Socio-economic Development of Tourism Infrastructure

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Abstract. The tourism industry is the dominant factor of socio-economic growth in many countries which have similar political, historical, geographical and cultural features. This indicates considerable potential for tourism development providing the availability of the necessary infrastructure supporting the adequate functioning of the industry. The article reviews the definition of the tourism infrastructure in a number of aspects and introduces the steps of the tourism infrastructure analysis in the region. The calculation of the integrated index of the tourism infrastructure in the region is carried out by means of standardizing the indices as per separate elements of the tourism infrastructure.

1. Introduction

Currently, Russia shows high potential for tourism development and this industry is capable of generating a considerable amount of capital providing for the sustainable socio-economic development. On the assumption of the unsatisfactory condition of tourism infrastructure being one of the major reasons for the slowdown in the tourism industry growth dynamics, it is important to take into consideration its structural changes and study their impact on the socio-economic development of the country and its certain territory a study may focus on.

The tourism industry is the dominant factor of socio-economic growth in many countries which have similar political, historical, geographical and cultural features. This indicates considerable potential for tourism development providing the availability of the necessary infrastructure that supports the adequate functioning of the industry.

The study focuses on the nature of the tourism infrastructure and definition of the basic terms and relevant research methods as well as integrative level of tourism infrastructure development in the regions.
2. Background

The tourism industry is often identified as a cross-industry network that specializes in creating a tourism product targeting certain recreational needs of the consumers while travelling, through goods and services for leisure and related purposes. The functioning of the tourism industry as it is today has become possible due to the strong links between all the financial, economic, social, and governmental controlling bodies and services. Such links are fundamental and of systemic, functional, synergistic, developmental, and administrative character. The steady growth in tourist flows requires continual improvement of the methods of service delivery and tourism networks whose effectiveness largely depends on the tourism infrastructure. It is well known that the contribution of the tourism industry into the country's economy is not easy to estimate as it is calculated according to the methodology proposed by the WTTC and includes:

1) direct visitor spending on travelling, specifically transport, accommodation, leisure, food, museums, sightseeing, etc.;
2) indirect contributions of tourism into the country's economy including investments into the tourism industry (building of the tourism infrastructure, buying transport and equipment), government expenditures on tourism (marketing, safety, administration, etc.), domestic sourcing for tourism enterprises (sourcing food, cleaning services, IT services, etc.);
3) induced contribution to the country's GDP (calculated as the expenditures of those who directly or indirectly gain income in the tourism industry).

According to the WTTC, travel and tourism directly contributed to Russia's economy only 1.2% of its GDP (1.1 trillion rubles) in 2017. It is anticipated to reach 1.6 trillion rubles (1.5%) by 2018-2028. Tourism's total contribution to Russia's GDP was 4.4 trillion rubles (equivalent to 4.8% of the total GDP) in 2017 and it is expected to reach 6 trillion rubles (5.7%) by 2028.

The study also showed that employment in the tourism sector accounted for 4.5% of Russia's population in 2017, which is expected to increase up to 5.9% by 2028.

3. Focus of the research

International relations are largely driven by the globalization processes, and it is the level of infrastructure development that defines potential of socio-economic development of the country and enhancement of its competitiveness. In the late 1960s, researchers of social capital D. Clark, A. Marshall and A. Hirschmann dedicated their studies to the nature of infrastructure that did not refer exclusively to the transport, communication and material and equipment sourcing as the elements of the non-productive sector, i.e. institutional infrastructure, but also referred to the aggregate capacities providing for the functioning of production and public service delivery.

Therefore, infrastructure is the total of elements providing for the socio-economic development of the national economy and its separate regions and continuous interaction and intercommunication of its objects and subjects. The notion of infrastructure efficiency refers to a certain balance between the elements responsible for the sustainable functioning of the whole system.

Thus, infrastructure plays a major role in the development of certain processes, for instance, production or service delivery. Studying the nature of infrastructure gives evidence in support of the functional approach concept developed by R. Merton according to which the following conditions have to be met [1, 4]:

1) functional unity of the whole (coherent performance of all its parts);
2) universal functionalism (provides for the positive functions of socio-economic phenomena);
3) functional necessity.
Hence, the tourism infrastructure represents a total of material and technical objects available in order to meet the needs of tourists and simultaneously provide services to the local residents.

At the beginning of the 1970s, V. Azar singled out three groups of infrastructure: the first one includes enterprises and organizations providing the service of accommodation (hotels, camping sites, etc.); the second one includes enterprises delivering services to tourists as well as local residents (public service companies, catering, trade, transport facilities, etc.); the third group includes organizations delivering service to the country’s population [1, 5].

American researcher W. Smith divided infrastructure into two levels. The first level has organizations whose income is earned as a result of service delivery in tourism. The organizations of the second level gain income from the expenditures of the local residents and tourists [6].

A. I. Zorin considers the tourism infrastructure from the perspective of production, recreational conditions and social sphere [7].

V. Arkhipova and A. Levizov’s rendering of the tourism infrastructure presupposes dividing it into three levels. The productive infrastructure is at the first level; organizations that can perform without tourists but perform better at tourist destinations are at the second one and the third level includes the elements constituted by each separate infrastructure, i.e. infrastructure of a tour operator, transport, educational, informational, scientific, research and trade infrastructures as well as enterprises that focus on producing goods popular with tourists [8].

The tourism infrastructure is an element of the socio-economic infrastructure. It can be maintained that its conceptual framework in the system of socio-economic development lies in the objective reality influenced by a number of general laws, specifically the law of diminishing marginal utility, law of economy of time, Engel’s law, the law of growing ecological needs, the law of rising necessities, Keynes’ Law and Gossen’s first law.

Regarding the impact of the tourism infrastructure on the socio-economic development of the country, these laws shall be rendered as follows: growing public expenditures on the development of tourism infrastructure shall result in the growing employment, incomes and more opportunity to travel for the local residents whereas the territory itself will serve as a tourist destination for foreign tourists [1].

4. Solutions, results and recommendations

The tourism infrastructure makes the foundation of the sustainable development of tourism and provides for the consumption process and tourism resource regeneration. Having high potential for tourism development, Russia has not been fully taking advantage of it, specifically due to the unbalanced development of the infrastructural elements in the regions, which causes multiple problems connected with the misallocation of resources and sometimes prevents from engaging potential actors into a vigorous tourism activity.

The level of the tourism infrastructure development shall be considered within the systemic approach. The tourism infrastructure development can be estimated using absolute values and integrated indices reflecting separate aspects of economic development and condition of the whole system.

Researcher from Kharkiv School of Economics V. Kovalevsky recommends an integrated approach when solving crucial economic issues which also concerns the issue of the tourism infrastructure as “the integrated systemic approach integrates all the systems into a single integrated system (which is established as an integrated model – a complex of economic material models of every individual local system)” [10].

Therefore, the level of the tourism infrastructure development can be defined with the help of an integrated index which consists of such elements as hotels and similar means of accommodation, collective accommodation facilities, sanatoria and recreation and retreat facilities providing healthcare services, guest houses and boarding houses, health camps for children, recreation camps and other tourism facilities, rural tourism estates, HoReCa facilities, shopping malls, tour operators, travel agents and operators engaged in excursion activities [11-17].
The analysis of the tourism infrastructure in the region shall be carried out according to the steps below:

1. Building a database of indices as per different elements of the infrastructure.
2. Finding individual (group) indices characterizing specific aspects of infrastructure development in the region.
3. Combining the obtained data into a single index by finding the geometric average of the group integrated indices.
4. Analyzing the results of the infrastructure development estimation [18–20].

The procedure of standardizing the indices as per separate elements of the tourism infrastructure is applied in order to find the integrated index of the tourism infrastructure in the region according to formulas (1) and (2):

$$Z_{ij} = \frac{X_{ij}}{\sigma}$$  \hspace{1cm} (1)

where $\sigma$ is the root-mean-square deviation of variable $X_j$

$$\sigma = \sqrt{\frac{1}{n} \sum_{i=1}^{n} (x_i - \bar{x})^2}$$  \hspace{1cm} (2)

where $x_i$ is element $i$ from the selected database, $\bar{x}$ is the mean of variable $x$.

On finishing the procedure of standardization, we obtain the standardized values of all the elements of the tourism infrastructure in the regions, the following step being the calculation of the integrated index of the tourism infrastructure (IITI) according to formula (3):

$$IITI = \sqrt{\frac{ip_1^2 + ip_2^2 + ip_3^2 + ipn^2}{n}}$$  \hspace{1cm} (3)

where $ip_1$ … $ipn$ are the calculated values of separate indices as per the elements of the tourism infrastructure.

The calculated weighted integrated index allows defining three levels of tourism infrastructure development:

1) 0.21–0.24 – regions with high level of tourism infrastructure development;
2) 0.25–0.30 – regions with medium level of tourism infrastructure development;
3) 0.31–0.72 – regions with low level of tourism infrastructure development.

5. Conclusion

The findings of the study of the tourism infrastructure development level can be used to elaborate a program of tourism infrastructure development which would take into account the specific characteristics of the regions with different levels of its development.

Such a program would target a balanced sustainable development of the tourism infrastructure allowing for the comfort, smooth performance and safety while implementing it as well as enhancing the country’s attractiveness for tourists, stimulation of all kinds of tourism and efficient use of the tourism potential.

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