

Assessing the Economic Effects of Tourism Infrastructure Development in Russia



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Abstract. Consistent development of the tourism sector in Russia requires expanding tourist supply and increasing the number of tourist infrastructure facilities, primarily accommodation facilities. A significant increase in tourist supply promotes the expansion of domestic consumer demand, which is a driver of the Russian economy, and spurs industrial production. Thus, the assessment of the economic effects of tourism infrastructure development, which is the aim of the work, is becoming relevant. Addressing this problem requires working out a methodological approach that allows us to conduct scenario modeling as a result of changes in demand for tourism products. Methodologically, the study uses input–output tables, including our own approach to determining the volume of domestic tourism in Russia. Information base is formed by data from Rosstat and statistics agencies of other countries, EMISS, VEB.RF, databases of intermediate tables of resources and use of the Russian economy. Theoretical basis includes research works on the development of the tourism infrastructure and methods of its assessment, scenario modeling and forecasting of the economy. Scientific novelty consists in improving the tools for using input–output tables to analyze and evaluate the economic effects resulting from the development of new tourism infrastructure projects. The importance of the tourism industry for the Russian economy is clarified, and the change in economic indicators (output of goods and services, number of employees, wage fund by industry) is calculated as a result of the forecast growth in demand for hotel sector services. The obtained values confirm the importance of an active policy on import substitution of tourism to promote

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positive economic dynamics and indicate the need to ensure that the number of workers in the industry is sufficient. At the same time, the implementation of planned indicators for the development of tourism in Russia requires addressing several problems in the ways that are proposed in the conclusion.

Key words: tourism, infrastructure, input–output method, final consumption, domestic demand.

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Introduction

The development of tourism industry in Russia intensified in 2020–2021. The impact of coronavirus infection has exposed the problem regarding the accessibility of recreation for Russian citizens, which was expressed in the lack of tourist infrastructure in those regions of the country that are promising for tourism development. To address the issue, in 2021 the national project “Tourism and the hospitality industry” was launched; in 2024 it was decided to extend the project until 2035. The documents defining Russia’s development in the medium term contain strategic guidelines for development of the industry, according to which “by 2030, the share of tourism in the gross domestic product of the country should increase to 5% (for comparison: in 2023 – 2.8%), export of tourist services – 3-fold compared to the level of 2023”¹.

In general, current level of development of the tourism market in Russia reflects the following features of Russian economy: low mobility of able-bodied population, concentration of business activity in regional capitals, territorial imbalances in the placement of infrastructure. Positive dynamics of its functioning can be ensured by actively constructing both supporting infrastructure and tourist facilities in the recreation areas of Russians: accommodation facilities, amusement parks, resorts, ski slopes, etc. Among them, of particular

importance is to fill tourist areas with accommodation facilities, which are the main element of hospitality industry. According to experts², Russia is experiencing an acute shortage of high-quality hotels in all segments of consumers: those who prefer family vacations with an all-inclusive system, and those who are willing to pay for premium service. The potential to meet the demand for tourist infrastructure facilities is very large and is formed by the needs of both domestic and inbound tourists. Thus, it is planned to provide 140 million domestic tourist trips³ per year by 2030 and reach the figure of 16 million incoming tourists by the same date⁴. According to research, the construction of infrastructure facilities has a positive impact on economic development, “ensuring smooth operation of all branches of the real sector and the social sphere” (Shults, Lavrinenko, 2020).

Currently, Russian government has embarked on supporting import substitution in infrastructure development in order to reduce critical dependence of the economy on unfriendly countries. This task

² ATOR: the resorts of the Russian Federation most of all lack hotels in the 4–5 star segment. Available at: <https://realty.ria.ru/20210218/kurorty-1598018672.html>

³ A unified plan to achieve the national development goals of the Russian Federation for the period up to 2024 and for the planning period up to 2030. Available at: https://www.economy.gov.ru/material/file/ffccd6ed40dbd803eedd11bc8c9f7571/Plan_po_dostizheniyu_nacionalnyh_celej_razvitiya_do_2024g.pdf

⁴ MED: A program for the development of inbound tourism until 2030 has been presented. Available at: https://www.economy.gov.ru/material/news/mer_predstavlena_programma_razvitiya_vezdnogo_turizma_do_2030_goda.html

¹ Decree on the national development Goals of the Russian Federation for the period up to 2030 and for the future up to 2036. Available at: <http://www.kremlin.ru/events/president/news/73986>

is also relevant for tourism development. The RF President instructed the RF Government to ensure “import substitution of goods and equipment that have no Russian analogues and are used to equip hotels, cruise ships, ski resorts and water parks”⁵. It is planned to design a project for the creation of goods for tourism within the framework of the current national tourism project⁶. Certain steps toward import substitution have already been taken. For example, in order to develop ski resorts in 2025, a plant for the production of rope transport systems on an area of 30 thousand square meters with 100% localization will be opened in the Tver Region, which will meet the need for cable cars in developing Russian resorts and cities⁷. Thus, resorts of the North Caucasus alone need 19 new passenger cable cars. In addition, the production of machinery and equipment for ski resorts (snowmobiles, snow and swamp-going vehicles, snow compacting machines, etc.) is being localized⁸.

Thus, a growing demand for domestic products of tourism industry will activate consumer demand, which accounts for up to 50% of the GDP use structure. The importance of contribution of household consumption to Russian economy requires appropriate assessment of the impact on its output of actions carried out by the state in this direction, including increasing the construction of tourist facilities. The importance of such an assessment is highlighted in the works of economic scientists (Lukin et al., 2018; Shirov et al., 2022). In order to make timely management decisions on the development of tourism industry, it is important

⁵ List of instructions following the meeting of the Presidium of the State Council. Available at: <http://www.kremlin.ru/acts/assignments/orders/69735>

⁶ Putin proposed to form a project to create goods for domestic tourism industry. Available at: <https://tass.ru/ekonomika/20385655>

⁷ A cable car factory will be opened in the Tver Region in 2025. Available at: <https://tass.ru/v-strane/18365579>

⁸ Denis Manturov and Dmitry Chernyshenko held a meeting on the production of industrial goods and equipment for ski tourism. Available at: <http://government.ru/news/50057/>

to determine the effect of programs and projects implemented within the framework of the national project “Tourism and hospitality industry”. However, there is a lack of works related to assessing and forecasting the economic consequences of measures taken in relation to tourism development. Insufficient attention is paid to quantitative approaches that investigate the impact of tourism on the economy of consumer demand. The above has determined the aim of the study, which is to assess the economic effects of tourist infrastructure development. This required solving the following tasks: critical analysis of existing approaches to determining the impact of tourism on the economies of countries and regions, identifying the need to create new tourism infrastructure facilities, designing methodological tools for modeling changes in economic parameters as a result of expanding the tourist offer and an expert assessment based on the results of calculations.

We will focus on evaluating the effectiveness of construction of hotel infrastructure facilities and the resulting demand for the consumption of tourism goods and services, since accommodation facilities are a central element in the tourism system (Nguyen, 2021).

Information base includes data from Rosstat and statistical observation bodies of other countries, EMISS, VEB.RF, databases of intermediate tables of resources and use of the Russian economy. Theoretical basis of the research includes works of scientists investigating the development of tourist infrastructure and methods of its assessment, scenario modeling and forecasting of the economy. Scientific novelty consists in clarifying the methodology for assessing the effects on the economy that have arisen as a result of increased consumption in the tourism industry during the increase in public demand for hotel services due to the implementation of new infrastructure projects, as well as substantiating further directions for tourism industry development.

Theoretical framework

Globally, tourism is an important sector in the economy and regional development, as it contributes to the growth of gross domestic product (GDP), creates new jobs and capital inflows (Widaningrum et al., 2020), infrastructure facilities (Seetanah, Khadaroo, 2009), especially in the field of transport (Zhou, 2021), promotes domestic tourism consumption of households (Steiner, 2006; Leonidova, Sidorov, 2023). The tourism sector also acts as an alternative form of export, improving the balance of payments in a country or region and boosting economic activity. For these reasons, in many countries, especially in developing ones (Khalil et al., 2007; Kruja et al., 2012), the authorities pay special attention to the development of tourism as an alternative source of economic growth.

Recently, scientific literature has shown increased interest in the study of domestic tourism has increased. Russian and foreign authors have proved that during the coronavirus pandemic, domestic tourism acted as a driver of economic growth (Christina, 2020; Nguyen, Su, 2020; Gursoy et al., 2020; Hoque et al., 2020; Arbulu et al., 2021; Leonidova, 2021; Donskova et al., 2022). The basis for the development of tourism is the tourist infrastructure, investments in which ensure the influx of tourists to the region and the long-term growth of the industry, contributing to meeting the needs of visitors for quality holidays (Nguyen, 2021). It is emphasized that among all the components of the tourism infrastructure, the key one is hotel infrastructure as a central link in the value chain of tourism (Mitchell et al., 2015).

Scientific literature studies the relationship between the development of tourist infrastructure facilities and the impact of this process on the economy. However, there are few studies that assess the economic consequences of the development of hotel infrastructure, which is noted by foreign authors (Dogru et al., 2020). Some studies analyze

the impact of the hotel industry on the economy of individual US states (Kim, Kim, 2015) based on the use of input–output approach. According to the obtained values of the multipliers of output, payroll and employment, the hotel industry makes a small contribution to the economy of the state of Texas compared to the manufacturing industry. Using an example of Chinese provincial economy, researchers have found that investments in the hotel business can stimulate the development of many economic sectors at the same time, which leads to further economic development (Dai et al., 2017). Other scientists have found that investing in hotels increases employment both in the economy as a whole and in the tourism industry (Dogru et al., 2020).

Russian authors (Nikolskaya et al., 2019) have shown that the development of hotel sector can achieve a number of goals aimed at solving existing social problems in order to ensure people's welfare and raise living standards: creating new jobs, improving the level and quality of service, increasing the income of regions' residents and the influx of foreign and domestic tourists. Scientists emphasize that in modern conditions caused by geopolitical instability, the driver of the growth of Russian hotel infrastructure is the reorientation of Russians toward domestic destinations, requiring the emergence of new hotel projects to meet growing demand (Frolova, 2023). Researchers note that the developed tourism infrastructure satisfies not only the interests of tourists, but also the needs of local population (Hadzik, Grabara, 2014; Stepanova, 2015).

Summarizing the works of scientists, we should note that a large group consists of works devoted to the functioning of tourist infrastructure facilities, in particular their condition and development problems (Kuklina et al., 2021; Pshenichnykh, 2021), uneven distribution (Stepanova, 2019; Gudkovskikh, Dirin, 2023), and also works devoted to regional specifics (Limonina, 2007; Dolmatenya et al., 2018).

Issues related to the quantitative measurement of the impact on the economy of consumer demand caused by the sale of tourist infrastructure facilities remain insufficiently investigated. This makes it important to further study this aspect in order to get a more comprehensive view on the economic contribution of tourism. An analysis of scientific papers has shown that the input–output approach (IOA) for assessing intersectoral effects is an effective method for estimating the overall economic effect that a change in final demand will have on the economy.

This method is more widespread abroad, which is due to the active development in some countries of input–output tables, which serve as an information base for analysis. Thus, economic effects of tourism development using an input–output approach were assessed for Spain (Artal-Tur et al., 2018), Sweden (Kronenberg, Fuchs, 2021), Indonesia (Faturay et al., 2017), China (Pratt, 2015; Wu et al., 2022) and other countries. In Russia, IOA is rarely used to assess the economic effects of development of certain types of economic activity (TEA) or implementation of investment projects, due to the lack of regional input–output tables and the rare updating of basic input–output tables. Nevertheless, the information published by Rosstat is suitable for conducting research and makes it possible to analyze intersectoral interactions in the economy at the macrostructural level (Sidorov, 2024; Shirov, 2024). Thus, based on IOA, Russian researchers assessed the impact on the economy of changes in tourism consumption caused by subsidizing part of the cost of recreation for the population (Leonidova, 2021), and also made a forecast of the volume of domestic tourist consumption in the country until 2035 (Leonidova, Sidorov, 2023). Having analyzed relevant works, we conclude that using the information base of the input–output tables in relation to assessing the

effects of changes in demand in the Russian tourism industry requires certain methodological techniques related to the aggregation of economic activities that form tourism. Thus, the promising nature of IOA toolkit, which allows assessing internal intersectoral interactions of the economic system and performing predictive calculations, indicates the expediency of its use in Russian conditions to evaluate decisions taken by the state regarding plans to increase the construction of tourist facilities.

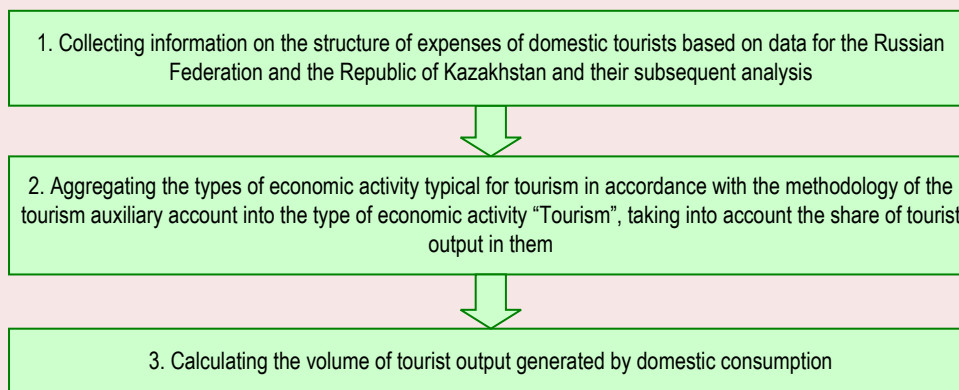
Research methodology

General scientific research methods served as the basis for identifying the need to create new facilities for hotel tourism infrastructure and developing proposals for its expansion. Changes in the economy related to the expansion of tourist services consumption are assessed with the help of IOA tools. Their basic equation is used for calculating various forecast options. In previous works (Leonidova, Sidorov, 2019; Leonidova, 2021; Leonidova, Sidorov, 2023) the authors proposed a methodological toolkit based on the methodology of the satellite tourism account, which made it possible to isolate the share generated by domestic tourist consumption. This helped to calculate the volume of final tourism output in the economy. In this study, the toolkit has been improved by clarifying statistical data.

The volume of tourism industry output in the country is measured on the basis of information from the following organizations:

- VEB.RF – information on the cost structure of tourists and holiday-makers;
- Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan – tourism satellite account with information on travelers' expenses;
- EMISS – information for 2023 on production and shipment of goods, works and services, number of employees, and salary fund;

Figure 1. Scheme for determining the volume of domestic tourism output in the economy of the Russian Federation



Source: own compilation.

– Rosstat – data from intermediate tables of resources and use for 2020 to assess the structure of the Russian economy.

The volume of tourist output in the Russian Federation is determined with the help of an algorithm⁹ shown in *Figure 1*. It was tested in the work (Leonidova, Rummyantsev, 2023) and proved its suitability for solving research problems.

Calculation of the volume of domestic tourism output is determined in constant prices.

Research results

Analysis of hotel infrastructure development in the Russian Federation

Russian economy in 2023 was characterized by an acceleration of dynamics. According to Rosstat, compared to the level of last year, % of GDP in the country increased by 3.6. This achievement was largely due to the growth of such industries as

“activities of hotels and catering enterprises” (+10%), “activities in the field of information and communications” (+9.8%), “activities of households as employers” (+9.6%). Of the most important sectors for Russian economy, manufacturing and trade showed active growth (6.9 and 6.6%, respectively; *Fig. 2*).

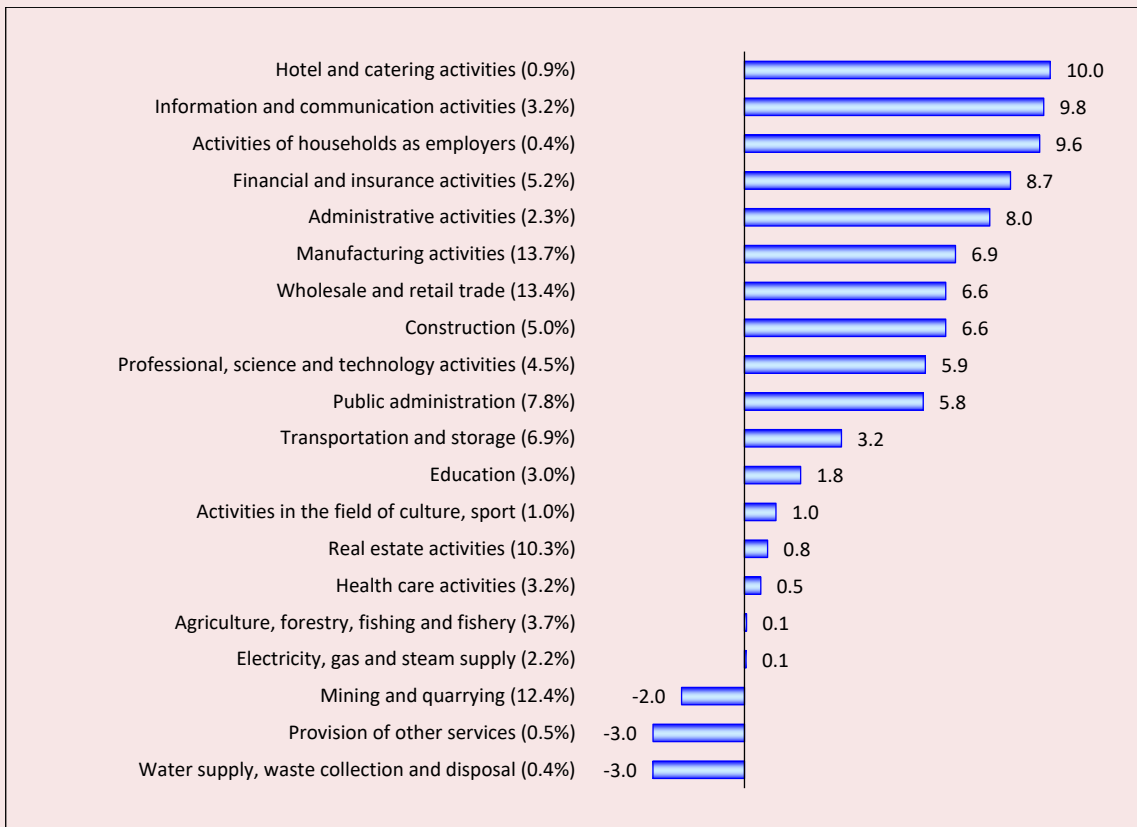
Thus, we can say that the main contribution to the economic dynamics in 2023 was made by consumer demand, caused, among other things, by active development of domestic tourism and people’s demand for hotel and restaurant services, which is confirmed by the positive dynamics of domestic tourist flow, which increased by 25.1% in 2013–2021 (*Fig. 3*).

As part of a cross-country comparison regarding hotel sector functioning, it was revealed that Russia is inferior in the number of hotels to some tourist-developed countries¹⁰ such as Japan and Italy (*Tab. 1*).

⁹ This study uses concepts of “type of economic activity” and “industry” as synonyms. In accordance with the proposed algorithm, the volume of domestic tourism output in the Russian Federation is calculated by isolating from the types of economic activities represented in the Russian qualifiers the share that is due to the consumption of domestic tourists, and their subsequent aggregation in the foreign economic activity “Tourism”.

¹⁰ For comparative analysis we chose those countries that are major markets in terms of the number of hotels in the hotel sector (Italy and Türkiye in Europe, Japan and China in Asia).

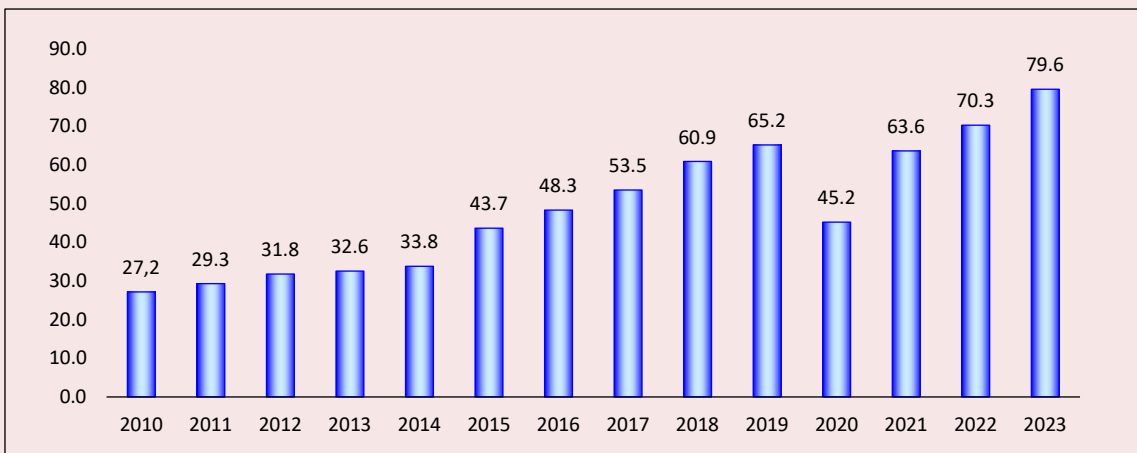
Figure 2. Increase (decrease) in gross value added in Russian economic sectors in 2023, % compared to previous year



Note: in parentheses after the name of the type of economic activity, its share in the structure of gross value added in the Russian economy in 2023 is indicated.

Source: Rosstat.

Figure 3. Dynamics of the number of Russians accommodated in collective accommodation facilities within the country (CAF), million people



Source: Rosstat.

Table 1. Indicators of the functioning of the hotel sector by country, according to data for 2021

Country	Number of collective accommodation facilities, units	Number of rooms, units	Number of beds, million units
Japan	61484	1764513	4.2
Italy	32109	1073592	2.2
China	7676	1120900	1.9
Türkiye	21083	918 091	1.9
Russia	28979	1027010	2.6

Source: Rosstat, Eurostat, Ministry of Culture and Tourism of Türkiye.

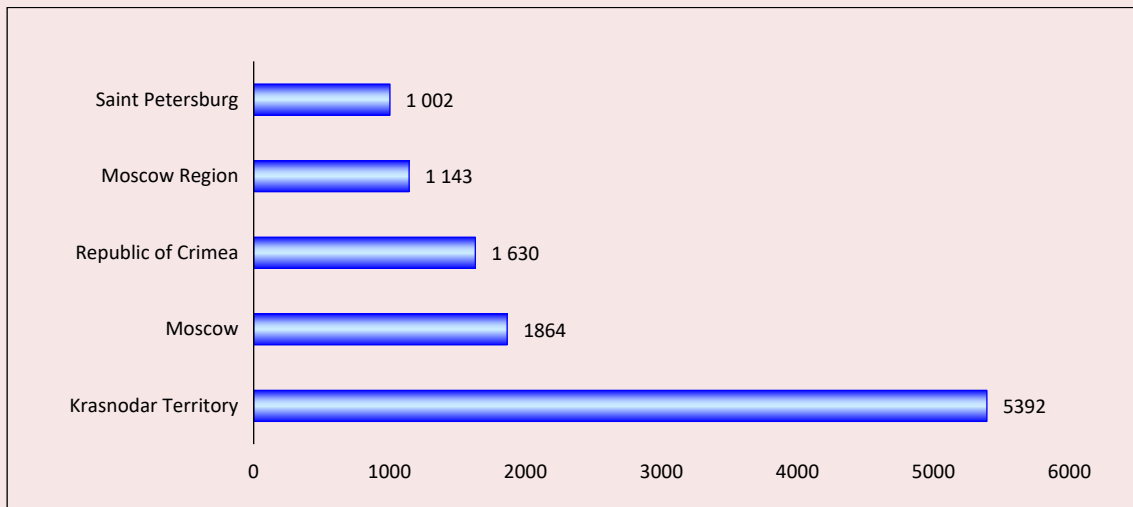
It is noteworthy that China has 3.7 times fewer hotels than Russia, but in terms of the number of places in them it lags only 1.3-fold behind Russia.

About 30% of CAF in Russia in 2023 were located in the framework of five destinations: business centers (Moscow with the Moscow

agglomeration, and Saint Petersburg) and resort regions (Fig. 4). The same proportions remain in terms of the number of rooms in CAF.

According to official statistics, in 2018–2023 the total number of rooms in the country’s collective accommodation facilities increased by 14.5% (Tab. 2).

Figure 4. Number of collective accommodation facilities in some regions of Russia in 2023, units



Source: Rosstat.

Table 2. Dynamics of indicators characterizing the activity of collective accommodation facilities in Russia for 2018–2023

Indicator	2018	2019	2020	2021	2022	2023	2023 to 2018, %
Number of rooms in CAF, units	975645	992601	977409	1027010	1058709	1117414	114,5
Number of overnight accommodations in CAF, units	274584735	283191006	191175546	275603110	318530181	357975260	130,3

Source: Rosstat.

At the same time, the demand for hotel services from the population grew at a faster pace. Over the same period, the number of overnight accommodations by tourists increased by 30.3%.

The above situation indicates that the demand for recreation is growing stronger than the supply. This is reflected in the shortage of rooms in hotel infrastructure facilities. Thus, by order of the Ministry of Economic Development of the Russian Federation, experts from VEB.RF assessed the missing number of rooms in the country's accommodation facilities. According to expert estimates¹¹, in 2021 the number of hotel rooms in the Russian Federation amounted to 1 million 211 thousand, including the "gray" market (approximately 184 thousand rooms). For the planned growth of domestic trips – 140 million by 2030 – it will be necessary to increase the number of rooms by 31.6%.

Thus, active construction of hotel infrastructure causes an increase in the demand of the population for tourist services, which requires measuring the impact of these processes on the country's economy. In Russia, there is a high potential for increasing domestic tourist consumption: half of Russians spend their holidays not traveling, but at home or at their dacha (in 2023 – 53%, of which 39% stay at home due to financial difficulties¹²).

According to estimates contained in the federal interregional tourism scheme of spatial planning of the Russian Federation approved by the Government of the Russian Federation, about 50 million Russians who are not currently traveling for various reasons may move into the travelers category with an increase in income, increase in the amount of free time, development of tourist infrastructure,

and improved information support for the promotion of destinations.

Implementation of policies related to the growth of people's incomes, introduction of programs to reduce the cost of recreation for the population within the country, reducing logistics costs due to the implementation of large projects for transport infrastructure development will make it possible to use the unrealized potential of demand for accommodation services from Russians; and implementation of measures to increase the accessibility of inbound tourism – from foreign tourists.

Assessing the effects of tourist infrastructure facilities development

In 2023, the share of tourism in Russia's GDP, estimated at 172.1 trillion rubles, amounted to 2.5%. In accordance with the structure of tourists and holiday-makers' spending on holidays (according to VEB.RF estimates the share of tourists staying overnight in hotels in the Russian Federation is 92.3% of total tourist flow) and taking into account the planned increase in hotel rooms by 2030, the volume of gross value added of tourism by this date will be 1.2 trillion rubles. Further modeling was carried out on the basis of these proportions.

IOA toolkit made it possible to calculate the value of the multiplier of total tourism costs¹³ (Fig. 5).

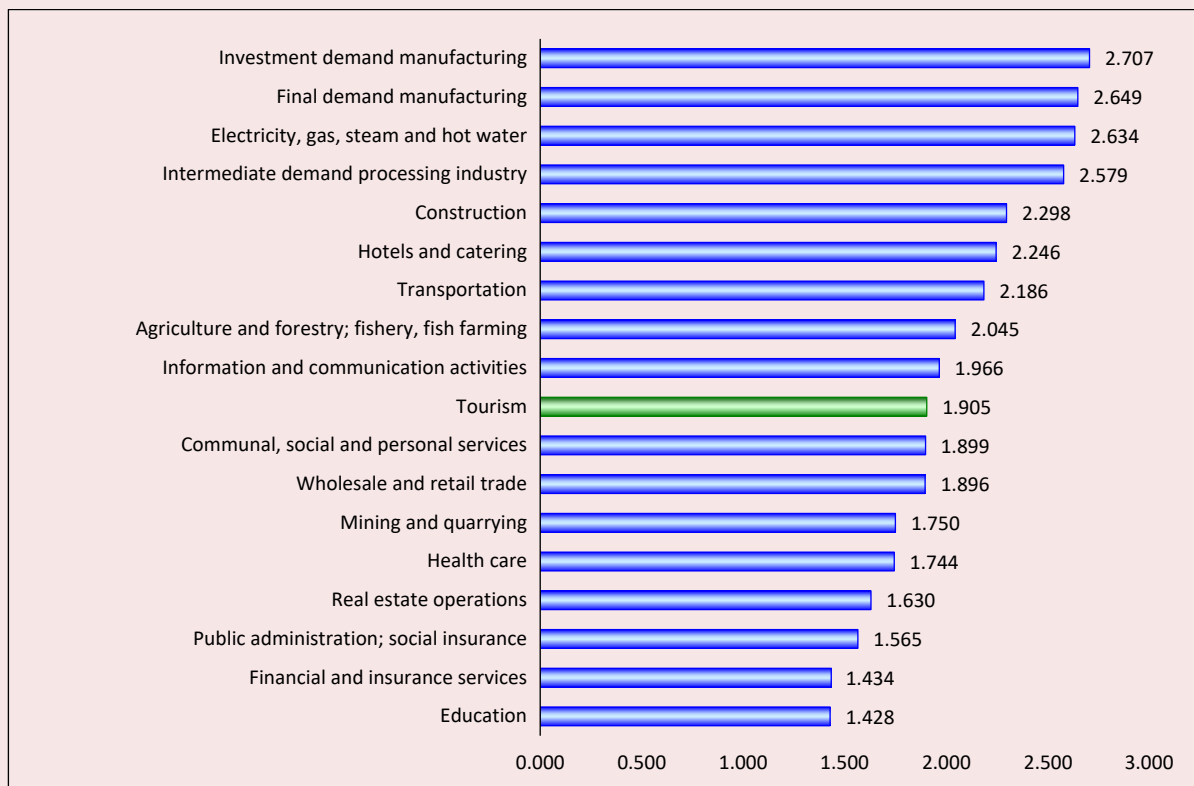
The higher the values of this indicator, the greater the economic effect the industry has on the economy. According to the calculations, with the existing structure of the Russian economy, tourism multiplier has a value of 1.9, which is lower than, for example, in manufacturing industry of investment, intermediate and final demand, housing

¹¹ By 2030, new hotels with 382.6 thousand rooms are planned to be built in Russia. Available at: <https://www.atorus.ru/node/51868>

¹² Summer vacation plans – 2024. VCIOM. Available at: <https://wciom.ru/analytical-reviews/analiticheskii-obzor/plany-na-letnii-otpusk-2024>

¹³ The indicator, also called the total cost coefficient and the multiplier of production costs, reflects the increase in one of the macroeconomic indicators (gross output, GDP, budget revenues, etc.) due to the spread of the initial impulse through the system of input–output relations – an increase in output in one of the sectors. In other words, a multiplier is a coefficient showing how the magnitude of the effect correlates with each other, and the initial increase in production that caused it.

Figure 5. Multiplier of total costs in various types of economic activity in Russia, ruble per one ruble of products



Source: own calculations.

and communal services and transport sector. We should note that, since the share of imported products is currently high in the structure of tourism industry, the multiplier value will be higher when implementing import substitution.

Input–output modeling helped to assess the economic effects that arose with increased demand in tourism sector, accompanied by corresponding consumption, which arose during the increase in the number of rooms of hotel infrastructure facilities by 2030 by 31.6% from the level of 2021 (Tab. 3). According to calculations, this will ensure a 239 billion rubles increase in gross output in the economy as a whole and will require the number of employees in the amount of 504.2 thousand people. In addition, the salary fund will increase. Its increase will amount to 317.6 million rubles.

Stimulating the consumption of goods and services of domestic tourism by the population will have the greatest effect on transport industry, since transport has the largest share in the structure of the aggregated type of economic activity “Tourism”. In addition, a fairly noticeable increase in demand for hotel services will affect hotel industry and catering sector.

The calculations carried out on the basis of the formed input–output model made it possible to determine the importance of tourism development for Russian economy.

As a result, it was revealed that tourism industry consumes products of enterprises in the field of transport, real estate transactions, and organizations for the manufacturing industry of intermediate and final demand (Fig. 6).

Table 3. Effects on the economy of the Russian Federation as a result of an increase in tourist consumption alongside an increase in the number of rooms of collective accommodation facilities in 2022–2030

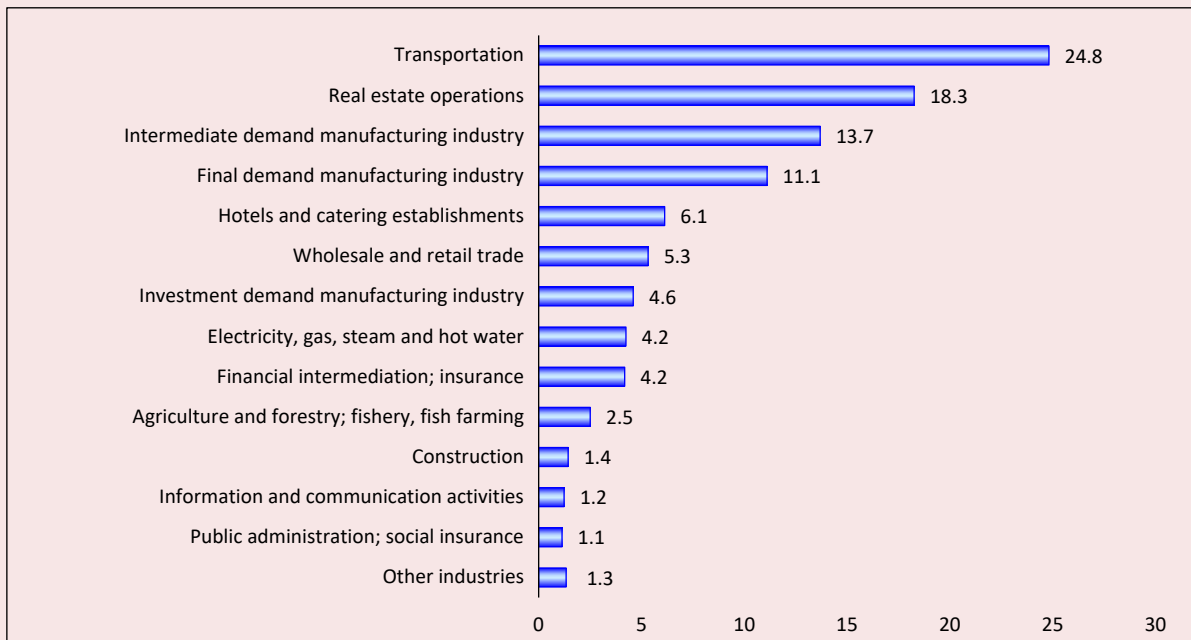
Type of economic activity	Increase in output of industry in basic prices, billion rubles	Increase in industry output, %	Increase in the number of employees, thousand people	Increase in salary fund, million rubles
Agriculture and forestry; fishery, fish farming	4.61	0.86	13	5
Mining and quarrying	4.86	0.18	2	2
Final demand manufacturing industry	9.97	0.50	14	6
Intermediate demand manufacturing industry	16.66	0.51	6	4
Investment demand manufacturing industry	7.68	0.49	13	10
Electricity, gas, steam and hot water distribution; water collection, treatment and distribution	8.45	0.91	15	8
Construction	2.44	0.20	5	3
Wholesale and retail trade	8.18	1.18	56	27
Transportation	92.92	88.96	84	62
Information and communication activities	1.98	0.26	8	9
Hotel and catering services	47.16	53.34	40	29
Financial intermediation; insurance	4.91	0.77	0	0
Real estate operations; rent of machinery and equipment without operator; rental of household goods and personal items; provision of services	17.70	1.18	61	39
Public administration and military security; social insurance	1.02	7.31	166	102
Education	0.13	0.15	6	3
Health care and provision of social services	0.11	0.03	1	1
Provision of other communal, social and personal services	10.29	11.77	15	10
Economy as a whole	239.07	1.29	504.2	317.6

Source: calculated on the basis of input–output modeling.

Within the country, the main consumers of tourism goods and services are the sectors “public administration and social insurance”, “transport” and “wholesale and retail trade” (Fig. 7). That

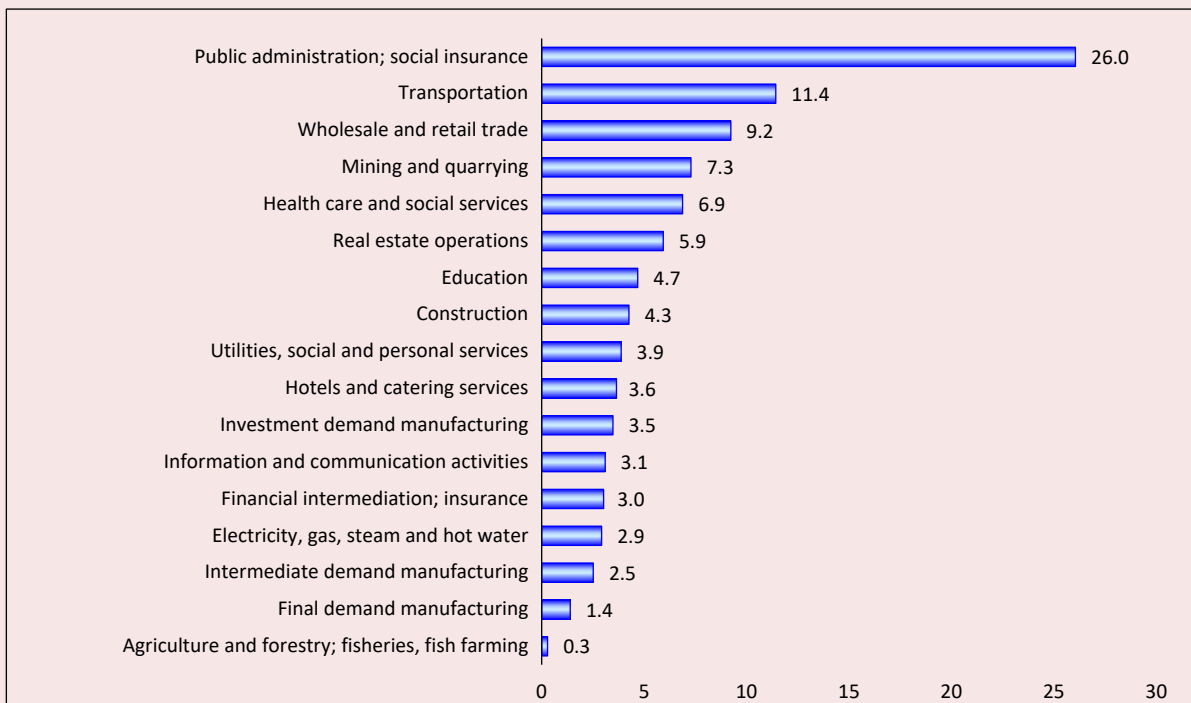
is, increasing consumption of their products will greatly stimulate the development of tourism, which proves, in particular, the importance of developing transport infrastructure.

Figure 6. Tourism industry usage of goods produced by Russian economic sectors, % of the total



Source: own calculations.

Figure 7. Structure of industrial consumption of tourism industry products in Russia, % of total



Source: own calculations based on Rosstat data.

Conclusions

Based on the results of the study, the following conclusions can be drawn.

1. According to a critical analysis of existing approaches to determining the impact of tourism on the economies of countries and regions, we revealed that the use of input–output balance makes it possible to assess internal intersectoral interactions of the economic system, perform forecast calculations showing the effectiveness of decisions taken to increase the construction of tourist facilities. Using our own methodological approach based on the application of IOA methodology, we modeled changes in the volume of consumption in tourism sector caused by an increase in demand for it due to an increase in the number of hotel rooms. This helped to assess the impact of these changes on the Russian economy and determine the importance of tourism industry for the country. At the same time, the use of input–output balance did not allow us to take into account the impact of many factors on the change in the volume of consumer demand (people’s income level, cost of services, inflation rate, geopolitical instability, popularity of tourist destinations, investment climate, etc.), which is a limitation of this study. Consideration of these factors is a subject of scientific interest for further research.

2. The obtained values of the effects on the Russian economy from the growth of domestic consumption of tourist services as a result of the development of infrastructure facilities determine the importance of increasing tourist flow within the country.

3. The results of the study confirm the need for an active import substitution policy to stimulate positive economic dynamics, and also indicate the importance of providing the necessary number of workers in the sector in the medium term.

We can identify risks that may hinder the implementation of the government’s plans for

development of tourism infrastructure. In particular, these include the rise in the cost of building materials. Thus, according to Rosstat, in Russia, the price index of manufacturers of construction products in 2023 increased by 10.1% compared to last year’s level. In addition, the activity of investors is affected by changes in the Central Bank’s rate. With its growth, the current instrument for subsidizing credit rates in the construction of hotels “becomes very burdensome for the state budget, since the state undertakes to subsidize the rate for up to ten years”¹⁴. The realization of demand in the hotel services market will depend on the growth of household incomes. At the same time, there is an increase in prices for travel services: prices for travel in Russia in 2023 increased by 15% due to an increase in the cost of all components of the tour package, in 2024 the growth will continue and will amount to at least 7–10%¹⁵. In this regard, it is necessary to expand the number of rooms in low-budget hotels, the shortage of which is noticeable in the industry. It is also advisable to implement measures of state support in co-financing the construction of accommodation facilities for hotels with a capacity of up to 100 rooms, to renovate existing hotels, which will increase the realization of their potential.

In addition, there is not enough state support for financing small accommodation facilities – existing programs are designed for hotels with a room stock of 100 rooms or more. In addition, the potential of already built facilities remains unrealized. We need renovation programs for the finished hotel stock. It is also promising to provide government support to businesses in relation to the construction of year-round eco-hotels with a long service life (20 years):

¹⁴ The hotel boom in the “feat” mode. Available at: <https://monocle.ru/monocle/2024/09/gostinichniy-bum-v-rezhime-podvig/>

¹⁵ ATOR estimated a 15% increase in prices for holidays in Russia this summer. Available at: <https://www.interfax.ru/russia/926659>

taking into account the seasonality in Russia, such facilities have a better chance of achieving payback; for example, hotels built from products of deep processing of wood (houses made of CLT panels), the production of which is localized in Russia. Subsidizing the construction of glamping is not very effective, since the service life of materials for them (PVC tents, wooden decking) is quite short.

An urgent problem for the Russian tourism industry is personnel shortage, which is estimated at 30–40%; it is due to low prestige of professions in the service sector, high proportion of unskilled labor, lack of educational centers and low wages¹⁶. It is predicted that by 2030 the tourism industry will need at least 400 thousand new employees (which corresponds to our estimates); in particular, by this time, investment projects implemented by the Corporation “Tourism.RF” will require more than 20 thousand trained personnel¹⁷.

Unresolved issues include the high level of transportation costs for tourists, which is due to large distances between travel destinations and the concentration of air transportation in the capital’s transport hub, as well as the underdevelopment of the system of direct charter flights across the country.

Thus, in order to meet the volume of demand by 2030, certain government efforts are needed aimed at increasing the demand for services of available accommodation facilities. Firstly, it is necessary to solve the problem of seasonality typical for tourism industry and increase the utilization of accommodation facilities in the off-season. Currently, annual occupancy of hotels in Russia

does not exceed an average of 33%. In this regard, when building new large accommodation facilities, they should be located near large cities with convenient transport accessibility.

Second, in order to develop human resources in Russian regions, it is advisable to create training centers on the basis of specialized universities in cooperation with leading employers. An example is a resource center for training tourism industry workers opened in the Moscow Region on the basis of the Russian State University of Tourism and Service. It is important to develop standards for employees of tourism industry to improve their skills.

Besides, it is necessary to assess tourism industry regarding the provision of infrastructure facilities in the context of regions and taking into account the volume of tourist flows. This will eliminate imbalances and identify areas with a low level of tourist facilities development.

Implementation of these measures will give an impetus to achieving the planned results in the development of tourism in Russia, which will contribute to increasing the profitability of the industry and, thanks to the multiplier effect, stimulate the country’s economy as a whole.

Practical significance of the study lies in the possibility of using its findings by the authorities to justify management decisions on the development of tourism infrastructure, in the development and revision of strategic and sectoral documents, as well as by researchers in the field of sectoral and regional economics. Scientific significance of the conducted research lies in improving the tools for using input–output balance to analyze and evaluate the economic effects resulting from the development of new tourism infrastructure projects. In the future, the research task will be to identify a range of factors contributing to further increase in domestic consumption in tourism.

¹⁶ Search spread: Why the number of tourist staff in Russia is not enough. Available at: <https://iz.ru/1676562/kseniia-nabatkina-valeriiia-mishina/poiskovyi-razbros-pochemu-v-rossii-ne-khvataet-turisticheskikh-kadrov>

¹⁷ By 2030, 400 thousand new employees will be in demand in Russia’s tourism industry. Available at: <https://regnum.ru/news/3835417>

References

- Arbulú I., Razumova M., Rey-Maqueira J., Sastre F. (2021). Can domestic tourism relieve the COVID-19 tourist industry crisis? The case of Spain. *Journal of Destination Marketing and Management*, 20, 100568. DOI: 10.1016/j.jdmm.2021.100568
- Artal-Tur A., Navarro-Azorín J. M., Ramos-Parreño J.M. (2020). Measuring the economic contribution of tourism to destinations within an input-output framework: Some methodological issues. *Portuguese Economic Journal*, 19, 243–265 DOI: <https://doi.org/10.1007/s10258-019-00167-y>
- Dai S., Xu H., Pratt S. (2017). Too much of a good thing? The economic impact of hotel investment in Hainan. *Journal of China Tourism Research*, 13(1), 26–45. DOI: <https://doi.org/10.1080/19388160.2017.1304862>
- Dogru T., McGinley S., Kim W.G. (2020). The effect of hotel investments on employment in the tourism, leisure and hospitality industries. *International Journal of Contemporary Hospitality Management*, 32(5), 1941–1965. DOI: <https://doi.org/10.1108/IJCHM-11-2019-0913>
- Dolmatenya Yu.V, Kuchumov A.V, Chaikovskaya A.V. (2018). Interregional comparisons of the level of tourism infrastructure development in the subjects of the Russian Federation. *Vestnik Tverskogo gosudarstvennogo universiteta. Seriya: Ekonomika i upravlenie=Bulletin of the Tver State University. Series: Economics and Management*, 3, 162–169. Available at: <https://www.elibrary.ru/item.asp?id=35683204> (in Russian).
- Donskova L.I., Barannikov A.L., Makovetskii M.Yu. (2022). The state of domestic tourism in Russia in the modern period: Quantitative and qualitative analysis. *Vestnik akademii znaniy=Bulletin of the Academy of Knowledge*, 52(5), 127–136 (in Russian).
- Faturay F., Lenzen M., Nugraha K. (2017). A new subnational multi-region input–output database for Indonesia. *Economic Systems Research*, 29(2), 234–251. DOI: 10.1080/09535314.2017.1304361
- Frolova E.A. (2023). Drivers of the hotel services Russian market under the foreign policy restrictions. *Servis v Rossii i za rubezhom*, 17(7), 54–63. DOI: 10.5281/zenodo.10561063 (in Russian).
- Gudkovskikh M.V., Dirin D.A. (2023). Spatial structure of tourism in the context of the “center–periphery” concept: The case of Tyumen Oblast. *Izvestiya RAN. Seriya geograficheskaya*, 87(1), 147–163. DOI: 10.31857/S2587556623010077 (in Russian).
- Gursoy D., Christina G. (2020). Chi effects of COVID-19 pandemic on hospitality industry: Review of the current situations and a research agenda. *Journal of Hospitality Marketing & Management*, 29(5), 527–529. DOI: 10.1080/19368623.2020.1788231
- Hadzik A., Grabara M. (2014). Investments in recreational and sports infrastructure as a basis for the development of sports tourism on the example of spa municipalities. *Polish Journal of Sport and Tourism*, 21(2), 97–106. DOI: <https://doi.org/10.2478/pjst-2014-0010/>
- Hoque A., Shikha F.A., Hasanat M.W., Arif I., Hamid A.B. (2020). The effect of coronavirus (COVID-19) in the tourism industry in China. *Asian Journal of Multidisciplinary Studies*, 3, 52–58.
- Jones P., Comfort D. (2020). The COVID-19 crisis and sustainability in the hospitality industry. *International Journal of Contemporary Hospitality Management*, 32(10), 3037–3050. DOI: 10.1108/IJCHM-04-2020-0357
- Khalil S., Kakar M.K., Malik A. (2007). Role of tourism in economic growth: Empirical evidence from Pakistan economy. *The Pakistan Development Review*, 46(4), 985–995.
- Kim H., Kim B.-G. (2015). Economic impacts of the hotel industry: An input-output analysis. *Tourism Review*, 70(2), 132–149. DOI: <https://doi.org/10.1108/TR-11-2014-0056>
- Kronenberg K., Fuchs M. (2021). The socio-economic impact of regional tourism: An occupation-based modelling perspective from Sweden. *Journal of Sustainable Tourism*, 30(12), 2785–2805. DOI: <https://doi.org/10.1080/09669582.2021.1924757>
- Kruja D., Lufi M., Kruja I. (2012). The role of tourism in developing countries: The case of Albania. *European Scientific Journal*, 8(19), 129–141.
- Kuklina M.V., Trufanov A.I., Kobylkin D.V. et al. (2021). Problems of tourism infrastructure development in the Barguzin Kotlovina the Republic of Buryatia. *Vestnik Altaiskoi akademii ekonomiki i prava*, 1-1, 59–65. DOI: 10.17513/vaael.1570 (in Russian).

- Leonidova E.G. (2021). Russian tourism during the COVID-19: Assessing effect of stimulating domestic demand for the country and regions' economy. *Ekonomicheskije i sotsial'nye peremeny: fakty, tendentsii, prognoz=Economic and Social Changes: Facts, Trends, Forecast*, 14(2), 59–74. DOI: 10.15838/esc.2021.2.74.4 (in Russian).
- Leonidova E.G., Rumyantsev N.M. (2023). Scenario modeling of tourism services consumption in Russia. *Ekonomicheskije i sotsial'nye peremeny: fakty, tendentsii, prognoz=Economic and Social Changes: Facts, Trends, Forecast*, 16(2), 35–51. DOI: 10.15838/esc.2023.2.86.2 (in Russian).
- Leonidova E.G., Sidorov M.A. (2023). Assessment and forecast of domestic tourist consumption in Russia. *Problemy prognozirovaniya=Studies on Russian Economic Development*, 1(196), 193–205. DOI: 10.47711/0868-6351-196-193-205 (in Russian).
- Limonina I.G. (2007). Regional features of the infrastructural tourism potential of the Leningrad Region. *Vestnik Sankt-Peterburgskogo universiteta. Seriya 7. Geologiya. Geografiya=Bulletin of St. Petersburg University. Series 7. Geology. Geography*, 2, 117–127 (in Russian).
- Lukin E.V., Leonidova E.G., Sidorov M.A. (2018). Boosting domestic demand as a driving force of economic growth (on the example of domestic tourism sphere). *Ekonomicheskije i sotsial'nye peremeny: fakty, tendentsii, prognoz=Economic and Social Changes: Facts, Trends, Forecast*, 11(4), 125–143. DOI: 10.15838/esc.2018.4.58.8 (in Russian).
- Mitchell J. et al. (2015). What is the impact of hotels on local economic development? Applying value chain analysis to individual businesses. *Anatolia*, 26, 347–358.
- Nguyen C.P., Su T.D. (2020). Domestic tourism spending and economic vulnerability, *Annals of Tourism Research*, 85, 103063. DOI: <https://doi.org/10.1016/j.annals.2020.103063>
- Nguyen Q.H. (2021). Impact of investment in tourism infrastructure development on attracting international visitors: A nonlinear panel ARDL approach using Vietnam's data. *Economies*, 9(3), 131. DOI: <https://doi.org/10.3390/economies9030131>
- Nikolskaya E., Pasko O., Anikina E., Dekhtyar G., Lebedev K. (2019). The hotel sector as an important component of regional economic infrastructure. *Journal of Environmental Management and Tourism*, 9(6), 1178–1182. DOI: 10.14505//jemt.v9.6(30).06
- Pratt S. (2015). Potential economic contribution of regional tourism development in China: A comparative analysis. *International Journal of Tourism Research*, 17(3), 303–312.
- Pshenichnykh Yu.A. (2021). Topical problems of uneven distribution of tourist flows and spatial tourism development in Rostov region. *Servis v Rossii i za rubezhom*, 15(3), 119–130. DOI: 10.24412/1995-042X-2021-3-119-130 (in Russian).
- Seetana B., Khadaroo J. (2009). An analysis of the relationship between transport capital and tourism development in a dynamic framework. *Tourism Economics*, 15(4), 785–802. DOI: <https://doi.org/10.5367/000000009789955215>
- Shirov A.A. (2024). Household consumption in the mirror of the input–output tables. *Problemy prognozirovaniya=Studies on Russian Economic Development*, 3(204), 6–17. DOI: 10.47711/0868-6351-204-6-17 (in Russian).
- Shirov A.A., Brusentseva A.R., Savchishina K.E., Kaminova S.V. (2022). Predictive and analytical capabilities of macroeconomic models in conditions of crisis economic development (using the example of the QUMMIR model). *Ekonomicheskije i sotsial'nye peremeny: fakty, tendentsii, prognoz=Economic and Social Changes: Facts, Trends, Forecast*, 15(6), 35–51. DOI: 10.15838/esc.2022.6.84.2
- Shults D.N., Lavrinenko P.A. (2020) Assessment of the economic impacts of reducing transportation costs based on DSGE modeling. *Problemy prognozirovaniya=Studies on Russian Economic Development*, 5, 120–132. DOI: 10.1134/S1075700720050160 (in Russian).
- Sidorov M.A. (2024). On the impact of exports on the number of employed population and on the professional structure of employment in Russia: An input – output approach. *Ekonomicheskije i sotsial'nye peremeny: fakty, tendentsii, prognoz=Economic and Social Changes: Facts, Trends, Forecast*, 17(3), 118–136. DOI: 10.15838/esc.2024.3.93.7 (in Russian).
- Steiner C. (2006). Tourism, poverty reduction and the political economy: Egyptian perspectives on tourism's economic benefits in a semi-rentier state. *Tourism Hospitality Planning and Development*, 3(3), 161–177.

- Stepanova S.V. (2015). Development of tourist infrastructure in the northern border regions of Russia. *Problemy razvitiya territorii=Problems of Territory's Development*, 6, 214–225 (in Russian).
- Stepanova S.V. (2019). Territorial disparities in the placement of tourism infrastructure in the Republic of Karelia. *Izvestiya Dal'nevostochnogo federal'nogo universiteta. Ekonomika i upravlenie=Proceedings of the Far Eastern Federal University. Economics and Management*, 3(91), 89–97. DOI 10.24866/2311-2271/2019-3/89-97 (in Russian).
- Widaningrum D.L., Surjandari I., Sudiana D. (2020). Analyzing land-use changes in tourism development area: A case study of cultural world heritage sites in Java Island, Indonesia. *International Journal of Technology*, 11(4), 688–697.
- Wu D.C., Cao C., Liu W., Chen J.L. (2022). Impact of domestic tourism on economy under COVID-19: The perspective of tourism satellite accounts. *Annals of Tourism Research Empirical Insights*, 3(2), 100055. DOI: <https://doi.org/10.1016/j.annale.2022.100055>
- Zhou W. (2021). Prediction of urban and rural tourism economic forecast based on machine learning. *Scientific Programming*, 1, 1–7. DOI:10.1155/2021/4072499

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