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ASSESSING THE SOCIO-ECONOMIC EFFECTIVENESS OF EFFICIENT TOURISM CLUSTER MANAGEMENT

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Abstract. The theoretical and methodological foundations for assessing the socio-economic effectiveness of tourism cluster management systems are examined. The study explores the conceptual foundations of tourism clusters, their structural components, and management characteristics, while providing a theoretical rationale for the influence of collaboration, competition, cooperation, and synergistic effects among cluster participants on the competitiveness of tourism destinations. The need to assess the socio-economic effectiveness of tourism clusters is substantiated, and a comprehensive assessment approach is proposed that incorporates economic outcomes alongside indicators such as employment, household income, infrastructure development, cultural heritage preservation, integration into the local economy, and management effectiveness. The proposed approach enables an integrated assessment of the economic and social outcomes of tourism cluster activities and provides a scientific basis for management decisions aimed at ensuring the sustainable development of tourism destinations.

Keywords: tourism cluster, cluster management, socio-economic effectiveness, effectiveness assessment, assessment criteria, indicator system, composite index, normalization, tourism destination competitiveness, sustainable tourism.

Annotatsiya. Turistik klasterlarni boshqarish tizimining ijtimoiy-iqtisodiy samaradorligini baholashning nazariy-uslubiy asoslari tadqiq etilgan. Turistik klaster tushunchasining mazmun-mohiyati, uning tarkibiy elementlari va boshqaruv xususiyatlari yoritilib, klaster ishtirokchilari o'rtasidagi hamkorlik, raqobat, kooperatsiya va sinergetik samaralarning turistik hududlar raqobatbardoshligiga ta'siri ilmiy jihatdan asoslangan. Turistik klasterlarning ijtimoiy-iqtisodiy samaradorligini baholash zarurati asoslanib, iqtisodiy natijalar bilan bir qatorda, bandlik darajasi, aholi daromadlari, infratuzilmaning rivojlanishi, madaniy merosni saqlash, mahalliy iqtisodiyotga integratsiyalashuv va boshqaruv samaradorligi kabi ko'rsatkichlarni qamrab oluvchi kompleks baholash yondashuvi taklif etilgan. Mazkur yondashuv turistik klasterlar faoliyatining iqtisodiy va ijtimoiy natijalarini o'zaro bog'liqlikda baholash hamda turistik hududlarning barqaror rivojlanishini ta'minlashga qaratilgan boshqaruv qarorlarini ilmiy asoslash imkonini beradi.

Kalit so'zlar: turistik klaster, klaster boshqaruvi, ijtimoiy-iqtisodiy samaradorlik, samaradorlikni baholash, baholash mezonlari, ko'rsatkichlar tizimi, integral indeks, normallashtirish, turistik raqobatbardoshlik, barqaror turizm.

Аннотация. Исследованы теоретико-методологические основы оценки социально-экономической эффективности системы управления туристическими кластерами. Раскрыты сущность понятия туристического кластера, его структурные элементы и особенности управления, а также научно обосновано влияние взаимодействия, конкуренции, кооперации и синергетических эффектов между участниками кластера на конкурентоспособность туристических территорий. Обоснована необходимость оценки социально-экономической эффективности туристических кластеров и предложен комплексный подход, предусматривающий наряду с экономическими результатами учет таких показателей, как уровень занятости, доходы населения, развитие инфраструктуры, сохранение культурного наследия, интеграция в местную экономику и эффективность управления. Предложенный подход позволяет оценивать экономические и социальные результаты деятельности туристических кластеров в их взаимосвязи, а также научно обосновывать управленческие решения, направленные на обеспечение устойчивого развития туристических территорий.

Ключевые слова: туристический кластер, управление кластером, социально-экономическая эффективность, оценка эффективности, критерии оценки, система показателей, интегральный индекс, нормализация, конкурентоспособность туристических территорий, устойчивый туризм.

INTRODUCTION

Tourism clusters are considered one of the most effective organizational forms in the modern tourism industry. In the tourism sector, clusters serve as a driving force not only for economic development but also for social and cultural advancement. Therefore, the proper organization and optimal management of tourism clusters, based on an assessment of the socio-economic effectiveness of their management systems, are of particular importance. When assessing the socio-economic effectiveness of tourism cluster management, it is necessary to consider their specific characteristics.

First, tourism clusters are characterized by a multilevel structure that requires cooperation among the government, regional authorities, the private sector, and public organizations.

Second, relationships among tourism cluster participants are based on an environment of mutual cooperation and competition.

Third, the intangible nature and seasonality of tourism products necessitate prompt and flexible management decisions¹.

Consequently, specialized methodological approaches are required to ensure the effective management of regional tourism clusters in Uzbekistan. When assessing the socio-economic effectiveness of tourism clusters, it is essential to consider not only financial results but also the added value generated for society. While the economic efficiency of tourism cluster activities is determined by the ratio of resources expended to results achieved, social effectiveness is measured through indicators such as the population's standard of living, employment, infrastructure development, and cultural heritage preservation². Making management decisions based on an accurate assessment of the socio-economic effectiveness of tourism clusters contributes to the diversification of regional economies through tourism development, enhances the social engagement of local communities, and strengthens cultural identity and social ties.

LITERATURE REVIEW

Amid ongoing global and transformational changes, the methodology and criteria for assessing the socio-economic effectiveness of tourism cluster management systems have become subjects of extensive research within the international academic community.

Researchers Babak Taheri, John L. Crompton, Kevin Kam Fung So, Irem Onder, and Yao-Chin Wang propose a holistic framework for balancing the principles of efficiency, effectiveness, and equity in the hospitality, tourism, and leisure sectors. Their research emphasizes the importance of integrating social equity and long-term outcomes into traditional management systems alongside efficiency considerations. They substantiate the need to measure not only economic benefits but also community well-being and environmental sustainability within tourism clusters³.

Researchers R. Capello, S. Cerisola, and E. Panzera of the Polytechnic University of Milan, Italy, developed a model for determining the optimal and efficient levels of tourist flows from an urban economics perspective. They identified the economic threshold of overtourism, a phenomenon arising from the excessive concentration of tourists in a particular destination, such as a city, cultural heritage site, or natural area, within a given period. Their research outlines approaches to enhancing cluster efficiency and maximizing benefits for local communities by improving the quality of tourism services⁴.

Scholars from the Commonwealth of Independent States (CIS) countries have also made significant contributions to this field of research. N. S. Beskorovaynaya, M. G. Leshcheva, and Yu. M. Elfimova analyzed the impact of tourism clusters on regional socio-economic development using the Caucasian Mineral Waters region as a case study. They proposed a methodology for calculating multipliers based on the cluster's core activities, particularly the revenues of health and wellness organizations. According to their findings, cluster activities contribute positively to employment, income generation, and infrastructure development⁵.

J. A. Ermakova and Yu. E. Kholodilina, in turn, conceptualize the tourism and recreation cluster as a socio-economic system. They distinguish its structural elements, participating entities, and forms of management, identifying the development of innovative and competitive tourism products as a fundamental prerequisite for

1 Кругман П. География и торговля. – М.: Дело, 2015. – 176 с.

2 Porter M.E. *The Competitive Advantage of Nations*. – New York: Free Press, 1990. – 896 p.

3 Taheri B., Crompton J.L., So K.K.F., Onder I., Wang Y.-C. Balancing efficiency, effectiveness and equity: a holistic framework for performance in the visitor economy // *International Journal of Contemporary Hospitality Management*. – 2026. – Vol. 38, No. 13. – P. 1–27.

4 Capello R., Cerisola S., Panzera E. From optimal to efficient tourism flows in cities: an urban economics perspective // *The Annals of Regional Science*. – 2026. – Vol. 75. – Article 21.

5 Бескоровайная Н.С., Лещёва М.Г., Елфимова Ю.М. Analysis of the impact of the tourist cluster on the socio-economic development of the cities of the Caucasian Mineral Waters region // *Экономика и управление: проблемы, решения*. – 2025. – № 6. – С. ...

effective management⁶.

Research conducted by Uzbek scholars focuses on developing approaches adapted to local conditions. N. T. Yusupova (2025) examines regional tourism clusters as an instrument for improving the economic efficiency of regional economies, highlighting the effects of reduced transaction costs, economies of scale and scope, synergy, and environmental responsibility. According to the researcher, cluster formation enhances regional competitiveness and stimulates socio-economic development⁷.

Overall, recent studies emphasize the decisive importance of a comprehensive system of indicators, multiplier effects, and management quality in assessing the socio-economic effectiveness of tourism clusters. These approaches provide an important scientific foundation for improving the methodology of effective tourism cluster management in Uzbekistan, particularly in the context of the Bukhara region.

RESEARCH METHODOLOGY

This study extensively employed SWOT analysis and a system of Key Performance Indicators (KPIs) to comprehensively assess the socio-economic effectiveness of the tourism cluster in the Bukhara region. The primary sources of empirical data included official statistical reports of the Bukhara Regional Department of Tourism and Cultural Heritage for 2017–2023, as well as indicators of tourist flows, tourism infrastructure, employment, and income.

The analysis combined quantitative and qualitative methods to identify the cluster's internal strengths and weaknesses, as well as external opportunities and threats. To measure effectiveness, key performance indicators were developed for economic dimensions, including tourism revenues, investment, and employment, and social dimensions, including the population's standard of living, cultural heritage preservation, and infrastructure development. The dynamics of these indicators were subsequently assessed.

This approach made it possible to objectively and comprehensively assess the effectiveness of systematic tourism cluster management.

ANALYSIS AND RESULTS

According to data published by the World Tourism Organization, Uzbekistan ranked among the world's fastest-growing international travel destinations in 2025, as global tourism continued its post-pandemic recovery.

Official statistics from the National Statistics Committee of the Republic of Uzbekistan indicate that 10.7 million foreign nationals visited the country between January and November 2025, highlighting the substantial growth in international visitor arrivals during this period.

The Government of Uzbekistan has established a series of quantitative targets for tourism development. The primary objective is to increase the annual number of international tourists to 20 million by 2030. Intermediate targets have been set at 12 million in 2026, 13.5 million in 2027, 15.2 million in 2028, and 17.5 million in 2029. Under the national program «Travel Across Uzbekistan!», the number of domestic tourist trips is projected to reach 25 million annually by 2030.

Pilgrimage tourism has been identified as a distinct growth segment, with plans to increase the annual number of visitors to 3 million by the end of the decade. To support this growth, plans have been outlined to establish 4,000 new hotels, guesthouses, and hostels across the regions by 2030, alongside the development of 20 tourism clusters throughout the country through the attraction of private investment.

From an economic perspective, the government aims to increase the annual value of tourism service exports to USD 6 billion by 2030. Medical and educational tourism are expected to make substantial contributions to this target, with their combined annual exports planned to reach USD 1.5 billion. Furthermore, the development plans envisage the regular organization of cultural and entertainment performances at cultural heritage sites and tourist destinations, with the objective of attracting 100,000 tourists annually through scheduled events⁸.

Overall, Uzbekistan is moving towards a more systematic and investment-driven expansion of its tourism sector. The need to assess the socio-economic effectiveness of tourism clusters in Uzbekistan is determined by several factors.

First, it is necessary to regularly assess the volume, efficiency, and effectiveness of public and private investments directed towards tourism clusters.

Second, the contribution of tourism cluster activities to regional socio-economic development should be

6 Ермакова Ж.А., Холодилина Ю.Е. Туристско-рекреационный кластер как социально-экономическая система // Креативная экономика. – 2021. – Т. 15, № 11. – С. 4237–4252.

7 Юсупова Н.Т. Региональный туристский кластер – как инструмент повышения эффективности экономики региона // Яшил иқтисодиёт ва тараққиёт. – 2025. – № 9. – С. 965

8 Visit Tashkent. Uzbekistan Targets 20 Million Foreign Tourists by 2030 [Электрон манба]. – VisitTashkent.uz, 7 January 2026. – Электрон ресурс. – Кириш режими: <https://visittashkent.uz/news/uzbekistan-tourism-growth-plan/> (мурожаат санаси: 13.06.2026).

continuously monitored and measured.

Third, the effectiveness of management decisions concerning tourism clusters in Uzbekistan should be evaluated, and their development in accordance with strategic plans should be systematically analyzed.

According to economist P. Krugman's theory of geographical economics, the success of clusters depends not only on their internal efficiency but also on external economic effects⁹.

The methodology for assessing tourism clusters in Uzbekistan should be based on a combination of quantitative and qualitative indicators.

Quantitative indicators include tourism revenues, the number of employed persons, investment volumes, hotel occupancy rates, and revenues generated from transport and other services.

Qualitative indicators encompass factors such as tourist satisfaction, local residents' attitudes towards tourism, the condition of cultural heritage sites, and environmental sustainability¹⁰.

The composite index method is an important instrument for comprehensively assessing the socio-economic effectiveness of tourism cluster management. It enables various indicators to be combined to determine the overall level of effectiveness. When calculating a composite index, a specific weighting coefficient is assigned to each indicator, and an overall assessment is derived from their weighted aggregation. This method is applied in international practice, including approaches used by the United Nations World Tourism Organization (UNWTO)¹¹.

Research conducted by Uzbek scholars has developed several scientific approaches to assessing the effectiveness of tourism clusters. In particular, considerable attention has been devoted to enhancing the competitiveness of regional tourism products, strengthening integration among cluster participants, and improving public-private partnership mechanisms¹².

According to official statistical data, employment and investment volumes in the tourism sector have increased in recent years. Further improvement of these indicators in accordance with international standards would contribute to expanding opportunities for the sector's development¹³.

Considering the research subject, an analysis of historical and time-series statistical data on the tourism sector of the Bukhara region highlights the importance of conducting scientific research into effective tourism cluster management mechanisms in Uzbekistan.

An analysis of tourism sector indicators for 2017–2023, provided by the Bukhara Regional Department of Tourism and Cultural Heritage, demonstrates that the region possesses substantial drivers of tourism development, reflected in increasing tourist arrivals, expanding tourism infrastructure, and rising revenues.

At the same time, further improvement in the systematic management of these opportunities through a cluster-based approach, the elimination of infrastructure gaps, and the effective utilization of existing development potential would contribute to realizing the full potential of the regional tourism sector (Table 1).

9 Krugman P. Geography and Trade. – Cambridge: MIT Press, 2011. – 156 p

10 UNWTO. Tourism Highlights. – Madrid: World Tourism Organization, 2024. – 24 p

11 UNWTO. Measuring the Sustainability of Tourism. – Madrid, 2023. – 48 p.

12 Қаямов А., Жўраев А. Ўзбекистонда туристик кластерларни шакллантириш истиқболлари. – Т.: Иқтисодиёт, 2022. – 186 б.

13 Ўзбекистон Республикаси Туризм ва маданий мерос вазирлиги. 2024 йилги йиллик ҳисобот. – Т., 2025.

Table 1

SWOT Analysis Based on Tourism Sector Indicators in the Bukhara Region¹⁴

Strengths	Weaknesses
Rapid growth in tourist arrivals: The total number of tourists increased from 1.4 million to 3.6 million during certain periods, with an annual growth rate of 134.8%. In particular, international tourist arrivals exceeded 637,000. Service exports and revenue generation: Revenue generated from international tourists reached USD 151.5 million. Revenue from domestic tourists also increased significantly, reaching UZS 385.3 billion. Private sector activity (handicrafts): The number of artisans increased substantially, from 1,050 to 8,112, with a reported growth rate of 114.2%. This provides a strong foundation for local employment. Digitalization and service infrastructure: Integration with the E-Mehmonxona electronic accommodation registration system has been ensured across almost all hotels (518 establishments).	Hotel classification and development opportunities: Of the 191 hotels in the region, two are classified as four-star establishments and four as three-star establishments. The development of five-star hotels represents an additional opportunity to enhance the region's tourism infrastructure. The majority of accommodation facilities belong to standard categories (513 establishments). Increasing the proportion of higher-category hotels is essential for attracting high-spending international tourists in the premium segment. Opportunities for the commercial utilization of cultural heritage sites: Of the 829 cultural heritage sites, eight have been leased for hotel operations and 14 for food service establishments. This indicates substantial opportunities for expanding the economic utilization of cultural heritage assets. Improvement of logistics and transport provision: With tourist arrivals reaching several million, the region operates 151 tourist buses, including 128 in Bukhara city. Further expansion of transport capacity in accordance with increasing tourist flows would contribute to improving the quality and accessibility of tourism services.
Opportunities	Threats
Infrastructure expansion and diversification: Expansion of the cluster's geographical coverage through the development of new hotels (48), restaurants (27), and ecotourism facilities (5). Pilgrimage tourism potential: The number of pilgrimage sites has reached 51, generating revenue of UZS 1.8 billion. Considering Bukhara's significance in the Islamic world, there is potential to increase this figure severalfold. International relations and investment: The number of sister cities has reached 15. Investment attracted to tourism infrastructure, reported at USD 56.7 million, provides a foundation for attracting international brands.	Restoration and preservation of cultural heritage sites: A total of 175 cultural heritage sites have been identified as requiring restoration. Their timely restoration would contribute to preserving and further enhancing Bukhara's historical attractiveness, which constitutes the core of the tourism cluster. Increasing competition: The establishment of major tourism centers in the neighboring cities of Samarkand and Khiva creates additional opportunities for Bukhara to enhance its tourism attractiveness, improve the quality of tourism services, and strengthen its competitiveness.

The preceding analysis demonstrates the need for a comprehensive, scientifically grounded methodology for assessing the socio-economic effectiveness of tourism cluster management systems. Such a methodology should incorporate quantitative and qualitative indicators, composite indices, SWOT analysis, and KPI-based approaches while taking into account the specific local conditions of Uzbekistan. Effective tourism cluster management and the assessment of its socio-economic effectiveness are matters of both theoretical and practical significance.

The application of SWOT analysis and the Key Performance Indicators (KPI) approach is also particularly important when assessing the socio-economic effectiveness of tourism cluster management in Uzbekistan. SWOT analysis helps identify the strengths, weaknesses, opportunities, and threats associated with a tourism cluster.

The KPI system, in turn, establishes specific, measurable, and time-bound indicators that facilitate monitoring and control of tourism cluster management processes. Examples of such indicators include the growth rate of tourist arrivals, average tourist expenditure, local employment rates, and the utilization rate of infrastructure facilities¹⁵.

14 Бухоро вилояти Туризм ва маданий мерос бошқармаси. Бухоро вилоятида туризм соҳаси кўрсаткичлари тўғрисида маълумотнома (2017–2023 йй. динамикаси ва 01.08.2023 й. ҳолатига тезкор статистик ҳисобот) [Матн] / Бухоро вилояти Туризм бошқармаси жорий архиви. – Бухоро, 2023.

15 Kaplan R., Norton D. The Balanced Scorecard. – Boston: Harvard Business School Press, 2016. – 322 p

CONCLUSION AND SUGGESTIONS

Based on the case of the Bukhara region, the effective management of tourism clusters and the enhancement of their socio-economic effectiveness require the introduction of a comprehensive and measurable system of Key Performance Indicators (KPIs), taking into account the strengths and existing development opportunities identified through the preceding SWOT analysis.

This system would facilitate the assessment of cluster performance in both quantitative and qualitative terms, provide a basis for informed management decisions, and support the formulation of a long-term development strategy.

The analysis of the Bukhara tourism cluster indicates that it is appropriate to classify tourism cluster KPIs in Uzbekistan into four principal dimensions to assess their economic, social, infrastructural, and innovation-related effectiveness.

The first dimension focuses on economic effectiveness KPIs. When establishing these indicators, priority should be given not only to increasing tourist arrivals but also to maximizing the revenue generated per tourist.

For this purpose, the average expenditure per international tourist (Yield per Tourist) indicator is introduced. It is calculated by dividing total international tourism revenue (USD 151.5 million) by the number of international tourists (637,440).

An increase in this indicator reflects the cluster's capacity to generate added value and facilitates the development of high-revenue tourism segments alongside mass tourism.

Furthermore, the proportion of higher-category hotels (three- to five-star establishments) is another important indicator. Currently, only six of the region's 191 hotels have an official star classification. Therefore, a target should be established to ensure that at least 30% of the 48 newly constructed hotels qualify for a star-rated category. This would enhance the cluster's competitiveness while increasing average tourist expenditure.

The second dimension focuses on social effectiveness and employment KPIs. When establishing these indicators, particular attention should be paid to enhancing the social benefits generated by the tourism cluster, increasing local employment, and improving household incomes.

For this purpose, an indicator measuring the integration of handicrafts and family entrepreneurship is introduced. It is measured by the number of permanent jobs created by guesthouses (253 establishments) and artisans (8,112 individuals). This indicator reflects the direct contribution of the cluster to the local economy.

Another important indicator is the tourism seasonality reduction coefficient. Currently, 295 cultural events are organized annually. Increasing the number of these events and expanding international exhibitions would help maintain stable employment during both the winter and summer seasons.

This would support the cluster's year-round operation and create stable sources of income for local residents.

The third dimension focuses on infrastructure and logistics effectiveness KPIs. When establishing these indicators, particular attention should be paid to the transport and logistics systems required to ensure the high-quality operation of the cluster.

Accordingly, a transport provision coefficient (Bus-to-Tourist Ratio) is introduced. It is assessed based on the daily utilization of 151 tourist buses and tourists' waiting times.

Improvements in this indicator would increase tourist satisfaction and enhance the efficiency of mobility within the cluster.

The cultural heritage commercialization index is another important indicator. Currently, 175 cultural heritage sites require restoration, while eight cultural heritage properties have been leased for hotel operations and 14 for restaurant operations.

Expanding the commercial utilization of these properties through public-private partnership mechanisms and increasing the associated tax revenues would strengthen the cluster's financial sustainability. At the same time, it would create opportunities to generate economic benefits while preserving cultural heritage.

The fourth dimension focuses on innovation development and management digitalization KPIs. When establishing these indicators, particular attention should be paid to the extent to which digital technologies are implemented to ensure the successful operation of a modern tourism cluster.

Accordingly, a Digital Payment Coverage Index is introduced. It is measured by the proportion of handicraft shops and restaurants equipped with foreign currency payment terminals and automated currency exchange facilities, of which 125 are currently available.

The objective is to achieve 100% coverage of convenient and rapid cashless payment options for tourists, thereby enhancing financial transparency within the cluster and expanding the scale of formal economic activity.

Another important indicator is the quality of ecosystem integration and monitoring, measured through the E-Guest Integration Rate. This indicator reflects the degree to which all entities involved in the tourism value chain, including hotels (518 establishments), family guesthouses (253 establishments), and hostels (70

establishments), are fully integrated into the unified E-Mehmonxona system and the cluster's digital platform.

A high level of this indicator would enable real-time monitoring of tourist flows into the region and facilitate management decisions based on accurate and timely data.

Overall, the proposed four-component KPI system is designed to promote not only quantitative growth but also qualitative, sustainable, and digital development in the management of the Bukhara tourism cluster.

Regular monitoring and analysis of these indicators would contribute to improving cluster effectiveness, making efficient use of development opportunities, and generating tangible socio-economic benefits for local communities.

More broadly, the proposed KPI system is intended to promote not only quantitative growth but also qualitative and sustainable development in tourism cluster management throughout Uzbekistan.

The continuous monitoring and analysis of these indicators would contribute to enhancing cluster effectiveness, fully utilizing existing opportunities, and creating tangible socio-economic benefits for local residents.

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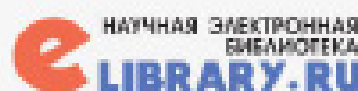
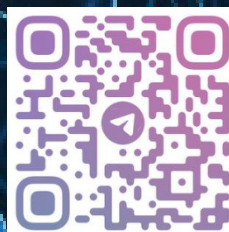
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