Tourist Infrastructure as the Basis for Sustainable Development of the Destination

Alexey Platov [1][a], Anna Silaeva [2][b] and Natalia Boboshko[3][c]
[1]*Moscow State University of Sport and Tourism, 43a Kronshtadsky Blvd, Moscow, Russia*
[2]*Russian State University of Tourism and Service, Cherkizovo, Moscow region, Russia*
[3]*The Vladimir Kikot Moscow University of the Ministry of Internal Affairs of Russia, 12 Akademika Volgina Moscow, Russia*

Keywords: Sustainability, Infrastructure, Tourism, Destination.

Abstract: Globalization and digitalization of the economy requires the transit of the tourism industry to the principles of sustainable development. The most important element of sustainable tourism development is its infrastructure model. The composition of the tourist infrastructure is extensive and is associated with all elements of the destination that provide and stimulate the development of tourism. Therefore, the objects of regional infrastructure can be considered as elements of the tourist infrastructure. The concept of sustainable development determines the vector of research in the field of tourism infrastructure. The study used a quantitative approach based on the IPA method (importance-performance analysis). A survey of tourists and stakeholders of the tourism industry in Moscow, St. Petersburg and Kazan was carried out. The results indicate a high assessment of the tourist infrastructure in general by both groups of respondents. However, when considering the "Importance - performance" matrices for individual groups of infrastructure, the inconsistency of the opinions of the groups of respondents is revealed.

1 INTRODUCTION

The basic approach to the development of tourist destinations in the current conditions should be the concept of the integrated development of infrastructure, transport and attractions that the region has. At the same time, among the modern concepts of tourism development, the theory of sustainable development occupies a central place. In the context of globalization and digitalization of the economy and society, the need for the transit of the tourism industry to the principles of sustainable development becomes obvious. Thus, in order to create a successful and competitive tourist destination, certain efforts should be made to build its infrastructure (based on the main idea of the tourist product of a given territory) and effective management.

For a tourist destination, infrastructure is a necessary resource that is no less important than natural and cultural attractions. The infrastructure of the tourist destination must be developed and meet the expectations of tourists (Slashchuk and Bernadska, 2019). The expectations of tourists can serve as one of the indicators in the procedure for assessing the readiness of the infrastructure of a tourist destination.

Sustainable tourism development can be achieved if the level of use of various resources does not go beyond the ability of these resources to regenerate. The principles of sustainable tourism development are maintaining the quality of the environment, providing benefits for the local community and tourists; maintaining harmony between the local population and the environment; and joint work of stakeholders to develop a sustainable development strategy.

The goal of sustainable tourism is to improve the well-being of society, the economy and the health of the population. Tourism sustainability should not be limited to debate. It is necessary to have a

[a] https://orcid.org/ 0000-0002-8039-9992
[b] https://orcid.org/0000-0002-9725-6357
[c] https://orcid.org/0000-0001-6485-5268

Platov, A., Silaeva, A. and Boboshko, N.
Tourist Infrastructure as the Basis for Sustainable Development of the Destination.
DOI: 10.5220/0010666200003223
In *Proceedings of the 1st International Scientific Forum on Sustainable Development of Socio-economic Systems (WFSDS 2021)*, pages 206-213
ISBN: 978-989-758-597-5

commitment on the part of stakeholders to support the natural, socio-economic and cultural sustainability of society as the main capital of tourism.

Thus, sustainable tourism development can be considered in three aspects: environmental, economic and social.

These three aspects should attract serious attention from society, business and government. The natural and agricultural environment must be maintained and conserved. In doing so, from an economic and sociocultural point of view, tourism should be able to contribute to the development of local society, improve its standard of living and preserve its society, so that people have a good reason to maintain the sustainability of tourism. (Amerta et al., 2018).

Today, the boundaries of the concept of "tourist infrastructure" are very vague, since there is no generally accepted formulation of an integral system of essential features that separate the object under consideration from all similar ones. Often, tourism infrastructure acts as a synonym for the entire tourism industry, recreation infrastructure, is defined as the material and technical base of tourism. Such uncertainty impedes understanding of the essence of tourism infrastructure as a basis for the development of tourism and recreation activities and the regional economy as a whole.

One of the main reasons for the difficulty in defining tourism infrastructure is that tourism is a heterogeneous industry (Dwyer et al., 2010). The literature offers various approaches to the concept of tourist infrastructure. Broadly speaking, tourism infrastructure encompasses the physical, legal, environmental and psychological factors that make a tourism product enjoyable, reliable and sustainable (Khadaroo and Seetanah, 2016). Hansen (1965), like Mera (1973), views infrastructure as a collection of economic and social overhead capital. Infrastructure is mainly focused on the formation of prerequisites for development, while recreational facilities are factors for improving daily life. They should be available every day and serve the local community and visitors (Bell et al., 2007; Lewinson, 2001). The tourism infrastructure is vast and linked to all the elements of the destination that support and stimulate tourism development (Swarbrooke and Horner, 2001). Consequently, various objects of regional infrastructure and recreation can be considered as elements of tourism infrastructure. Lohmann and Netto (2017) included those facilities that tourists use when leaving their residence, getting to their destination and returning home.

The state of infrastructure has a strong influence on the competitiveness of a destination (Murphy et al., 2000), the efficiency of its production and distribution of tourism services, and in some cases determines the very possibility of providing tourism services (Sakai, 2006). The emergence of the concept of sustainable development has had a great influence on the direction of research in the field of tourism infrastructure. Researchers have shown interest in the relationship between the health of transport infrastructure and tourism development (Albalate et al. 2017; Rehman Khan et al. 2017). The impact on sustainability of such infrastructures, cycle paths and hiking trails has been studied (Deenihan and Caulfield, 2015; Olafsdottir and Runnstrom, 2013). The results have reliably demonstrated the presence of the influence of the state of objects on maintaining stability. Empirical studies in Croatia have shown a statistically significant correlation between the level of tourism development and the state of tourism infrastructure (Mandić et al., 2018).

State and municipal management of tourism infrastructure mainly depends on the place of the tourism industry in the general economic system of the region. In some countries, the strengthening of the tourism sector in rural and urban areas has resulted in prioritization of the development and improvement of hard infrastructure (physical assets), while soft infrastructure (human resources) remains underdeveloped (Thapa, 2012). From an economic point of view, government intervention and government investment are justified in a situation where private business is unable to form the tourism infrastructure. Infrastructure can be created and maintained by the public or private sector, as determined by domestic economic and social policies.

2 MATERIALS AND METHODS

The theoretical basis of the research is the fundamental and applied works of scientists and specialists in the field of the theory of sustainable development of territorial socio-economic systems, analysis and assessment of the level of sustainability of territorial entities. In the course of the research, modern concepts in the field of sustainable development and management of tourist areas were widely applied.

The presented study is of an explanatory type. To solve the set tasks, general scientific and specific scientific methods of research were used, including classification, methods of grouping and comparisons, methods of logical and economic analysis,

generalization and synthesis. Their application made it possible to ensure the validity and reliability of the conclusions and proposals.

The cities of Moscow, St. Petersburg and Kazan were selected for the study as recognized centers of international and Russian tourism.

The empirical part of the research was carried out using the survey method.

In order to identify the unity of views or disagreements, the survey was conducted among consumers and stakeholders of the tourism industry.

700 questionnaires were sent by e-mail to tourists visiting these cities. The survey was conducted during 2020. Within the framework of this study, 297 fully completed questionnaires were received.

The stakeholder sample consisted of 29 respondents representing two types of tourism activities:

- active entrepreneurs in the tourism sector (N = 19);
- local government representatives authorized to represent the tourism sector (N = 10).

The study used a quantitative approach based on the IPA method (importance-performance analysis) (Eskildsen, Kristensen, 2006). The essence of the methodology is to measure the level of people's interest in the activities of other groups. Interest was measured by comparing the level of expectations and the level of performance.

The average scores on the criteria of "importance" and "performance" were assessed on a five-point Likert scale: 0-1.5 - "not at all important", 1.6-2.5 - "not important", 2.6-3.5 - "indifferent ", 3.6-4.5 -" important ", 4.6-5.0 -" very important "and 0-1.5 -" completely dissatisfied ", 1.6-2.5 -" dissatisfied ", 2.6- Possibly Overkill 3.5 - "partially satisfied", 3.6-4.5 - "satisfied", 3.6-4.5 - "very satisfied"

At the final stage, the average scores are plotted on a matrix for analysis. The matrix is represented by two intersected coordinate axes “importance” and “performance” that divide the space into four squares: “Keep up the Good Work”, “Possibly Overkill”, “Lower Priority” and “Concentrate Here".

The “Keep up the Good Work” square indicates those attributes of the object that are important to customers and with which they are satisfied. The challenge for the tourism business is to maintain this state of affairs. The “Possibly Overkill” square indicates a possible overuse of resources on those attributes of an object that are unimportant to consumers and do not have a noticeable effect on their behavior. The "Lower Priority" square identifies those attributes of an object that have received insufficient attention and resources. It is not recommended to spend additional funds on these attributes, as they also do not matter much to consumers. The “Concentrate Here” square highlights the problematic attributes of the object. They are extremely important to consumers and largely determine their behavior, but the tourism industry does not devote enough attention and resources to them.

To assess the respondents in the questionnaire, the main groups of objects of tourist infrastructure were presented:

Transport support: airport, railway and bus stations, developed and accessible public transport network, taxi, car rent, parking areas, high-quality road network, car service modules (gas station, car wash, sale of spare parts and minor repairs), auto camping, equipped parking for tourist buses.

Accommodation: 4-5 star hotels, 1-3 star hotels, hostels, recreation centers, individual residential houses, rented apartments.

Catering: restaurants and cafes, canteens, fast food outlets, street stalls.

Consumer, medical and financial services: malls, supermarkets, small convenience stores, markets, dry cleaners and laundries, hairdressing salons, repair shops, medical centers, banks, ATM, currency exchange offices.

Leisure and entertainment: museums, theaters, art galleries, sports facilities, theme parks and amusement parks, cinemas, exhibition complexes.

Information support and communication systems: tourist information centers, mobile communication, accessible internet.

Communal systems: power supply systems, water supply and sewerage systems, outdoor lighting systems.

3 RESULTS AND DISCUSSION

The analysis shows that 75% of all selected objects of tourist infrastructure in the survey of tourists were attributed to the square "Keep up the Good Work" (Table 1). Stakeholders referred 68% of objects to the same zone. At the same time, the least used square turned out to be “Concentrate Here”: 6% among tourists and stakeholders. Thus, we can talk about a satisfactory assessment of the tourism infrastructure in general by both groups of respondents. However, these indicators are averaged; when considering the “Importance - performance” matrices for individual groups of infrastructure, the inconsistency of opinions of the groups of respondents is revealed.

Table 1: The results of IPA.

№	The main objects of tourist infrastructure	Tourists		Stakeholders	
		Importance	Performance	Importance	Performance
	Transport support				
1	airport	4.75	4.64	4.92	4.83
2	railway and bus stations	4.87	4.75	4.56	4.43
3	developed and accessible public transport network	4.68	4.87	4.34	4.21
4	taxi	3.78	4.48	3.87	3.99
5	car rent	3.44	4.17	3.76	3.65
6	parking areas	4.15	3.76	3.68	3.32
7	high-quality road network	4.59	4.44	4.54	4.21
8	car service modules (gas station, car wash, sale of spare parts and minor repairs)	3.32	4.53	3.96	3.55
9	auto camping	2.79	3.14	3.11	2.16
10	equipped parking for tourist buses	2.96	1.98	3.43	3.08
	Accommodation				
11	4-5 star hotels	3.69	4.61	4.47	4.86
12	1-3 star hotels	4.64	4.12	4.56	4.24
13	hostels	3.74	3.96	4.13	3.65
14	recreation centers	3.65	3.45	3.86	3.32
15	individual residential houses	3.01	4.29	3.21	3.97
16	rented apartments	4.54	4.21	3.67	3.43
	Catering				
17	restaurants and cafes	4.67	4.32	4.94	4.54
18	canteens	3.68	3.05	2.73	2.04
19	fast food outlets	4.65	4.48	4.43	4.11
20	street stalls	4.13	3.46	3.55	3.06
	Consumer, medical and financial services				
21	malls	4.12	4.68	3.68	4.43
22	supermarkets	4.11	4.37	3.22	3.65
23	small convenience stores	4.03	3.76	2.86	2.34
24	markets	3.87	3.98	3.45	3.32
25	dry cleaners and laundries	2.87	3.65	3.11	3.13
26	hairdressing salons	2.65	3.55	2.73	2.97
27	repair shops	3.04	3.74	2.98	3.24
28	medical centers	4.45	4.12	3.06	4.37
29	banks	4.38	4.36	4.54	4.45
30	ATM	4.68	4.59	4.46	4.21
31	currency exchange offices	3.65	3.87	4.43	4.07
	Leisure and entertainment				
32	museums	4.78	4.92	4.95	4.88
33	theaters	4.05	4.87	4.13	4.54
34	art galleries	4.27	4.69	4.21	4.53
35	sports facilities	3.89	4.43	4.57	4.32
36	theme parks and amusement parks	4.45	4.64	4.67	4.12
37	cinemas	3.98	4.15	3.54	3.65
38	exhibition complexes	4.34	4.42	4.87	4.76
	Information support and communication systems				
39	tourist information centers	4.54	4.25	4.78	4.43
40	mobile communication	4.87	4.75	4.46	4.31
41	accessible internet	4.85	4.23	4.33	4.16
	Communal systems				
42	power supply systems	4.75	4.68	4.86	4.72
43	water supply and sewerage systems	4.81	4.72	4.79	4.65
44	outdoor lighting systems	4.47	4.11	4.65	4.23

Most of the objects of the "Transport Support" group are significant for both groups of respondents (Figure 1). For this part of the infrastructure alone, the scores were distributed across all four squares. Airports, rail and road transport, a well-developed public transport network are very important for all respondents. This opinion confirms that transport accessibility is a prerequisite for the success of a tourist destination. At the same time, respondents note a high degree of satisfaction with the quality of basic transport services. Campsites and equipped tourist bus sites are categorized as Low Priority by both groups.

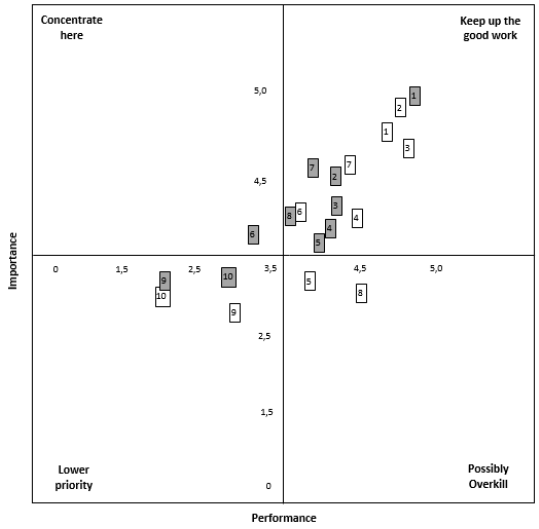

Figure 1: The Importance Performance Analysis of Transport Support.

The respondents note the high importance of hotels, while the importance of hotels of higher categories is higher for stakeholders, while the segment of inexpensive hotels and hostels is more attractive for tourists. The matrix shows the underestimation by stakeholders of such objects as rental apartments and apartments (Figure 2). These objects are of very high importance for tourists. Recreation centers, individual dwelling houses showed an average level of significance, in all likelihood, due to the fact that the target group of their consumers is poorly represented among the visitors of the selected megacities. Finding most of the properties in the "Keep up the Good Work", "Possibly Overkill" squares shows a high level of satisfaction with destination accommodation facilities.

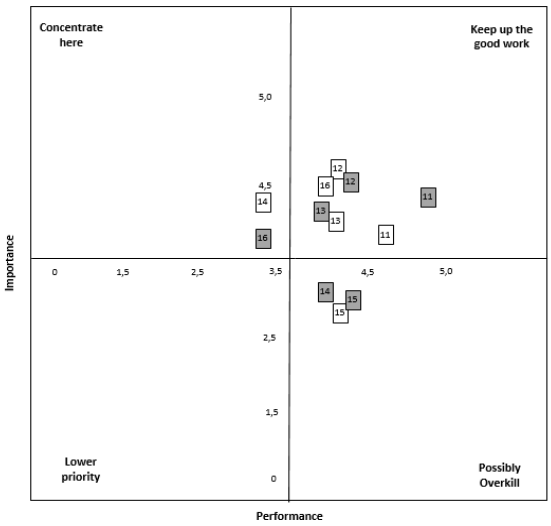

Figure 2: The Importance Performance Analysis of Accommodation.

Tourists and stakeholders pointed to the high importance of catering facilities such as restaurants, cafes and fast food outlets (Figure 3). Canteens received an average level of significance, mainly due to visitors and respondents from St. Petersburg, where this format is represented very widely. Street food for both groups of respondents fell into the "Concentrate Here" square, so entrepreneurs and authorities should pay attention to this promising direction. In general, both groups showed an excess of the level of importance over the level of satisfaction for most public catering facilities. This result highlights the need to improve the quality of products and services for this part of the infrastructure.

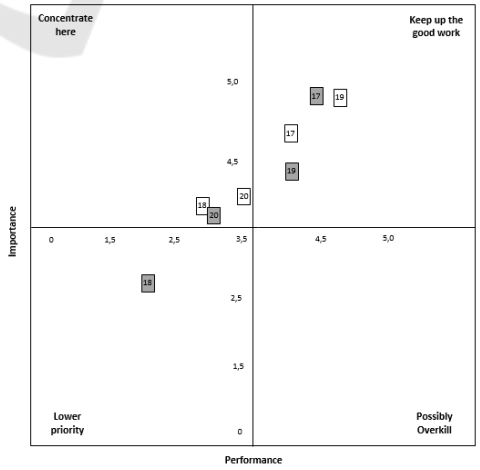

Figure 3: The Importance Performance Analysis of Catering.

The composition of the objects of the group "Household, medical and financial services" is rather heterogeneous, the distribution of respondents' answers in the matrix has a significant scatter (Figure 4). Trade enterprises turned out to be significant for tourists, while they are not of high importance for stakeholders. In the “Lower Priority” square, only the assessments of stakeholders were found, while the same positions were placed by the tourists in the “Keep up the Good Work” square. On this element of infrastructure, there is the greatest divergence of opinions among tourists and stakeholders.

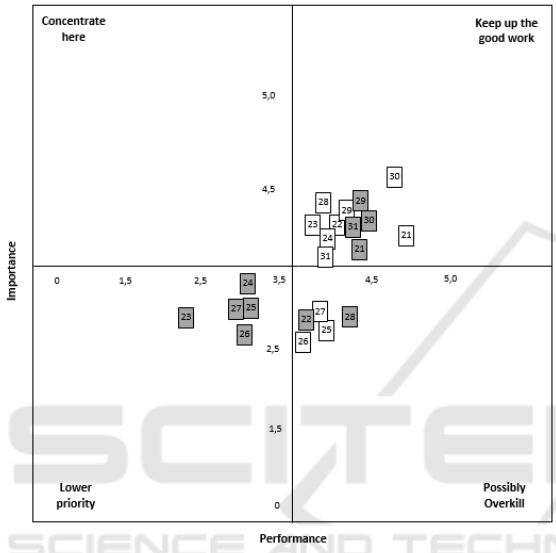

Figure 4: The Importance Performance Analysis of Household, medical and financial services.

On the contrary, in the group “Organization of leisure and entertainment” the respondents showed a unanimous opinion, all positions were placed in the square “Keep up the Good Work” (Figure 5). The level of satisfaction consistently exceeds the level of significance. This result can be called quite expected, given that these facilities in Moscow, St. Petersburg and Kazan occupy leading positions in their category not only in the country, but also in the world.

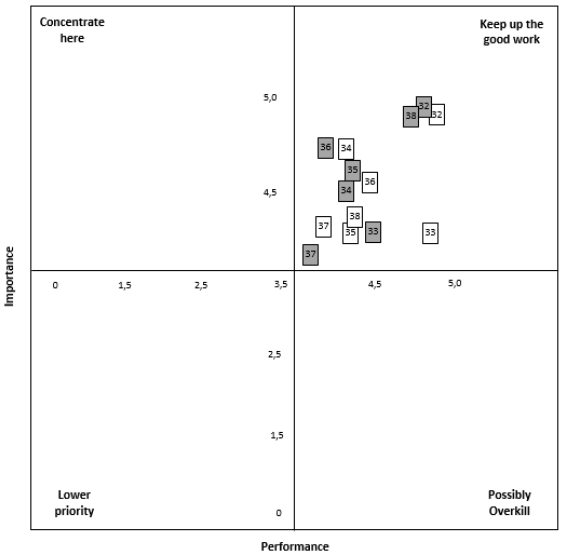

Figure 5: The Importance Performance Analysis of Organization of leisure and entertainment.

A similar situation has developed for the groups "Information support and communication systems" and "Communal systems" (Figures 6, 7). Modern tourists are very demanding on the quality of mobile communications and services of Internet providers. High-quality utility services are highly significant for all respondents. The level of satisfaction for these positions is generally high, which is also expected for the three largest metropolitan areas.

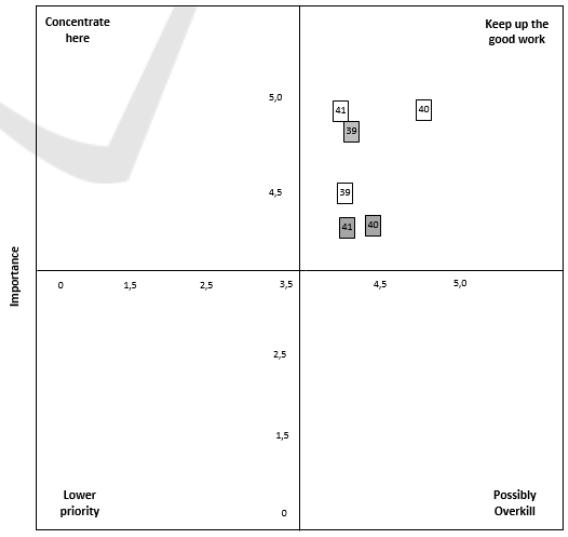

Figure 6: The Importance Performance Analysis of Information support and communication systems.

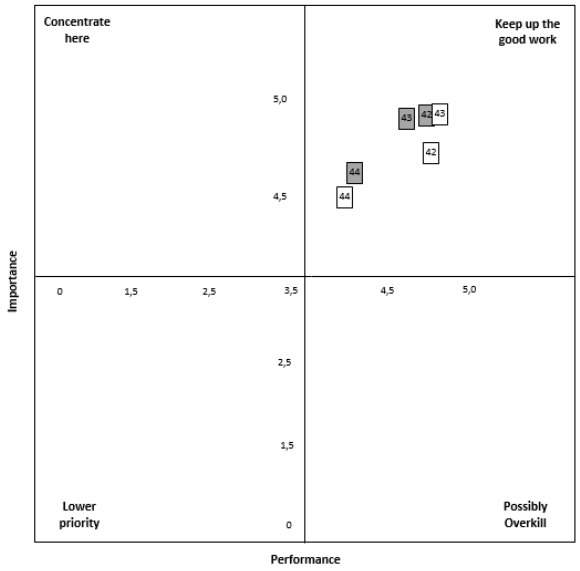

Figure 7: The Importance Performance Analysis of Communal systems.

4 CONCLUSIONS

The results of the analysis indicate, on the whole, a fairly favorable state of the tourist infrastructure of the three largest megacities of Russia. Tourists praised the importance and current quality of two-thirds of the selected major infrastructure facilities.

Infrastructure is a key factor in ensuring sustainable socio-economic development and competitiveness of tourist destinations.

The selected destinations are the most dynamically developing cities with a population of over one million in Russia: the population and the volume of tourist flow in the last decade have outstripped the forecasts of the previous plans. The new plans provide cities with balanced, sustainable and polycentric development. This will make it possible to more efficiently and more evenly distribute the load on their infrastructure.

Moscow's strategic documents include tasks for the implementation of the sustainable development goals adopted by the UN. Moscow and eight other cities and regions of the world participate in the pilot project of the Organization for Economic Cooperation and Development "Regional dimensions of sustainable development goals: structure and main trends." Moscow is already ahead of other countries participating in the project in terms of achieving sustainable development goals.

In 2018, St. Petersburg became the first city in Russia to join the Global Destination Sustainability Index (GDS-Index), an international program that contributes to the socio-economic and tourism development of cities.

Kazan was the first city with a population of over one million, where the regulation "On a Historical Settlement" was adopted. It is the historical settlement that is the core of the Kazan tourist destination. In 2020, the Concept for Sustainable Development of the Historical Settlement of Kazan was adopted. It explains in detail how in 15 years to radically change the infrastructure of the historical core of Kazan, without losing its historical identity. It is assumed that the Concept will become a model for other Russian large cities.

Considering the importance of tourism infrastructure, we can conclude that it performs a number of functions. The tourism infrastructure creates the necessary conditions for organizing tourist services, organizes and maintains ties between enterprises in the industry, forms territorial tourist complexes, creates new jobs, affects consumer demand, and contributes to the growth of tax revenues to budgets of different levels.

Tourism infrastructure is a significant factor in ensuring sustainable socio-economic development of both destinations and regions in general. The three studied destinations belong to cities with impressive budgets, which partly explains the results obtained. The application of the methodology used in other regions would allow tourism stakeholders and authorities to take a deeper look at the problems associated with tourism infrastructure.

REFERENCES

Albalate, D., Campos, J., and Jimenez, J.L. (2017). Tourism and high-speed rail in Spain: Does the AVE increase local visitors, *Annals of Tourism Research,* 65: 71-82.

Amerta, I.M.S., Sara, I.M., and Bagiada, K. (2018). Sustainable tourism development, *International Research Journal of Management, IT and Social Sciences,* 5(2): 248-254.

Bell, S., Tyrväinen, L., Sievänen, T., Pröbstl, U., and Simpson, M. (2007). Outdoor Recreation and Nature Tourism: A European Perspective, *Living Review in Landscape Research*, 2: 1- 46.

Deenihan, G. and Caulfield, B. (2015). Do tourists value different levels of cycling infrastructure? *Tourism Management,* 46: 91-101.

Dwyer, L., Forsyth, P., and Dwyer, W. (2010). *Tourism Economics and Policy*, Bristol, Buffalo, Toronto, Channel view publications.

Eskildsen J.K. and Kristensen K. (2006). Enhancing importance-performance analysis, *International*

journal of productivity and performance management, 1: 40-60.
Hansen, N.M. (1965). Unbalanced Growth and Regional Development, *Western Economic Journal,* 4: 3-14.
Khadaroo, J. and Seetanah, B. (2007). Transport infrastructure and tourism development, *Annals of tourism research,* 34(4): 1021-1032.
Lewinson, D.M. (2001). Financing infrastructure over time, *Journal of Urban Planning and Development,* 127(4*)*: 146-157.
Lohmann, G. and Netto, A.P. (2017). *Tourism theory concepts, models and systems*, CABI, Oxfordshire.
Mandić, A., Mrnjavac, Ž., and Kordić L. (2018). Tourism infrastructure, recreational facilities and tourism development, *Tourism and Hospitality Management,* 24(1): 1-22.
Mera, K. (1973). Regional production functions and social overhead capital: An analysis of the Japanese case, *Regional and Urban Economics,* 3: 157-186.
Murphy, P., Pritchard, M.P., and Smith, B. (2000). The destination product and its impact on traveller perceptions, *Tourism Management,* 21(1): 43-52.
Olafsdottir, R. and Runnstrom, M.C. (2013). Assessing hiking trails condition in two popular tourist destinations in the Icelandic highlands, *Journal of Outdoor Recreation and Tourism,* 3-4: 57-57.
Rehman Khan, S.A., Qianli, D., SongBo, W., Zaman, K., and Zhang, Y. (2017). Travel and tourism competitiveness index: The impact of air transportation, railways transportation, travel and transport services on international inbound and outbound tourism, *Journal of Air Transport Management,* 58: 125-134.
Sakai, M. (2006). Public sector investment in tourism infrastructure", In: Dwyer, L., Forsyth. (eds.), *International Handbook on the Economics of Tourism*, Cheltenham, UK, Northampton, USA, Edward Elgar, pages 266-279.
Slashchuk, A. and Bernadska, H. (2019). Scientific approaches to conceptualization and classification of tourist infrastructure, *Ekonomichna ta Sotsialna Geografiya*, 81: 12-17.
Swarbrooke, J. and Horner, S. (2001). *Business travel and tourism*, Butterworth-Heinemann, Jordan Hill, Oxford.
Thapa, B. (2012). Soft-infrastructure in tourism development in developing countries, *Annals of Tourism Research,* 39(3): 1705-1710.