastructure. Analyzing demand for infrastructure is particularly important because demand may fluctuate wildly due to external and internal factors. It is also

important to distinguish permanent demand from temporary demand. Because the sphere of tourism often comes across seasonal upsurges in the global market, it does not mean that the rising trend will stay forever. Therefore, it is useful to determine the demand and supply function concerning infrastructure facilities. We propose an equation for tourism demand and supply equilibrium using the following formula:

$$\text{Demand}_{tourism} = N_{tourist} * P_{cost}$$

$$\text{Supply}_{tourism} = \sum_{i=1}^n Q_i^{tr} * P_i^{tr} + \sum_{i=1}^k Q_i^{ac} * P_i^{ac} + \sum_{i=1}^l Q_i^{ta} * P_i^{ta} + \sum_{i=1}^r Q_i^{ts} * P_i^{ts}$$

Market equilibrium can be formulated as follows:

$$N_{tourist} * P_{cost} = \sum_{i=1}^n Q_i^{tr} * P_i^{tr} + \sum_{i=1}^k Q_i^{ac} * P_i^{ac} + \sum_{i=1}^l Q_i^{ta} * P_i^{ta} + \sum_{i=1}^r Q_i^{ts} * P_i^{ts}$$

where,

- $N_{tourist}$ – the number of tourists in the area;
- P_{cost} – average expenditure each tourist spends;
- n – number of available transport units;
- k – number of available accommodation units;
- l – number of available tourism attractions and amenities;
- r – number of tourism companies;
- Q_i^{tr} – corresponding number of tourists using the transportation unit;
- P_i^{tr} – corresponding price for using transportation;
- Q_i^{ac} – corresponding number of tourists using accommodation units
- P_i^{ac} – corresponding price for using accommodation;
- Q_i^{ta} – corresponding number of tourists going to tourism attraction units
- P_i^{ta} – corresponding price for tourism attraction;
- Q_i^{ts} – corresponding number of tourists using tourism service units;
- P_i^{ts} – corresponding price for tourism services.

The above-given formula roughly represents equilibrium in the tourism market. We have assumed that all tourists arriving in the area will use at least one of the infrastructure facilities. The right side of the equation represents demand for tourism in the form of tourists' expenditure, and the left side represents supply or how tourists may spend their money.

This equilibrium model can be considered static because it cannot reflect changes over time but can only be used to assess a particular moment. Nevertheless, policymakers can use this formula to evaluate the efficiency of tourism infrastructure by comparing it to the results of previous periods.

RESULTS AND ANALYSIS

We divided tourism infrastructure into four components: transport infrastructure (air transport, railway, roads, available transport vehicles, etc.), accommodation infrastructure (hotels, hostels, guesthouses, etc.), tourism attractions and amenities (cultural heritage sites, recreational facilities, theme parks, etc.), tourism services (tourism companies, tour agents, retail outlets, restaurants, and other services). We asked experts to evaluate the importance of each infrastructure component, then took an arithmetical average of their assessments and obtained the following weights: 30.60% for transport infrastructure, 15.45% for accommodation, 38.43% for tourism amenities, and 15.52% for tourism services. Based on this, we calculated the infrastructure development

potential using the following formula:

$$TI = 0.306TR + 0.1545AC + 0.3843TA + 0.1552TS$$

where:

TI – the total tourism infrastructure potential (5 scale mark);

TR– transport infrastructure development (5 scale mark);

AC–accommodation infrastructure development (5 scale mark);

TA – tourism attractions and amenities development (5 scale mark);

TS – development of tourism services (5 scale mark).

The average assessments for each region's infrastructure development level are given in Table 1.

Table1: Tourism infrastructure development indicator components

Regions	TR	AC	TA	TS	TI
Tashkent city	4.61	4.81	3,76	4,58	4,31
Tashkent region	4.42	4.09	4,12	3,46	4,10
Samarkand	4.30	4.58	4,49	3,58	4,31
Bukhara	4.63	4.13	4,28	3,09	4,18
Djizzakh	3.64	3.15	3,48	2,07	3,26
Korezm	4.55	3.43	4,27	3,61	4,12
Republic of Karakalpakstan	3.94	3.18	3,54	2,58	3,46
Syrdarya	3.76	2,21	2,87	2,01	2,91
Andijan	4.64	3,85	3,63	2,84	3,85
Namangan	4.67	3,79	3,79	3,10	3,95
Ferghana	4.61	4,13	3,49	3,19	3,89
Kashkadarya	3.66	2,97	4,27	1,73	3,49
Surkhandarya	3.01	1,84	4,36	1,67	3,14
Navoi	4.69	4,37	3,37	3,43	3,94

Source: authors' work

Based on Table 1, we illustrated the heat map of tourism infrastructure development estimates for 14 administrative regions of Uzbekistan (Figure 1). We conditionally divided the infrastructure development indicator into three categories: low($2.91 \leq TI \leq 3.49$), moderate($3.85 \leq TI \leq 3.95$), and high($4.1 \leq TI \leq 4.31$). The classification of regions is very important, as it may indicate that each group should be treated specifically concerning its internal characteristics and specific development strategy.

It can be seen from Figure 1 that five regions (Republic of Karakalpakstan, Kashkadarya, Surkhandarya, Djizzakh, Syrdarya) fall into the category of poorly developed infrastructure, four regions (Navoi, Ferghana valley: Ferghana, Namangan, Andijan) account for moderately developed infrastructure, and the remaining five regions (Khorezm, Bukhara, Samarkand, Tashkent region and Tashkent city) correspond to highly developed infrastructure categories.

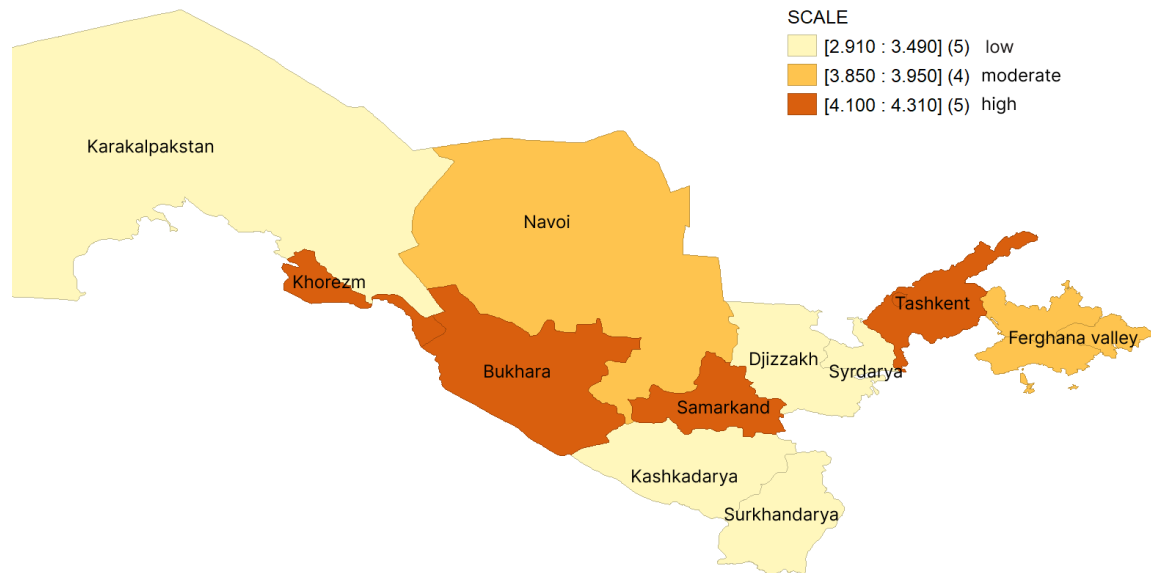


Figure 1. Tourism infrastructure development in the Republic of Uzbekistan

Source: developed by authors using GeoDA software

The distribution of infrastructure in Uzbekistan dates back to the Soviet era when most infrastructure facilities were built on the roadways connecting Russia to Central Asia. In other words, regions such as Tashkent, Samarkand, Bukhara, Navoi, and Khorezm had better infrastructure facilities than other regions. After independence, however, the government tried to develop railway infrastructure and achieved some good results. For example, new trains made in Spain were deployed between Samarkand and Tashkent. Although the government has tried to improve transportation, education, healthcare, and other infrastructure by attracting foreign investments, many problems remain.

For example, regarding transportation infrastructure, Uzbekistan's transportation network requires significant improvement. Many roads and highways are in poor condition, hindering the efficient movement of goods and people (Ergashev et al., 2020). Meanwhile, Uzbekistan's energy infrastructure has grappled with outdated power plants and inadequate distribution systems (Nasimov et al., 2020). The energy sector has struggled to meet the increasing demand, leading to electricity shortages and blackouts in some areas (Nasimov, 2016). And the government still is trying to liberalize the energy market to improve efficiency.

Uzbekistan faces environmental challenges, including air and water pollution, deforestation, and soil degradation (Safarov et al., 2022a). Addressing these issues requires improved infrastructure and sustainable development practices.

It is worth noting that the Uzbek government has been actively working to address these infrastructure problems. Efforts to attract foreign investment, improve regulatory frameworks, and promote public-private partnerships are being undertaken to accelerate infrastructure development in the country. However, the progress and effectiveness of these efforts vary, and further developments are necessary to overcome these challenges fully.

It is also useful to look at the map where tourists pinned the locations of interesting places (Figure 2). As one can see, the most attractive places are in the east, namely, the Tashkent region and Fergana Valley. Interestingly, even though some regions have poor infrastructure, there are a considerable amount of pinned places. This probably is because of the beautiful landscapes and natural reserves located in the Kashkadarya, Surkhandarya, and Djizzakh regions, and it indicates good potential for further development of infrastructure projects.

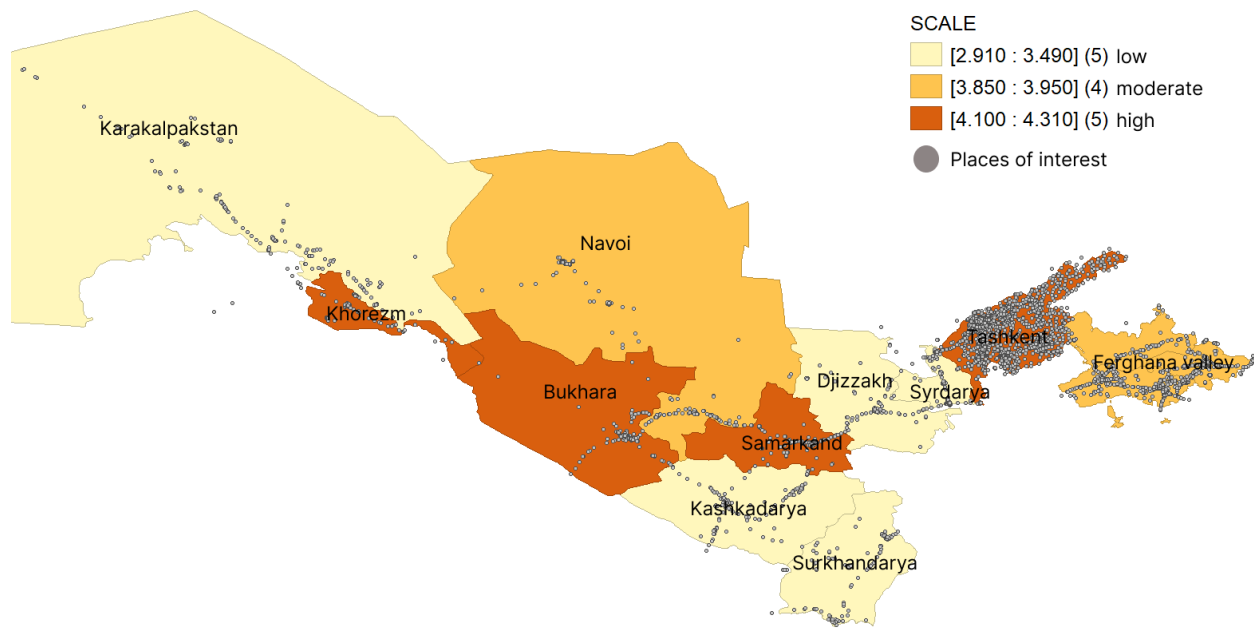


Figure 2. The places of interest pinned by tourists in Uzbekistan (developed by authors using GeoDA software)

Source: The coordinates of places of interest were extracted from <https://mapcruzin.com/free-uzbekistan-country-city-place-gis-shapefiles.htm> on 20th June 2023

Tourism infrastructure in its all forms plays a crucial role in the choices of tourists. The correlation between tourists' favorite places and infrastructure is a well-established concept in the field of tourism studies. Infrastructure directly impacts the overall tourist travel experience and convenience. Below are some key points highlighting the correlation between tourists' favorite places and infrastructure:

Accessibility: good transportation infrastructure, including well-connected airports, highways, and public transportation systems, makes it easier for tourists to access and explore a destination. Destinations with convenient and reliable transportation options are more likely to be preferred by tourists (Beirman, 2003).

Accommodation: the availability and quality of accommodation infrastructure significantly influence tourists' decisions when choosing a destination. Tourists' favorite places tend to have a wide range of lodging options, catering to different preferences and budgets (Smeral, 2008).

Communication: access to modern communication infrastructure, such as mobile networks and internet connectivity, is vital for

tourists to stay connected, access information, and share their experiences. Destinations with good communication facilities are likely to attract tech-savvy travelers (Chon & Maier, 2010).

Attractions and facilities: tourists are drawn to destinations with a rich cultural heritage, natural beauty, and recreational activities. Infrastructure supporting museums, historical sites, entertainment venues, and natural attractions enhance the tourism experience (Getz, 2008).

Safety and security: a well-developed safety infrastructure, including healthcare facilities, emergency services, and law enforcement, is crucial for tourists' peace of mind. Destinations that prioritize the safety and well-being of visitors are more likely to be favored by tourists (Crofts & Litvin, 2003).

Tourist services: the presence of efficient and reliable tourist services, such as tour operators, travel agencies, guides, and information centers, enhances tourists' experience and makes their stay more enjoyable (Buhalis & Law, 2008).

Environmental sustainability: in recent years, tourists have shown increasing interest in sustainable tourism practices. Destinations with eco-friendly infrastructure and a commitment to

environmental conservation may attract environmentally conscious travelers (Sheldon & Var, 2009).

Hospitality and cultural infrastructure: tourist-favorite places often have a strong hospitality culture, with friendly locals who welcome visitors and promote positive interactions (Ruhanen, 2013).

The above-mentioned results of the study, namely the tourism infrastructure potential index, can be used to assess the performance of infrastructure components. This can be crucial in working out the development of infrastructure when taking into account the environmental impact. For example, without accurate information about infrastructure performance, it is hard to make correct decisions regarding the expansion of infrastructure or its modernization. Also, the methodology of making up integral indicators can be used to assess infrastructure elements within macro components. For instance, visitors' feedback on decoration, the kitchen, accommodation, and other services in a hotel might be accumulated into some integral indicator to represent an overall picture of hotel performance.

Overall, the presence of a well-developed infrastructure not only attracts tourists but also contributes to their satisfaction and the likelihood of their returning to the destination. Moreover, tourists' preferences for infrastructure may vary depending on their travel motivations, preferences, and demographic characteristics.

CONCLUSION

In conclusion, this article highlights infrastructure's crucial role in shaping the tourism industry. A comprehensive analysis was conducted throughout the study to evaluate the multifaceted effects of various infrastructure developments on tourism destinations. The findings reveal that well-planned and efficiently managed infrastructure can significantly enhance tourism experiences, attract more visitors, and contribute to sustainable economic growth for host communities.

The research has shown that improved transportation networks, such as airports, roads, and public transit, facilitate easier accessibility to tourist destinations, reducing travel time and increasing convenience for travelers. Additionally, the provision of modern amenities, such as accommodation facilities, restaurants,

and recreational centers, contributes to a more enjoyable and comfortable stay for tourists, encouraging repeat visits and positive word-of-mouth recommendations (Suprina et al., 2023).

Public-private partnerships and community engagement are crucial to optimize the benefits of infrastructure on tourism. Collaborative efforts can ensure that infrastructure projects align with residents' needs and aspirations while meeting tourists' expectations. Moreover, ongoing monitoring and evaluation of infrastructure projects are necessary to identify and address any adverse impacts and make necessary adjustments as needed.

The article emphasizes that infrastructure development is a pivotal factor in shaping the success and sustainability of tourism destinations. With careful planning, sustainable practices, and effective Management, infrastructure can catalyze tourism growth, generate economic opportunities, enhance visitor experiences, and preserve the natural and cultural assets that make each destination unique (Kurniati & Suryanto, 2023). By taking a proactive and responsible approach, stakeholders can harness the full potential of infrastructure to create thriving, resilient, and attractive tourism destinations for the years to come.

Therefore, policymakers, governments, and stakeholders in the tourism industry must recognize the vital role of infrastructure and invest in its development and maintenance. Sustainable and well-planned infrastructure projects, guided by thorough research and understanding of tourists' needs and expectations, will foster the growth of tourism, create employment opportunities, and contribute to the overall economic prosperity of the region.

As the global tourism industry evolves, future studies should continue to monitor and analyze the interplay between infrastructure development and tourism trends. By doing so, destinations can adapt to changing demands and preferences, ensuring that infrastructure remains a driving force behind sustainable and thriving tourism growth. Ultimately, a strategic focus on infrastructure can enhance the overall competitiveness of destinations in the increasingly competitive global tourism landscape.

In brief, tourism infrastructure, which consists of four big components: transportation,

accommodation, tourism attractions, amenities, and tourism services, plays a crucial role in the formation of supply in the tourism market. In this research, we worked out the qualitative indicator of assessing tourism infrastructure quality by conducting interviews with dozens of high-ranking officials, journalists, and entrepreneurs. The proposed classification clearly shows that places pinned by tourists account for regions with more developed infrastructure (Figure 2). This, in turn, illustrates that infrastructure development is crucial in tourists' choices.

Based on this research's findings, we propose that projects directed to the development of tourism infrastructure in relatively poorly developed regions, such as the Republic of Karakalpakstan, Kashkadarya, Surkhandarya, Djizzakh, and Syrdarya regions, should be subsidized. The government should initiate a special coordination center to monitor the performance of tourism infrastructure pre- and post-reforms. The development plans should be worked out considering cultural differences, priorities, and local environmental characteristics. It would also be useful to expand this study and implement more systemic and deep analysis with more respondents so that policymakers could see the whole picture more accurately.

Also, during the research, we formulated a static supply and demand equilibrium equation in the tourism market concerning infrastructure facilities. This formula can be used to assess the extent of the balanced development of tourism infrastructure. In particular, the income for infrastructure facilities can be taken as an efficiency indicator, assuming that fixed costs for infrastructure renovation are not significant. Nevertheless, the impact of infrastructure on tourists' behavior should be studied more thoroughly and systematically. The research adds to previous studies by proposing the classification of regions' infrastructure in Uzbekistan and proposing a new static tourism market equilibrium formula concerning infrastructure facilities.

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