

TOURISM COMPETITIVENESS IN UZBEKISTAN: ARCHAEOLOGICAL TOURISM AT SHAH-I-ZINDA AND SUSTAINABLE DEVELOPMENT

Irina KADIROVA¹, Nargiza ABDUVAKHIDOVA

¹ Head of Global Education Tourism Department, Silk Road International University of Tourism and Cultural Heritage, Samarkand, Uzbekistan (uzpractice@gmail.com)

² Head of Youth Department, Silk Road International University of Tourism and Cultural Heritage, Samarkand, Uzbekistan.

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Abstract: With the rapid growth of the tourism industry worldwide, cultural and archaeological tourism has gained increasing attention. However, there is still a lack of studies on tourism competitiveness in developing countries. This research explores key factors that influence the competitiveness of Uzbekistan's tourism sector, particularly in cultural and heritage tourism. Uzbekistan, home to numerous historical sites, including the Shah-i-Zinda complex, holds great potential as a leading cultural tourism destination in Central Asia. The study aims to identify critical factors that strengthen the tourism sector, attract international visitors, and foster sustainable tourism development. Using a descriptive approach and literature review, this research highlights the role of national and regional tourism strategies in shaping a competitive and sustainable tourism industry. Findings suggest that architectural and archaeological heritage, particularly the Shah-i-Zinda complex, can play a key role in enhancing Uzbekistan's global tourism appeal. This site, featuring architectural masterpieces from the 11th to 19th centuries—especially the Timurid era—offers significant cultural and historical value. By leveraging such heritage assets, Uzbekistan can position itself as a premier destination for cultural tourism while ensuring sustainable development.

Keywords: Timurid period; Archaeological Tourism, Competitiveness of Tourist Destination, Concept of Sustainable Tourism.

چکیده: با رشد سریع صنعت گردشگری در سراسر جهان، گردشگری فرهنگی و باستان‌شناسی توجه روزافزونی را به خود جلب کرده است. با این حال، همچنان مطالعات اندکی درباره رقابت‌پذیری گردشگری در کشورهای در حال توسعه انجام شده است. این پژوهش به بررسی عوامل کلیدی مؤثر بر رقابت‌پذیری بخش گردشگری ازبکستان، به‌ویژه در حوزه گردشگری فرهنگی و میراثی، می‌پردازد. ازبکستان، که میزبان شمار زیادی از محوطه‌های تاریخی از جمله مجموعه شاه‌زنده است، پتانسیل بالایی برای تبدیل شدن به یکی از مقاصد اصلی گردشگری فرهنگی در آسیای مرکزی دارد. هدف این مطالعه شناسایی عوامل حیاتی در تقویت بخش گردشگری، جذب گردشگران بین‌المللی، و ترویج توسعه پایدار گردشگری است. این پژوهش با بهره‌گیری از رویکرد توصیفی و مرور منابع، نقش راهبردهای ملی و منطقه‌ای گردشگری را در شکل‌گیری صنعتی رقابتی و پایدار برجسته می‌سازد. یافته‌ها نشان می‌دهند که میراث معماری و باستان‌شناسی، به‌ویژه مجموعه شاه‌زنده، می‌تواند نقش کلیدی در افزایش جذابیت جهانی گردشگری ازبکستان ایفا کند. این مجموعه که دربردارنده شاهکارهای معماری از سده یازدهم تا نوزدهم میلادی و به‌ویژه دوره تیموری است، دارای ارزش فرهنگی و تاریخی چشمگیری است. ازبکستان با بهره‌گیری از چنین منابع میراثی می‌تواند خود را به‌عنوان مقصدی برتر برای گردشگری فرهنگی معرفی کرده و در عین حال، توسعه پایدار را تضمین کند.

کلیدواژه: دوره تیموری، گردشگری باستان‌شناسی، رقابت‌پذیری مقصد گردشگری، مفهوم گردشگری پایدار.

I. Introduction

Tourism is the world's largest and most diverse industry, playing a crucial role in economic growth through income generation and employment. Robinson and Nowli (2005) describe special interest tourism as a "sustainable strategy" that enhances destination development, service quality, and strategic tourism, thereby increasing competition and business opportunities.

Tourism destinations increasingly strive to stand out in a competitive global market, much like private enterprises (Crouch, 2011; Lee & King, 2009). Their success is closely linked to the performance of tourism-related businesses, which, in turn, depend on the appeal of the destination itself (Crouch, 2011). Maintaining a competitive edge is a complex task that shapes the overall effectiveness of the tourism industry (Dwyer et al., 2002). Key drivers of competitiveness include natural and cultural attractions, visitor satisfaction, sustainable planning, efficient destination management,

and robust support infrastructure. Integrated planning and an understanding of consumer behavior are essential for success. A well-defined identity enables destinations to capture market share and remain competitive over time (Lin et al., 2011; Yildirim, 2020). Therefore, strengthening this identity and developing targeted tourism products should be central to regional and national development strategies (Danylyshyn et al., 2020).

A destination's success depends on delivering a superior visitor experience contrasted to its competitors. Establishing a culture of quality is crucial, requiring skilled personnel, professional ethics, and comprehensive management systems. Customer happiness and loyalty are crucial to competitiveness and can only be achieved through high-quality services and products (Michael et al., 2019). Cultural differences across various regions of the world, along with the presence of historical and archaeological sites, can be considered a competitive advantage in tourism. Since

visiting historical monuments and archaeological sites is appealing to tourists, introducing the cultural heritage of each country can have a direct impact on the development of its tourism industry.

Archaeological surveys and excavations indicate that human communities have occupied the Samarkand region of Uzbekistan from the Paleolithic period to the present day. As a result, numerous archaeological sites and monuments exist in this region. Given the growing public interest in ancient sites, the Samarkand region is gradually emerging as one of the major tourist destinations in Central Asia. The presence of iconic monuments, such as the Shah-i-Zinda complex, provides a competitive advantage over other cities in the region, contributing to the expansion of both architectural and archaeological tourism.

While tourism continues to grow in significance across Central Asia, there is a noticeable lack of comprehensive studies focusing on the region's tourism competitiveness. This study aims to explore the growing competitiveness of tourism in the city of Samarkand. It specifically seeks to identify the key factors contributing to the city's development and competitive identity that can enhance its appeal in the international tourism market. A clear understanding and strategic analysis of these factors, combined with the promotion of archaeological tourism, can play a significant role in strengthening Samarkand's position as a competitive and attractive tourist destination.

II. Samarkand and Central Asia: An Archaeological and Historical Crossroads

Central Asia holds immense significance in archaeological activity due to its unique geographical location and its historical role as a cultural, mercantile, and ideological bridge between major civilizations (Kohl, 1984). Inhabited since the Paleolithic period, the region boasts thousands of archaeological sites representing various cultural phases (Davis and Anov, 1999; Kolobova et al., 2011; Zwyns, 2021; Pavlenok et al., 2022). The presence of valuable resources, such as lapis lazuli, gold, and silver, heightened its importance in trade and technological advancements. As a key segment of the Silk Road (Rondelli and Tosi, 2006), Central Asia facilitated the exchange of goods (silk, spices, gemstones), ideas, religions (Buddhism, Islam, Zoroastrianism), and technologies between civilizations like China, India, Iran, and Rome. Its advanced trade systems supported complex economic structures and nurtured influential civilizations, including Bactria, Sogdiana (Shishkina, 1994), and the Timurid Empire (Golombek and Wilber, 1988), which had lasting impacts on neighboring cultures.

Samarkand stands out as one of the most historically significant cities in Central Asia. Despite repeated destruction and reconstruction, its origins likely date

back to the 5th century BCE. Positioned along the Silk Road, Samarkand was a major center for trade, cultural exchange, and scientific advancements in fields such as astronomy, medicine, and mathematics. Archaeological research indicates that the surrounding area contains more than 2,000 ancient sites (Rondelli et al., 2013; Mantellini and Berdimuradov, 2016), offering invaluable opportunities to explore the region's past and deepen our understanding of its historical development (Fig. 1).

Recent archaeological discoveries have shed light on the rich history of Samarkand and other regions of Uzbekistan (Abdullaev and Genito, 2014), confirming that Uzbekistan has long been a dynamic cultural landscape. Diverse human groups interacted and exchanged knowledge, goods, and traditions, with Samarkand playing a pivotal role as a key hub along the Silk Road. Its strategic position significantly shaped the economy, culture, and intellectual life of the region, making it a major center of learning, especially during the Islamic period.

III. Archaeotourism: Bridging the Past and Present Through Cultural Heritage

Archaeotourism is a combination of two words: archaeology and tourism. It refers to travel focused on visiting and experiencing ancient sites and historical places. The primary driving forces behind archaeotourism are a passion for the past and an interest in learning about the ancient cultures that once thrived in these regions (Wurz and Merwe, 2005; Khanipour, 2024a). It is closely associated with tourism destinations that feature archaeological heritage sites, monuments, and historic buildings (Jusoh et al., 2017).

Many countries integrate archaeotourism with broader fields such as ecological tourism, geotourism, and heritage tourism. This integration allows visitors to appreciate natural wonders while gaining a deeper understanding of local culture and history. Jusoh et al. (2017) state that archaeotourism offers a distinctive appeal, which, though subjective, is often compelling enough to attract and impress visitors.

Archaeological sites such as settlement site (Azizi Kharanaghi et al., 2016; Khanipour et al., 2021; Khanipour and Nishiaki, 2024; Khanipour and Abe, 2025; Khanipour, 2025), caravanserais (Khanipour, 2024b), qanats, Cemetery (Soltysiak Naseri, 2017; Naseri et al., 2019; Jamshidi Yeganeh, 2023; Oudbashi et al., 2023; Khanipour and Molaie Kordshooli, 2023; Khanipour and Akbari, 2024), rock art (Azizi Kharanaghi et al., 2011; Khanipour et al., 2015; 2018; 2024c; Molaie Kordshooli et al., 2022) and ancient mines represent diverse aspects of past human societies, including their technological innovations, social structures, and patterns of mobility. The preservation, restoration, and adaptive reuse of these sites as open-air

or site museums constitute a strategic approach to promoting archaeotourism. This form of tourism not only contributes to the safeguarding of cultural heritage but also offers considerable potential for attracting visitors with an interest in history, architecture, and cultural landscapes. Archaeotourism enhances public engagement with the past by providing educational experiences that illuminate the development of ancient technologies, architectural styles, and societal evolution. Thus, archaeotourism fosters a deeper appreciation of historical diversity and contributes to local economic development while simultaneously supporting broader efforts in heritage conservation and cultural sustainability. Beyond its role in cultural education, archaeotourism plays a crucial part in heritage preservation. By raising public awareness about past civilizations and modern archaeological practices, it

fosters support for conservation efforts. Additionally, archaeotourism contributes to the development of significant economic and political partnerships, strengthening both local and national heritage initiatives. The rich historical architecture in Uzbekistan makes it an increasingly popular destination for tourists. The buildings from various historical periods, especially those from the Timurid era, offer a significant opportunity to enhance architectural tourism in the country. Among the most exceptional architectural complexes in this region is Shah-i-Zinda, a place where visitors can experience the pinnacle of Islamic art. This site holds the potential to not only promote architectural tourism but also support sustainable development. Furthermore, it serves as a competitive edge for Samarkand, distinguishing it from other cities in Central Asia.

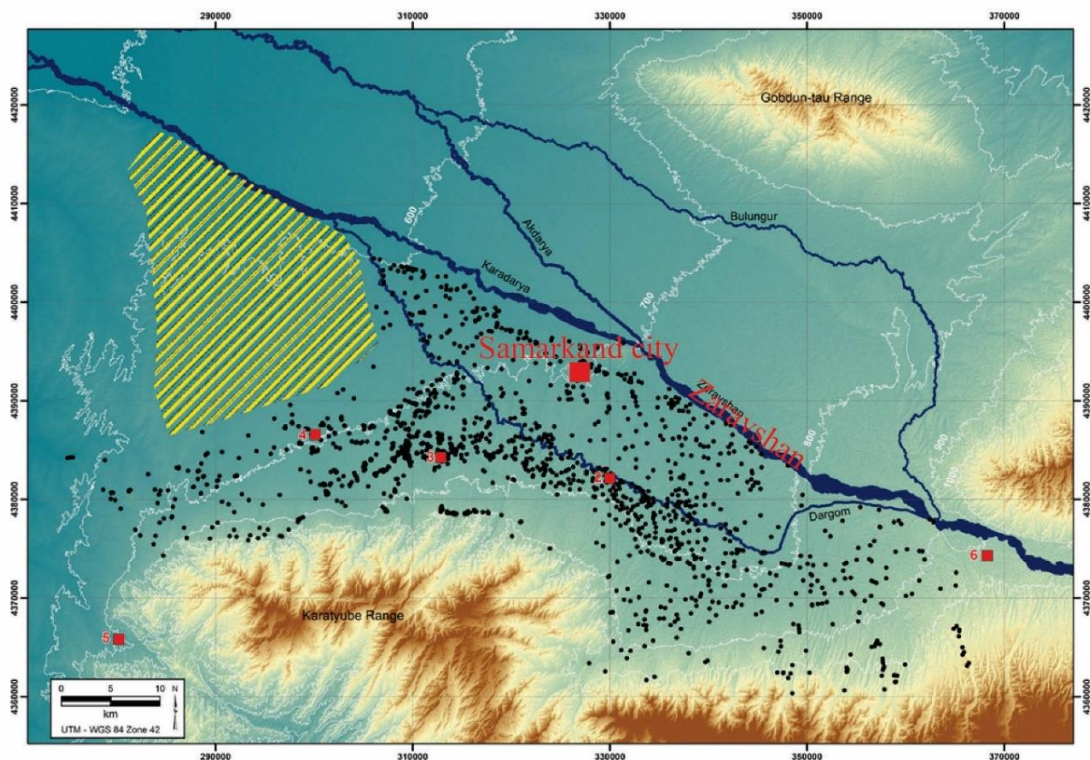


Figure 1: The Distribution of Archaeological Sites in the South of Zaravashan River (after Mantellini, 2018).

IV. Shah-i-Zinda Complex

The Shah-i-Zinda complex is located in the modern city of Samarkand, on the ancient Afrasiab site. This complex includes multiple mausoleums built from the 11th to the 19th centuries (Nemtseva et al., 1977). The complex features a main street with various mausoleums built on either side (Figs. 2-3), constructed using marble over time.

As mentioned, the complex is situated on a hill, which has resulted in the buildings being arranged at different levels, connected by various staircases. The entrance to the complex is from the south, and it includes a large portal. At the end of the complex is the

tomb of Khwaja Ahmad, which is the northernmost mausoleum, effectively closing off the main street of Shah-i-Zinda. The oldest structures in the complex date back to the 11th century, but today, only the foundations and gravestones remain. Most of the buildings in the complex belong to the 14th century. The reconstructions carried out in the 16th and 19th centuries (Fig. 4) had minimal impact on the overall structure and appearance of the complex. Although buildings have been constructed in different periods, the mausoleums of the Timurid dynasty's rulers, princes, and royal women are the main components of the complex.



Figure 2: Overview of Shah-i-Zinda



Figure 3: The main street of Shah-i-Zinda and the tombs on both sides of it.



Figure 4: The portico built in the 19th century, with a Persian inscription mentioning the construction year as 1310 AH

The main entrance gate (the Darwazakhana or the first Chahar Taq) faces south and was constructed between 1434 and 1435 under the command of Ulugh Beg. Several studies have been conducted on the Shah-i-Zinda complex, with the first description of the complex being provided by Abu Tarhar Samarkandi. Various archaeologists, including Bulatova (1965) and Nemtseva et al. (1977), have conducted excavations that have contributed to a better understanding of the site. Researchers such as Golombek and Wilber have also described the architecture of the complex (Nasriddinov, 2006).

One of the standout features of the Shah-i-Zinda buildings is the use of Islamic calligraphy, which has been incorporated as a decorative element throughout the complex. Quranic inscriptions, Hadiths of the Prophet, poetry, and even the names of the builders and the dates of construction can be found within the complex. These inscriptions, together with the unique tile work, make the Shah-i-Zinda complex one of the most important examples of Islamic architecture and art in Central Asia. The layout, architecture, and especially the tile work of the complex make it one of the most unique Islamic architectural complexes, attracting the attention of archaeologists, architects, researchers in architecture, and art.

The name "Shah-i-Zinda" ("The Living King") is associated with a legend that says Qutham ibn Abbas, the cousin of the Prophet Muhammad, is buried here. It is said that he arrived in Samarkand during the 7th century with the Arab invasion to propagate Islam.

According to popular legends, he was beheaded for his faith but miraculously picked up his head and entered a deep well, where he passed away. From then on, this place became known as Shah-i-Zinda. Due to the sanctity of this location, various tombs have been constructed here, particularly during the Timurid period.

V. Architectural and Artistic Features of Shah-i-Zinda Mausoleum Complex

This complex contains about 24 different mausoleums and buildings. The main structures are located in the northeastern section of the complex, where the oldest building, the mausoleum of Qutham ibn Abbas, is situated. Due to differences in elevation, the buildings in this complex can be divided into three groups: upper, middle, and lower.

The upper group includes several buildings facing each other, with the mausoleum of Qutham located in this section. This section, the oldest part of the complex, contains a corridor, a mosque, a pilgrimage site, and several rooms, all of which have undergone changes in their layouts over time. The mosque features a wainscoting decorated with inlaid tiles, crafted from small pieces of blue, green, and white tiles. The mihrab of the mosque also includes a large rectangular frame with a Quranic verse made of inlaid tile. At the entrance to the pilgrimage site (a room for worship), pieces of wood protrude from the wall. These wooden pieces are part of an architectural set dating back to the 11th century and represent the impeccable wood carving art

for which Central Asian craftsmen were renowned. The entrance to this site, built by Yusuf Shirazi (Fig. 5) between 1404 and 1405, is made of elm wood, intricately carved. Some parts of the door, once adorned with various woods and ivory, no longer remain. Above the two doors of this large gate, inscriptions can be seen:

- On the right side: "The doors of paradise are open to sincere worshippers."
- On the left side: "And eternal mercy for the worshippers of the generous."



Figure 5: The Builder's Name Inscription on Wood: Yousef Shirazi.

In the upper [northern] courtyard stands one of the earliest extant mausoleums of the 14th century, which marks the end of the Shah-i-Zinda memorial complex: the Khwaja Ahmad mausoleum (Fig. 6). The name of a certain Khwaja (Khoja) Ahmad is mentioned in the dedicatory inscription on the portal, which suggests that he may be the one buried in the mausoleum. However, the individual might have been the father or grandfather of the deceased, as the middle part of the inscription

(the family tree) is lost. The portal of the mausoleum is of significant artistic value. It is faced with carved glazed terracotta in turquoise tones, featuring an expressive dedicatory inscription. A filigree pattern of stalks, leaves, and flowers adorns the background. A border of painted majolica tiles edges the inscription band. This new technique of carved relief work, combined with contrasting colors, first appeared in the Shah-i-Zinda complex.

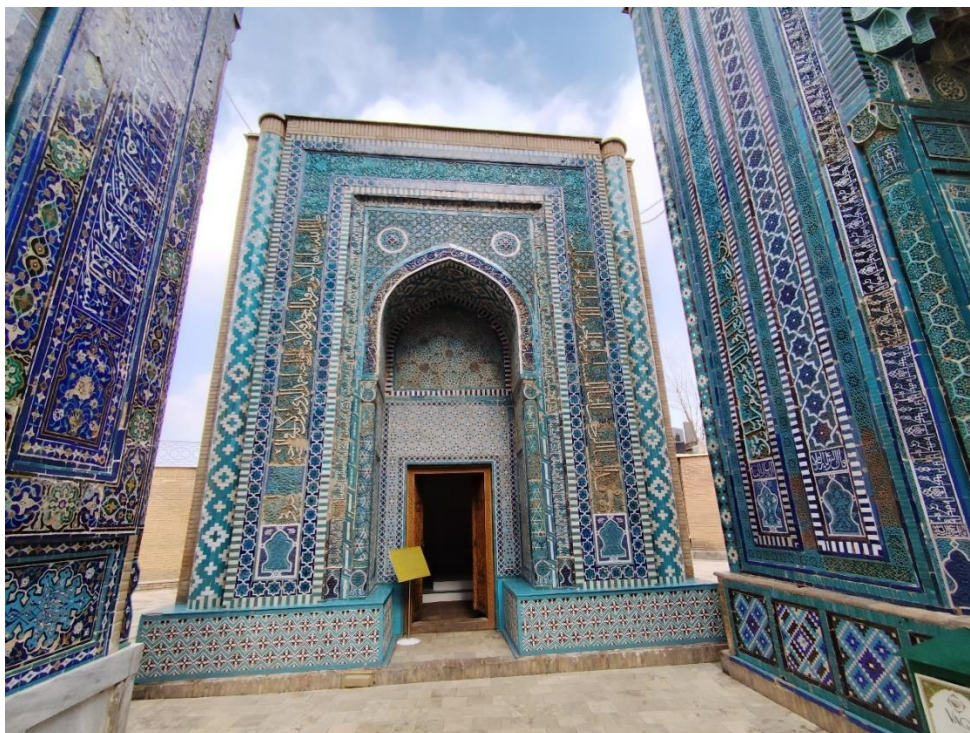


Figure 6: The Khwaja Ahmad mausoleum

The middle group includes mausoleums (Fig. 7) built in the late 14th and early 15th centuries, associated with the Timurid family, military aristocracy, and religious figures. On the western side, the mausoleum of Shad-Mulk Agha, Timur's niece, is located. This building is a domed tomb with a hall, constructed in 1372 CE. Across from it stands the mausoleum of Shirin Bika Agha, Timur's sister. Next to Shirin Bika Agha's mausoleum, a building known as the "octagonal" structure can be seen, which is an unusual tomb from the early 15th century.

One of the most magnificent buildings in the complex, in terms of architecture and tilework, is the mausoleum of Shad-Mulk Agha (Fig. 8). This mausoleum was built by Timur's elder sister, Turkan Agha, for her daughter. The building displays the brightest tiles from the Timurid period. Both the interior and exterior facades are adorned with a variety of tilework styles. The building is square, with each side measuring 6.5 meters. It is covered by a dome, and the squinches are decorated with muqarnas. Arabic and Persian inscriptions are found on the entrance arch.



Figure 7: The mausoleums of the Middle Group

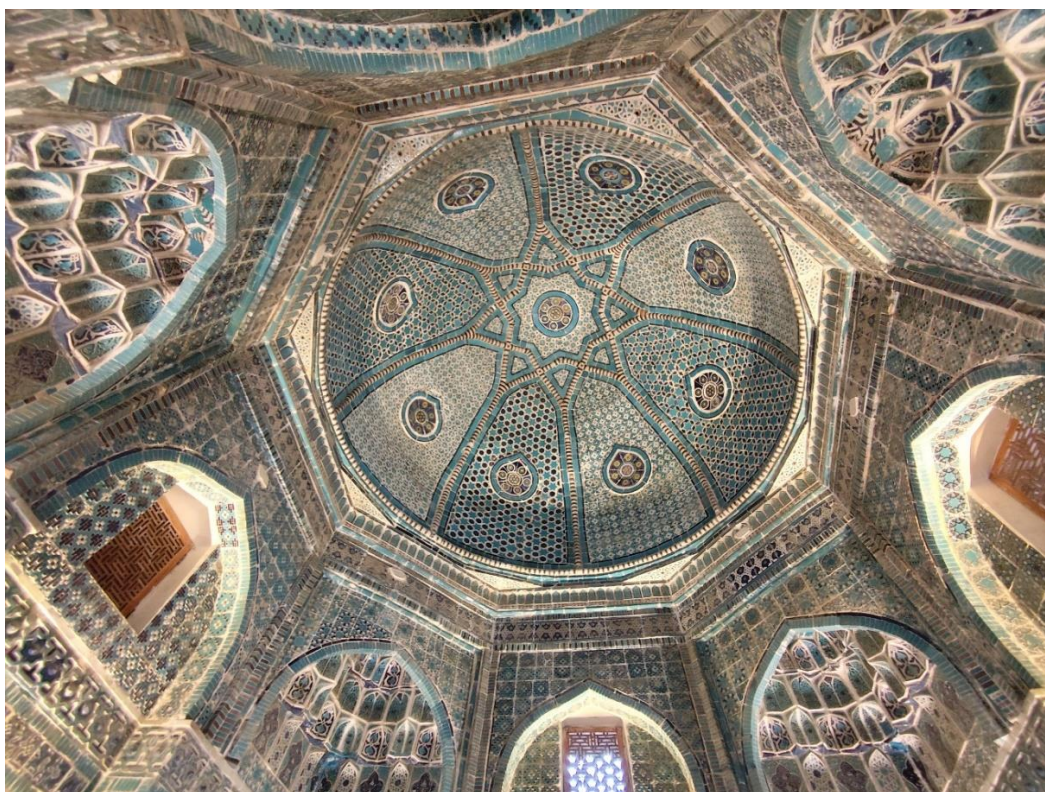


Figure 8: Interior Decorations of the mausoleum of Shad-Mulk Agha

Typical of the mausoleums in this complex, the building is square in plan, with a pishtaq facing the Shah-i-Zinda corridor. The pishtaq rests on a decorated socle and is detailed with semi-attached columns at the outer edges and beneath the entrance arch. A muqarnas half-dome covers the entrance portal. The interior is also square, with three shallow niches on each wall. An octagonal zone of transition includes muqarnas squinches and arched panels above the wall recesses. The dome is decorated with eight 'ribs' that emanate from an eight-pointed star within the crown. A diaper pattern fills the sections between the ribs, and a teardrop medallion is centered in each wedge-shaped section. The exterior of the dome is clad in brick ribs, terminating with an unusual pointed cap. The mausoleum is remarkable for the extensive use of tile revetment, covering both the interior surfaces and the pishtaq with a diverse range of techniques, including carved glazed terracotta, faience mosaic, haft-rangi, and polychrome underglaze painted tiles. Aside from the pishtaq, the exterior surfaces bear no trace of decorative revetment.

The lower group is located near the multi-tiered staircase and is considered one of the most

proportionate buildings in the complex. A double-domed structure, which forms the tomb of Qazi-zadeh Rumi, a scholar from Bursa in the Ottoman Empire and a collaborator with the renowned Iranian mathematician, Ghiyath al-Din Jamshid Kashani, is found here. These two scholars worked together at the famous Samarkand Observatory during the reign of Ulugh Beg.

In 1434 and 1435 CE, under the orders of Ulugh Beg, Timur's grandson, a grand gate was built to connect the cemetery to the city. The typical and standard building in this cemetery was a square, domed structure, with an artistically decorated entrance facing the main street or road, while the other sides were simple, without elaborate decoration.

In general, the architecture of Shah-i-Zinda is heavily influenced by the Timurid period, reflecting several key features typical of this era's architecture. The use of square plans, large domes, and symmetrical coverings is evident throughout the buildings in this complex (Fig. 9). The interiors of the mausoleums are designed to allow light to enter through windows and roof apertures, creating a spiritual atmosphere within an enclosed space.



Figure 9: Details of the Tilework and Inscriptions of Shah-i-Zinda.

VI. Sustainable Tourism Development and Destination Competitiveness

Today, in light of environmental issues stemming from human activities and unbalanced development, the concept of sustainability has garnered significant attention in tourism literature. The sustainable development of tourism and the preservation of its competitiveness are greatly influenced by environmental quality (Angelkova et al., 2012). Sustainable tourism development relies on the preservation of natural resources, cultural values, and the social cohesion of destinations.

Sustainable development, and one of its derivatives—sustainable tourism development—are regarded as antidotes to environmental threats (Adango et al., 2018). The primary goal of sustainable development in tourism is to create economic opportunities, deliver social and cultural benefits, and protect the environment. Sustainable tourism is a well-established concept that emphasizes the long-term well-being of tourism by ensuring that future generations can meet their needs (Lee, 2013). This approach underscores the importance of generating benefits for local and indigenous communities.

Sustainable tourism development seeks to meet the needs of multiple stakeholders, including tourists, entrepreneurs, and host communities. Consequently, sustainable tourism development is expected to provide satisfying experiences for tourists, maximize profits for entrepreneurs, foster development for host communities, and protect the environment (Sher et al., 2015).

Therefore, incorporating sustainability principles into the analysis of destination competitiveness can be an effective measure to mitigate the negative impacts of tourism development. Ignoring the sustainability of natural and cultural resources, social values, and the satisfaction of host communities can lead to a decline in destination quality, resulting in tourist dissatisfaction and, ultimately, reduced destination competitiveness in the long term.

VII. Context of the Study

The competitiveness of a tourist destination is defined by factors such as safety, efficiency, quality, high productivity, adaptability, modern management, cost-effectiveness, and the ability to offer excellent products. A key objective of any destination is to provide tourism products that fully align with visitor expectations, meet social and environmental standards, comply with regulations, and are accessible at fair prices and appropriate times.

A competitive tourism destination attracts both local and international visitors by offering high-quality, innovative, and value-added services that cater to tourist preferences. This also includes providing customer-

centric tourism experiences that help the destination secure and sustain its market position in both domestic and global contexts (Sul et al., 2020).

Tourism competitiveness is a reflection of the overall performance of service providers, infrastructure, and other contributing factors. Marketing experts describe this as the "product universe," which encompasses all aspects that shape a tourist's perception of a destination, such as visual appeal, colors, atmosphere, geographical features, sensory experiences, human interactions, and comfort levels (Ambiehl et al., 2002). A tourism product or service is considered competitive when it can establish a strong presence in the market and attract demand comparable to or greater than that of its competitors.

Developing a tourism product involves more than just combining resources and services—it requires a clear conceptual approach. As tourist expectations continue to rise, competitive tourism products must emphasize satisfaction, accessibility, safety, transparency, credibility, and harmony with nature. Meeting these criteria strengthens both individual service providers and the overall destination, enhancing its competitive standing (Candea et al., 2009).

Sustainable tourism, as a modern approach to destination development, requires an understanding of tourism's interconnections with regional and national economies, as well as its long-term social and environmental impacts (Mazilu, 2010). Public administration plays a crucial role in shaping tourism competitiveness. To expand market share, destination organizations must invest strategically, plan effectively, and implement targeted initiatives (Benedetti et al., 2011). A sustainable tourism strategy recognizes tourism as a key economic sector that is closely linked to other industries and broader economic and social dynamics.

Sustainable tourism must adapt to changing social and economic conditions, evolving tourist needs, and emerging destinations. In recent years, tourism has become a major global industry, generating revenue and employment. To ensure long-term success, the sector must embrace sustainability, as tourism resources, while abundant, require responsible management. Tourism also has long-term economic potential, enhances foreign exchange earnings, improves a country's global image, and stimulates economic activity through the multiplier effect. By driving demand for goods and services, tourism contributes to economic diversification and strengthens its role in global development.

Tourism in recent years has become one of the most important global industries, generating income, jobs, etc. In this regard, tourism is simply obliged to realize the need to apply the concept of sustainable development, since:

- Tourist resources are almost inexhaustible;
- Tourism is one of a small number of sectors of the economy with real prospects for long-term development;
- The exploitation of tourist resources, accompanied by effective promotion to the foreign market, can be a source of increased foreign exchange earnings, thereby contributing to the improvement of the balance of payments.
- Tourism is quite safe in the labor market, and in the tourism sector, it is possible to redistribute the labor resources released from other sectors of the economy.

- Tourism is a means of promoting the image of the country, thereby participating in the direct and indirect promotion of exports of national goods and services to world markets;
- Through the multiplier effect, tourism acts as a dynamic element of the global economic system, creating a specific demand for goods and services, which contributes to the growth of their production and diversification of the structure of the country's economic sectors.

Table 1: The tasks of sustainable tourism in a tourist destination in the context of its competitiveness

Sphere	Tasks
Planning	- Mission definition; - Organization
Information	- Information support for tourists; - Information support of the local community;
Creating a tourist proposal	- Taking care of tourists; - Entertainment for tourists; координация инфраструктуры туризма; работа учреждений развлечения контроль и совершенствование качества
Marketing and Communications	- Promotion; - Sales promotion; - Public relations; - Brand management; - Market research
Sales	- Information systems - Booking systems; - Package offers
Lobbying	- Promotion of tourism among the population - understanding the importance of tourism at the level of high political power; - Cooperation with collaborating organizations

One of the possible options for the development of the concept of sustainable tourism as a basis for increasing competitiveness, as well as taking into account the above factors, may be the application of the concept of mosaic eco-development (Mazilu, 2007). This concept suggests the implementation of the principles of sustainable development in small geographical areas, when after their sufficient development, they will gradually expand, so that in the long term, they will cover the entire territory of the country. The ecological space should look like a chessboard alternating large areas of agricultural territories with smaller areas allocated for industry, various categories of infrastructure, parks, and nature reserves. This complex alternation will inevitably arise due to the uneven spatial distribution of natural resources and the applied economic, social, and

environmental criteria. Within the framework of this activity, ecology and bioeconomics can provide original territorial solutions corresponding to industry specifics.

There is no single model of sustainable tourism that is correct and applicable in any circumstances. Tourism can contribute to the sustainable development of territories, since the territories themselves are part of an interactive, integrated, and responsible environment in matters of economy, social status, and nature, on which the territories depend.

The goals of sustainable tourism development were defined by the World Tourism Organization in 2005: economic viability, local prosperity, quality of jobs, social equality, tourist satisfaction, local community control, public welfare, cultural wealth, physical integrity, biological diversity, resource efficiency, and environmental cleanliness.

It should be recognized that in order to ensure all these responsibilities, a "sustainable" tourist is also imperative. He should be aware of all the requirements, even when choosing a complex tourism product, not to mention the responsible behavior during his trip.

To prove that sustainable development is one of the pillars of tourism competitiveness, it is necessary to compare the indicators of sustainable development and the indicators of competitiveness.

Indicators of competitiveness of tourist destinations at the level of countries of the world are calculated annually by the World Economic Forum (World Economic Forum, <https://www.weforum.org/>). Data from the Travel and Tourism Competitiveness Report 2015 is currently available¹.

Sustainable development indicators are calculated by an organization called Sustainable Development

Solutions Network (SDSN, <http://unsdsn.org/>). Their statistics called SDG (Sustainable Development Goals) Index and Dashboards provide detailed descriptions by country around the world².

To identify the degree of dependence of the competitiveness index on sustainable development, we will conduct a correlation analysis. The index of tourism competitiveness index is labeled as TadmT Index, and the indicator of sustainable development through Sust Index.

The asymmetry and kurtosis indices do not exceed the boundaries, which indicates the normality of the distribution of the studied sample. The correlation coefficients are given in Table 2, and the scatter plot of indices is shown in Fig. 2.

Table 2: Correlation coefficients of tourism competitiveness and sustainable development indicators of the countries of the world

	Competitiveness index	Sustainability Index
Competitiveness index		0,8368 0,0000
Sustainability Index	0,8368 0,0000	

Correlation

P-Value

The table shows Pearson correlation coefficients, which measure the strength of the linear relationship between two variables, ranging from (-1) to (+1). The P-value presented under the correlation coefficient tests the statistical significance of the hypothesized correlations. P-values below 0.05 indicate statistically significant non-zero correlations at the 95.0% confidence level. As can be seen from the table, P-values for a pair of studied indicators are below 0.05, which indicates the significance of the obtained statistics.

As a result, the correlation coefficient is 0.8368, which indicates a very high degree of dependence of the indicators, which is almost functional in nature.

Table 3: Parameters of the regression model of the tourism competitiveness index to the sustainable development index

	<i>Least Squares</i>	<i>Standard</i>	<i>T</i>	
<i>Parameter</i>	<i>Estimate</i>	<i>Error</i>	<i>Statistic</i>	<i>P-Value</i>
Intercept	0,665897	0,0206461	32,2529	0,0000
Slope	-0,0505117	0,00267106	-18,9107	0,0000

Table 4: Analysis of Variance

<i>Source</i>	<i>Sum of Squares</i>	<i>Df</i>	<i>Mean Square</i>	<i>F-Ratio</i>	<i>P-Value</i>
Model	0,256432	1	0,256432	357,62	0,0000
Residual	0,0953692	133	0,000717062		
Total (Corr.)	0,351801	134			

¹ <http://reports.weforum.org/travel-and-tourism-competitiveness-report-2015/>

² <http://sdgindex.org/data/dashboards/>

The resulting regression equation is as follows:

TandT Index = $1/(0,665897 - 0,0505117*\text{sqrt}(\text{Sust Index}))$.

Since the P-value in the analysis of variance table is less than 0.05, there is a statistically significant relationship at the 95% confidence level. The correlation coefficient is 0.85. The coefficient of determination is 72.89%, which means that the model

describes 72.89% of the sampling variability. Since the Durbin-Watson (DW) test has a P-value greater than 0.05, we can conclude that there is no autocorrelation of the model residuals, which in turn indicates its adequacy.

The graph of the regression model is shown in Fig. 10. Plot of Fitted Model TandT Index = $1/(0,665897 - 0,0505117*\text{sqrt}(\text{Sust Index}))$.

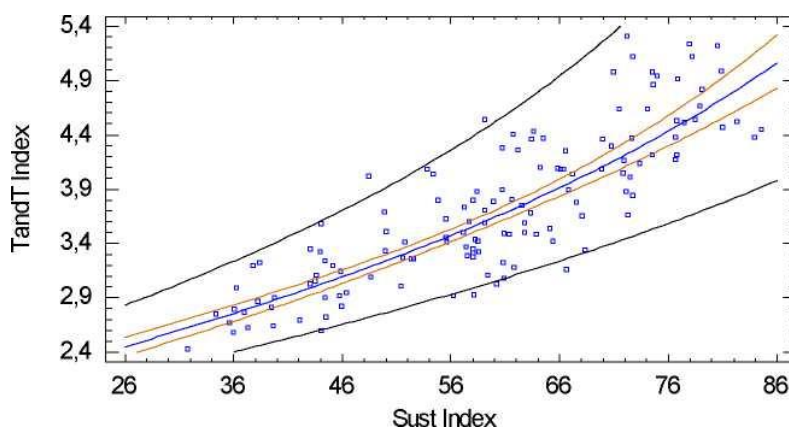


Figure 10: Graph of the regression model of the tourism competitiveness index on the sustainable development index.

Based on the graphical representation of the regression model and its mathematical expression, we can see that the dependence of the index of tourism competitiveness on the index of sustainable development is non-linear. When the sustainability of development increases, tourism competitiveness increases at a higher rate. This indicates the presence of some synergistic effect and should stimulate destinations to pay more attention to sustainability issues.

The research conducted in this paragraph allows us to draw the following conclusions.

Sustainable development is one of the elements of competitiveness of a tourism destination. It should be understood that there are other elements as well. Competitiveness is an artificial indicator that does not always reflect the state of a tourist destination. A destination may have such resources that will put it on the list of highly competitive ones, but the demand for the destination may be very low. Conversely, a destination that is not highly competitive or sustainable can expect high tourism demand (especially under protectionist policies, closed or monopolistic/oligopolistic markets). That is, sustainable development is a necessary but not a sufficient condition for increasing the competitiveness of a destination.

It is statistically proven that sustainable development leads to increased tourism competitiveness. The study analyzes tourist destinations at the country scale. In the process of calculations, the actual functional

dependence of tourism competitiveness on sustainable development was revealed. The calculated regression model showed that with the growth of sustainable development, tourism competitiveness also increases, and non-linearly. This indicates the presence of some synergistic effect and should stimulate destinations to pay more attention to the issues of sustainable development.

VIII. Conclusion

The Shah-i-Zinda complex, as a unique example of art and architecture from the 11th to 19th centuries, can contribute to a better understanding of the archaeology of this period, particularly the Timurid era, and play a crucial role in the development of archaeological tourism in Uzbekistan. This complex is not only an important tourist attraction but also a key factor in the preservation and introduction of the country's cultural heritage. Research indicates that sustainable development is one of the key factors in the competitiveness of tourism, though it is not sufficient on its own. While sustainability significantly contributes to the attractiveness and long-term success of a destination, other factors also play a significant role. The findings of this study show a strong correlation between sustainable development and tourism competitiveness, as increased sustainability, through its synergetic effect, raises the position of a destination in the tourism industry.

In recent years, Uzbekistan has strengthened its position in tourism by adopting different strategies. The

development of needful tourism infrastructure, including roads, airports, hotels, and service complexes, along with effective upgrade such as hosting international conferences, attracting international students, and the protection, restoration, and inclusion of sites in the UNESCO World Heritage list, are key factors that have contributed to enhancing the competitiveness of the country. However, challenges yet exist in the path of developing archaeotourism in Uzbekistan.

Currently, tourists often visit the cities of Tashkent, Samarkand, Bukhara, and Khiva, while many other regions of the country have high potential for attracting tourists. Introducing natural places, creating archaeological site museums, and developing cultural programs can help extend the tourism industry

throughout the country. As a result, countries like Uzbekistan, aiming to growth competitiveness in the tourism sector, should consider sustainable development as a key strategy. This approach will not only raise Uzbekistan's position in the international tourism market but will also contribute to the long-term preservation of cultural heritage and the development of a sustainable economy. Founding archaeological parks, specialized archaeological site museums, and developing related infrastructure can foster not only urban and architectural tourism but also rural tourism. Finally, the development of archaeological tourism in Uzbekistan will not only serve as an opportunity for public education about the history of the region but also play and significant role in preserving archaeological sites and strengthening the local economy.

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