



## PROSPECTS FOR THE DEVELOPMENT OF THE TOURIST AND RECREATION COMPLEX AS AN EFFECTIVE LEVER FOR THE RESTORATION OF THE TOURIST INDUSTRY IN UZBEKISTAN AFTER THE PANDEMIC

Usmanova Zumrad Islamovna

PhD, Associate Professor of the Department of Marketing

Samarkand Institute of Economics and Service

[zumradusmanova10@gmail.com](mailto:zumradusmanova10@gmail.com)

### Annotation

The article scientifically substantiates the proposal for the development of a tourist and recreational complex as an effective lever for the restoration of the tourism sector in Uzbekistan after the Covid-19 pandemic. Based on the analysis of the development of the sanatorium-resort complex in the regions of Uzbekistan, a largely pronounced differentiation of regional units and the concentration of demand for the development of the activities of sanatorium-resort institutions and recreation organizations were revealed. An econometric model has been developed that reflects the positive impact of the development of the sanatorium and resort complex and the infrastructure of recreation organizations on the indicator of the share of tourism in the country's GDP.

**Keywords:** tourism, the share of tourism in GDP, health resort complex, coronavirus pandemic, tourist and recreational complex, differentiation of regional units, concentration of demand.

### Introduction

In recent years, integration processes in the world economy have been constantly accompanied by the action of de-integration factors (an increase in the number of "hot spots", the sanctions struggle, the spread of various diseases, etc.). At the end of December 2019, an outbreak of the coronavirus COVID-2019 was recorded in Wuhan, China, which is forcing the world to dramatically change its attitude towards the current socio-economic policy.

Unprecedented measures are being taken around the world to combat the spread of coronavirus infection, including by restricting the movement of people and closing businesses. As a result, the world's largest economies are experiencing sharp declines in production and consumption, disruption to global value chains and trade relations, falling commodity prices in global financial markets, and deteriorating conditions.

Today it is known that this epidemic seriously affects the economy and business of many countries of the world. Many global and national think tanks have called the coronavirus the new "black swan" (a global, difficult-to-predict phenomenon with significant consequences) of the world economy. The world is plunging into the deepest peacetime recession since the 1930s. According to the WTO, the fall in the volume of world trade this year may be more than 30%.

The global impact of the coronavirus epidemic poses a serious threat to all aspects of the world - economic, social development and many other areas. Nearly 90 percent of global economic activity has



been affected in some form by the coronavirus pandemic. Transnational trade links and supply chains have been disrupted, consumer demand has shrunk, and millions of people are out of work. These are the realities of the day.

The economic damage caused by the coronavirus pandemic is mainly related to the decline in demand, that is, the inability of consumers to purchase affordable goods and services. These losses are particularly evident in areas of the service sector that have been severely affected, such as airlines and tourism, hospitality and catering, and recreational and cultural events. The same negative consequences apply to other industries [1].

Estimates of the estimated damage to the global economy from the coronavirus pandemic vary, but there is no doubt that tourism is one of the worst hit industries. As of April 7, the World Tourism Organization UNWTO estimated a decrease in tourist activity in 2020 by 20-30% (compared with forecasts of growth of 3-4% in January), as a result of which the world economy will receive less from \$ 30 billion to \$ 50 billion. in the official report of the organization "Assessing the Impact of the COVID-19 Outbreak on International Tourism" since 2000, the current crisis is the third and largest in terms of negative dynamics: the first decrease in international arrivals (by 0.4%) happened in 2004 during the SARS epidemic, the second (by 4%) - due to the global economic crisis in 2009 - and all this, of course, cannot be compared with the current figures. According to UNWTO forecasts, the decrease in the number of tourists will persist in the next five to seven years, while only in world aviation alone, lost profits in 2020 compared to 2019 will amount to 38%, or \$ 252 billion.

The travel industry will quickly regain its positions after the victory over the coronavirus infection, however, some of the habits of travelers may change. This was told by Professor Joseph Cheer from the Center for the Study of Tourism Problems of the Japanese University of Wakayama in an interview with RIA Novosti. In his opinion, the current pandemic is different from the previous ones. But the experience of past crises shows that the tourism industry will recover very quickly.

In almost any society, tourism is part of normal life. And people will be very happy to be able to travel again. How much they can afford to do this depends on how badly the world will be affected by the economic crisis resulting from the coronavirus pandemic. But overall, the need to catch up in terms of tourism will be very high.

Although it is difficult to predict whether people will travel as before, or whether many will draw certain conclusions for themselves. The current discussion in the tourism sector is about how to make tourism better and more environmentally friendly. If there is a chance to reorient the tourism industry and change the tourism product, now is the best time to do so.

The economic crisis will quite naturally affect not only the tourism sector, so the incomes of most of the population will decrease. Everyone is already accustomed to cheap flights through low-cost airlines, and you can rent a house anywhere in the world for a fairly low price, but the situation will change. In the coming years, experts predict a decrease in the number of international tourists. At the same time, a significant increase in domestic tourism is expected. This is due not only to the general financial condition of the vast majority of people, but also to the fear of traveling abroad in the coming months.



Of course, not the most pleasant changes are taking place in domestic tourism now. At the time of quarantine in most countries, travel is impossible both abroad and within the country. However, when the situation stabilizes, an active growth of interest in travel within the homeland will begin.

Domestic tourism growth will be driven by high deferred demand and continued restrictions on international tourism after the quarantine. At the same time, due to declining incomes, people will look for affordable offers and give preference to independent travel, ecotourism and health tourism.

For Uzbekistan, which has colossal tourist resources (today there are more than 7 thousand monuments of different epochs and civilizations in Uzbekistan, the country has a high potential for the development of such types of tourism as cultural, pilgrimage, health-improving, sports, ecotourism, etc.) the issue of restoring the tourism sector is very relevant.

In recent years, the country has seen high growth rates in this area (Fig. -1). So, in 2017, 2,690 thousand foreign tourists entered the Republic of Uzbekistan. This figure is 32.7% more compared to 2016, when the number of arrivals was 2,027 thousand people. In turn, during 2018 the number of foreign visitors amounted to 5,346 thousand people and exceeded the indicators of the same period in 2017 by 99%, and in 2019 the country was visited by 6,748 thousand foreign visitors. For 2016-2019 large-scale reforms were carried out in the country (for 2016-2019, over 55 regulatory legal acts were adopted in the country aimed at creating favorable conditions for the development of the tourism sector), aimed at accelerating the development of tourism as a strategic sector of the national economy, which created favorable conditions for significant growth in the sector.



Fig-1. Trends in the entry of foreign visitors to Uzbekistan, thousand people

The development of ecotourism and health tourism requires timely decisions to improve the tourist and recreational complex in the regions of Uzbekistan with a high tourist and recreational potential. Studies have shown that the development of the tourist and recreational system has a positive effect on increasing the indicators of tourism development in the country. We believe that the issues of restoring the tourism industry in the country should be resolved in close connection with the tasks of developing the infrastructure of the tourism and recreation system, which determines the relevance of the chosen topic.



## Literature Review

Tourism, being a complex open system, covers many areas of knowledge: architecture, urban planning, recreational geography, ecology, economics, sociology, psychology, medicine, taxonomy, cybernetics, etc. A lot of research has been devoted to the development of regional tourism. A special place in them is given to the study of the problem associated with the formation and development of the tourist and recreational complex. In recent years, scientists have carried out a number of studies in this direction. Volkova T.A., Maksimov D.V., Minenkova V.V., Filobok A.A., Khodykina M.F. [2] analyzed the current state of the Krasnodar Territory shopping and entertainment complex and the main indicators of the sanatorium and resort and tourist complex, on the basis of which a forecast for the development of the industry until 2020 was made.

A.V.Gladilin [3] considered the methods of forecasting existing in economic analysis, investigated the specific characteristics of tourist services. For the most accurate forecast of tourism demand, a method based on regression analysis is proposed. In the econometric model, the influence of the population in the country of origin of tourists, income per capita in the country of origin of tourists, as well as a number of expenses for the purchase of accommodation and transport services, on the formation of demand is studied.

I.L.Polyakova [4], within the framework of the study of the peculiarities of the use of tourist and recreational resources, the concept of a tourist and recreational complex is proposed, its essence and functions are studied, and the elements of a tourist and recreational complex and factors influencing its development are determined.

Ivolga A.G., Chaplitskaya A.A., Varivoda V.S., Molchanenko S.A., Radishauskas T.A., Mikhailova K.Yu., Selevanova E.V., Adamchevskaya V.G., Elfimova Yu. M., Movsesyan G.G., Skorykh G.A., Trukhachev A.V., Rassokhina T.V. [5] examined the social aspects of sustainable development of rural areas through agritourism, economic, environmental and social aspects affecting the development of tourist and recreational complexes, both at the national level and on the example of individual unique regions of the Russian Federation.

Y.M.Ilyaeva [6] considered the development of small business in the tourist and recreational complex of the North Caucasus Federal District.

A monograph by such authors as V.V.Minenkova, D.V.Maksimov, T.A.Volkova, A.A.Filobok, D.V.Sidorova, M.F.Khodykina. [7] is devoted to the analysis of investment processes in the tourist and recreational complex of the Krasnodar Territory, as well as the development of a system of indicators of the effectiveness of investment activities in the region. Investigated: the current state of the tourist and recreational complex of the region, investment policy, territorial differentiation of investments in the region. A system of indicators is proposed that allows to establish the relationship between the level of development of the tourist and recreational complex and the investment policy of the region.

Minenkova V.V., Sidorova D.V., Filobok A.A., Maksimov D.V. [8] in the research work analyzed the instruments of regional investment policy in the tourist and recreational complex of the Krasnodar Territory. Investment projects in the resort and tourism sector of the region are considered. The scheme



of management of investment processes in the tourist and recreational complex of the Krasnodar Territory is presented.

Gladilin V.A., Nechaeva S.V., Karaseva S.A. [9] considered the priority area of investment activities in the tourism and recreation sector, such as the formation of the infrastructure of the investment market. In the scientific work of the authors, options are proposed for the implementation of an innovative development strategy based on the use of modern technologies and the involvement of science in the reform and technological transformation of domestic and international tourism, ensuring a more complete use of the domestic tourism potential and an influx of funds for the socio-cultural sphere and for the development of regions.

Zhukovskaya I.F., Krasnova M.V. [10] analyzed the state and dynamics of the nominal and real incomes of Russians, the ruble exchange rate, and the tourist and recreational complex of Russia. In the scientific work of the authors, the main problems of import substitution in the Russian tourism market, which are caused by both external and internal factors, have been identified, the main directions for the further development of the domestic tourism business have been proposed.

## Methodology

Any economic indicator is most often influenced not by one, but by several factors. For example, the demand for a certain good is determined not only by the price of this good, but also by the prices of substitute and complementary goods, consumer income, and many other factors. In this case, multiple regression is considered.

$$\hat{y} = f(x_1, x_2, \dots, x_p) \quad (1)$$

Multiple regression is widely used in the study of demand factors, the function of production costs, in macroeconomic calculations and in a number of other economic issues. The main goal of multiple regression is to build a model with a large number of factors, as well as to determine the influence of each factor separately and their combined impact on the modeled indicator.

The construction of a multiple regression equation begins by addressing the model specification. It includes two areas of issues: selection of factors and selection of the type of regression equation. To study the influence of the studied factors on tourist demand, we decided to use a linear multiple regression model.

The most common and simplest of the multiple regression models is the linear multiple regression model:

$$y = \alpha' + \beta'_1 x_1 + \beta'_2 x_2 + \dots + \beta'_p x_p + \varepsilon \quad (2)$$

According to the mathematical meaning, the coefficients in equation  $\beta'_j$  (2) are equal to the partial derivatives of the effective attribute  $y$  with respect to the corresponding factors. The parameter  $\alpha$  is called the intercept and determines the value of  $y$  in the case when all explanatory variables are equal to zero. At the same time, the value of each regression coefficient is equal to the average change in  $y$  with an increase in  $\beta'_j$  by one unit only on the condition that all other factors remain unchanged. The  $\varepsilon$  value is the random error of the regression relationship.



Obtaining estimates of parameters  $\alpha'$ ,  $\beta'_1$ ,  $\beta'_2, \dots, \beta'_p$  regression equation (2) is one of the most important tasks of multiple regression analysis. The most common method for solving this problem is the method of least squares (OLS). Its essence consists in minimizing the sum of squares of deviations of the observed actual values of the dependent variable  $y$  from its calculated values  $\hat{y}$ , obtained by the regression equation.

Then the calculated expression has the form:

$$\hat{y} = a + b_1 x_1 + b_2 x_2 + \dots + b_p x_p \quad (3)$$

Here  $a, b_1, b_2, \dots, b_p$  are estimates of theoretical values  $\alpha'$ ,  $\beta'_1$ ,  $\beta'_2, \dots, \beta'_p$ , or empirical regression coefficients.

Thus, while in theory the regression model allows for any number of factors, it is practically unnecessary. The selection of factors is made on the basis of a qualitative theoretical and economic analysis. However, theoretical analysis often does not allow an unambiguous answer to the question of the quantitative relationship of the features under consideration and the advisability of including a factor in the model. Therefore, the selection of factors is usually carried out in two stages: at the first, factors are selected based on the essence of the problem; on the second, statistics for the regression parameters are determined based on the matrix of correlation indicators.

Intercorrelation coefficients (i.e. correlations between explanatory variables) allow duplicating factors to be eliminated from the model. It is believed that the two variables are clearly collinear, i.e. are in linear relationship with each other if  $r_{x_i x_j} \geq 0.7$ .

If the factors are clearly collinear, then they duplicate each other and it is recommended to exclude one of them from the regression. In this case, preference is given not to the factor more closely related to the result, but to the factor that, with a sufficiently close connection with the result, has the least closeness of connection with other factors. This requirement reveals the specificity of multiple regression as a method for studying the complex impact of factors in terms of their independence from each other.

Today, there are many software tools (MS Excel, SPSS, STATISTICA, etc.) that make it possible to easily construct a multiple regression equation. When constructing a multiple regression equation, we used the capabilities of the SPSS software package.

To check the overall quality of the regression equation, the coefficient of determination  $R^2$  is used, which in the general case is calculated by the formula:

$$R^2 = 1 - \frac{\sum e_i^2}{\sum (y_i - \bar{y})^2} \quad (4)$$

It shows, as in pairwise regression, the proportion of total variance  $Y$  explained by the regression equation. Its values are between zero and one. The closer this coefficient is to one, the more the regression equation explains the behavior of  $Y$ .

For multiple regression,  $R^2$  is a non-decreasing function of the number of explanatory variables. Adding a new explanatory variable never decreases  $R^2$ . Indeed, each subsequent explanatory variable can only supplement, but in no way reduce the information explaining the behavior of the dependent variable.



The analysis of the statistical significance of the coefficient of determination is carried out on the basis of testing the null hypothesis  $H_0: R^2 = 0$  against the alternative hypothesis  $H_1: R^2 > 0$ . To test this hypothesis, the following F-statistics are used:

$$F = \frac{R^2}{1-R^2} \times \frac{n-p-1}{p} \quad (5)$$

The value of F, when the assumptions of the least squares are met and when the null hypothesis is valid, has the Fisher distribution. It can be seen from (5) that the indicators F and  $R^2$  are equal or not equal to zero at the same time. If  $F = 0$ , then  $R^2 = 0$ , and the regression line is the best OLS, and, therefore, the value of y does not linearly depend on  $x_1, x_2, \dots, x_p$ .

To test the null hypothesis at a given significance level  $\alpha$ , the critical value  $F_{\text{tabl}}(\alpha; p; n-p-1)$  is found from the tables of the critical points of the Fisher distribution. If  $F > F_{\text{tabl}}$ , zero - the hypothesis is rejected, which is equivalent to the statistical significance of  $R^2$ , i.e.  $R^2 > 1$ .

The statistical significance of the parameters of multiple linear regression with p factors is checked on the basis of t - statistics:

$$t_{b_j} = \frac{b_j}{m_{b_j}} \left( \text{или } t_a = \frac{a}{m_a} \right) \quad (6)$$

Where the value  $m_{b_j}$  ( $m_a$ ) is called the standard error of the parameter.

Obtained by expression (6) t - statistics for the corresponding parameter has a Student distribution with the number of degrees of freedom  $(n-p-1)$ . At the required significance level  $\alpha$ , this statistic is compared with the critical point of the Student's distribution  $t(\alpha; n-p-1)$  (two-sided).

If  $|t| > t(\alpha; n-p-1)$  then the corresponding parameter is considered  $H_0: b_j = 0$  или  $H_0: a = 0$  statistically significant, and zero - ( $|t| < t(\alpha; n-p-1)$ ) the hypothesis in the form is rejected.

Rigorous validation of parameter significance can be replaced with simple benchmarking:

- If  $|t| \leq 1$ , t.e.  $b_j < m_{b_j}$ , then the coefficient is statistically insignificant.
- If  $1 < |t| \leq 2$ , t.e.  $b_j < 2m_{b_j}$ , then the coefficient is relatively significant. In this case, it is recommended to use the table of critical points of the Student's distribution.
- If  $2 < |t| \leq 3$  then the coefficient is significant. This statement is guaranteed for  $(n-p-1) > 20$  and  $\alpha \geq 0.05$ .
- If  $|t| > 3$  then the coefficient is considered highly significant. The probability of error in this case, given a sufficient number of observations, does not exceed 0.001 results.

The type of tourist and recreational activity and the functions of the recreational system, as a rule, are included in its name, for example, a sanatorium and resort institution, various tourist organizations and fitness clubs, as well as specially equipped recreation facilities at enterprises (for example, psychological relief rooms) ... The totality of the above institutions make up the recreational environment, by which we mean not only the complex of its institutions and institutions, but also the integrity of the unity of values and means that are the sphere of implementation of the social functions of recreation [11]. The development of recreational activities in the region, in the absence of proper planning and management, leads to degradation of the natural environment and loss of profits in the



industry, which requires the development of environmentally sound plans for the territorial organization.

It is well known that only an integrated approach to the management of resort and recreational areas will allow us to stabilize and improve the ecological situation, which is decisive in the issues of giving the areas a recreational status. The creation of a dynamically developing balanced system that coordinates the interaction between resort areas, agro-technical polices and recreational complexes will significantly expand the scope of recreational activities by involving uncovered territories with powerful landscape, climatic and recreational potential in it.

Large recreational complexes of the regions are, in fact, a kind of lattice nodes of the territorial economy. They draw the attention of the authorities to solving the problems of the development of the recreational industry, the placement of its facilities in accordance with the specialization of the region. An important prerequisite for the creation of a recreational complex in a particular region is the study of the natural and climatic conditions and the established traditions of recreational practice. In addition, it is necessary to determine the amount of investment, the appropriate resources and qualified personnel that make up the core of the enterprise staff. The formation of the labor potential of the recreational complex is also a multifaceted problem. Along with carrying out purposeful work to improve the professional competence of personnel, this requires maintaining a certain stability of the staff and its self-improvement. Practice shows that the low provision of this process is one of the reasons for the qualification backwardness of sanatorium-resort complexes in the periphery. In a more advantageous relationship are organizations that have a gravitation towards large centers for the training and retraining of personnel in the recreation industry.

Here, the manufacturers of recreational services are specialized enterprises of the sanatorium-resort sphere: sanatoriums, boarding houses, rest houses, tourist centers, etc. From this point of view, recreational services act as one type of tourist services. Having a complex composition, the tourist and recreational sphere is a complex of industrial and non-industrial facilities. The basis of tourist and recreational services is the services of sanatoriums and resorts, boarding houses, rest homes, children's health institutions, recreation centers, in addition, accommodation facilities that are not part of the sanatorium-resort sphere, for business purposes, tourist-sports, tourist-excursion and specialized enterprises, other private hotels.

Uzbekistan has unique historical monuments and natural conditions that have preserved their original appearance, which is extremely rare in the previously developed, with a high population density, and provides ample opportunities for the development of tourism, recreation and health improvement. With unique monuments and diverse nature on the territory of Uzbekistan, more than 200 types of natural healing sources of mineral waters and mud-healing springs have been discovered. The chemical composition, medicinal-biological and other properties of these underground springs are priceless.

On the basis of these springs, sanatoriums-resorts, physiotherapeutic institutions and other health institutions were created. Of these, such as the sanatoriums of Zamina, the Chimgan zone, Ak-Tash hospitals, the Chartak, Sitorai Mokhi Khosa, Turon, Chinabod sanatoriums are of world importance.



Currently, there are special sanatoriums, dispensaries and rest homes in the republic, the number of rooms of which is 56348 beds.

In the development of the tourism and recreational services market in Uzbekistan, the differentiation of regional units and the concentration of demand for the development of the activities of sanatorium and resort institutions and recreation organizations are largely expressed. Analyzing the current state of development of recreational tourism, which includes sanatoriums and recreation facilities in the context of the regions of Uzbekistan, specific features of the regions were identified. In support of this, let us consider the data in the table on the activities of sanatorium-resort institutions presented by the State Committee of Statistics of the Republic of Uzbekistan (table 1).

Table 1. Activities of health resort organizations by region in 2019

	Number of health resort organizations	Including objects, units	Number of rooms		Placed persons (persons)
			Rooms	Places (beds)	
<b>The Republic of Uzbekistan</b>	<b>201</b>	<b>211</b>	<b>10995</b>	<b>28073</b>	528308
Republic of Karakalpakstan	7	7	292	566	6833
regions:					
Andijan	10	12	379	835	9797
Buhkara	4	4	312	620	9320
Djizzax	11	11	642	1268	24435
Kashkadarya	16	17	582	2305	13219
Navoiy	7	7	357	745	12673
Namangan	18	18	1441	2915	70919
Samarkand	28	29	831	2837	22846
Surxandarya	11	12	319	1293	14345
Sirdarya	2	2	69	264	900
Tashkent region	35	36	3007	6250	133972
Fergana	33	36	1677	4183	152668
Khorazm	5	5	108	616	5515
Tashkent city	14	15	979	3376	50886

**Source:** prepared on the basis of data from the State Statistical Committee of the Republic of Uzbekistan.

According to the analysis of the data in the table, the following groups were combined according to the services provided, and it was clarified to what extent the differentiation of regional units and the concentration of demand for the development of the activities of sanatorium and resort institutions and recreation organizations in the regions of the Republic were found. Thus, the group of the most developed areas includes: Tashkent, Fergana, Samarkand, Namangan regions and the city of Tashkent. Developed groups are represented by Jizzakh, Kashkadarya and Andijan regions. In the group of medium-developed regions: Navoiy, Surkhandarya regions. And in the group of underdeveloped Bukhara, Khorazm and Sirdarya regions and the Republic of Karakalpakstan. This means that,



according to the data in the table on the provision of health services in sanatoriums and resorts in the regions of Uzbekistan, the concentration of regional units is expressed in large cities with a developed level of tourism, and the differentiation of supply falls on underdeveloped cities such as Bukhara and Khorezm.

This means that the concentration of regional units for the provision of health services by sanatorium-resort organizations located in the regions is unevenly developed. In terms of the number of places in the number of sanatorium-resort organizations among the regions, the leading place is occupied by Tashkent, Fergana, Namangan and Samarkand. In turn, they are ahead in terms of the number of health resort organizations in the region. Here Samarkand region ranks fourth with 2837 beds.

This means, according to the data in the table, the concentration of regional units and the differentiation of supply and demand for services rendered by sanatoriums and recreation enterprises of the Republic is expressed to a high degree. This is especially evident in the example of Tashkent, Fergana, Namangan and Samarkand regions, since most of them are located - 63.7% of all sanatorium-resorts, the remaining 9 regions account for 36.3% of these institutions. A high degree of concentration of regional units for the development of the activities of rest homes can be traced in the Tashkent, Khorezm, Kashkadarya regions and the city of Tashkent. 70% of all holiday homes are located in the above areas, the remaining 10 areas account for only 30% of holiday homes.

It follows from the above studies: despite the fact that there are a large number of tourist and recreational facilities on the territory of Uzbekistan, which are rapidly increasing the rate of population growth, and an increase in the flow of tourists coming to the country for the purpose of health improvement and recreation, the existing facilities cannot fully satisfy the demand of all recreants. In particular, it was revealed that in such regions as Surkhandarya, Navoi, Andijan, Bukhara, as well as Samarkand and Jizzakh regions, they have great opportunities for the provision of services by sanatoriums, resorts, children's hospitals, etc. this will give an opportunity to increase the flow of foreign tourists and the possibility of improving the health of the indigenous population. It is also necessary to increase the efficiency of travel agencies when using the services of health resort organizations and rest homes.

The development of effective plans for the development of tourist and recreational services in the Republic of Uzbekistan and the choice of an optimal economic strategy in this area are directly related to the process of developing forecast parameters of key indicators that determine the development of the industry. Of particular importance is the forecasting of the development of tourism and recreation services by assessing the significant impact of the share of the tourism sector on the country's GDP[13]. The modern management system requires the use of reliable methods and tools to determine the future state and scale of economic processes and events. An econometric analysis of the prospects for the development of tourist and recreational services makes it possible to study the power of complex socio-economic phenomena by economic and mathematical methods, to determine their patterns and make scientifically sound decisions[12].



Thus, using correlation-regression methods, it is important to identify the main factors affecting the share of the tourism industry in the country's GDP, predicting trends in its change through the development of multivariate regression models.

To perform this analysis, the purpose of our study is to identify factors that affect the share of tourism in GDP in the Republic of Uzbekistan, and to select the most important of them using correlation-regression methods. A number of factors were selected to develop an econometric model for predicting the prospects for the development of tourist and recreational services in the Republic of Uzbekistan.

Table 2 Factors selected for economic and statistical analysis

Final indicator: the share of the tourism industry in the country's GDP (in%) - Y	
Factors	Indicators
Number of sanatoriums and resorts of the Republic of Uzbekistan (units)	X <sub>1</sub>
Number of places in sanatoriums and resorts of the Republic of Uzbekistan (thousand pcs.)	X <sub>2</sub>
The total number of citizens served by sanatoriums and resorts of the Republic of Uzbekistan (thousand people)	X <sub>3</sub>
Number of citizens of Uzbekistan served by sanatoriums of the Republic of Uzbekistan (thousand people)	X <sub>4</sub>
The number of foreign citizens served by sanatoriums of the Republic of Uzbekistan (thousand people)	X <sub>5</sub>
Number of recreation centers in the Republic of Uzbekistan (units)	X <sub>6</sub>
The total number of citizens served by recreation centers of the Republic of Uzbekistan (thousand people)	X <sub>7</sub>
The number of foreign citizens served by recreation centers of the Republic of Uzbekistan (thousand people)	X <sub>8</sub>

As a result of the analysis, significant factors have been identified that affect the indicator of the share of tourism in the GDP of the Republic of Uzbekistan (table 3).

Table 3 Significant Factors Included in the Linear Regression Model

	$\beta_i$	Standard error	T-statistics	p-value
$\beta_0$	-1,271	0,982	-1,294	0,243
X <sub>1</sub>	0,009	0,006	1,549	0,172
X <sub>3</sub>	0,004	0,002	2,911	0,027
X <sub>5</sub>	0,044	0,035	1,248	0,259
X <sub>6</sub>	0,001	0,002	0,524	0,619



Table 4 Criteria for checking the quality and importance of the model

Coefficient of multivariate determination R-squared.	Standard error of estimation	F-actual
0,903	0,11214	14,007

## Conclusions

The results of the study show that today, in the development trend of the tourism and recreational services market in Uzbekistan, there is a significant concentration of territorial units and a differentiation of supply according to the level of development of sanatorium-resorts and recreation organizations. This is especially evident in the example of Tashkent, Fergana, Namangan and Kashkadarya regions, since these regions account for 63.7% of all sanatorium-resort organizations, and the remaining 9 regions account for 36.3% of these institutions.

A high level of concentration of territorial units of recreation organizations falls on the Tashkent, Khorezm and Kashkadarya regions, as well as the city of Tashkent. 70% of all recreation organizations are concentrated in these regions, and 30% of these establishments are in the 10 remaining regions.

Considering the fact that Uzbekistan has a sufficient number of recreational facilities, however, given the increasing population and the flow of foreign tourists who come for health purposes, it was found that the existing facilities today do not satisfy all the needs of recreationalists.

In particular, it was found that in the Surkhandarya, Navoi, Andijan and Bukhara regions there are great opportunities for the construction of sanatoriums, rest homes, boarding schools and children's hospitals. The creation of appropriate recreational infrastructure in these regions will make a significant contribution to the improvement of the population of our country and will help increase the flow of foreign tourists.

We believe that if, in solving this problem, the State Committee for the Development of Tourism of the Republic of Uzbekistan develops a new system of benefits, this will increase the interest of our citizens and foreign tourists, which will lead to the effective use of existing sanatoriums and health institutions, as well as the prospective development of tourism and recreation. spheres.

Thus, the impact of such factors as "The number of sanatoriums and resorts of the Republic of Uzbekistan", "The total number of citizens served by sanatoriums", "The number of foreign citizens served by the sanatoriums of the Republic of Uzbekistan", The number of rest homes in the Republic of Uzbekistan "on the final indicator -" Share tourism industry in the republic's GDP "is significant. The influence of these factors on the result can be explained as follows:

1. An increase in the number of sanatoriums and boarding houses in the country by 100 units will lead to an increase in the share of tourism in GDP by 0.9%;
2. An increase in the number of citizens served in sanatoriums and resorts of the republic by 100 thousand people will lead to an increase in the share of the tourism industry in GDP by 0.4%;
3. An increase in the number of foreign citizens served in sanatoriums and resorts of the republic by 100 thousand people will lead to an increase in the share of tourism in GDP by 4.4%;



4. An increase in the number of recreational facilities in the country by 100 units will lead to an increase in the share of tourism in GDP by 0.1%.

## Literature:

1. Erin Duffin. Impact of the coronavirus pandemic on the global economy - Statistics & Facts. <https://www.statista.com/topics/6139/covid-19-impact-on-the-global-economy/>.
2. Волкова Т.А., Максимов Д.В., Миненкова В.В., Филобок А.А., Ходыкина М.Ф. Туристско-рекреационный комплекс краснодарского края: основные показатели и прогноз развития // Вестник национальной академии туризма, 2016. № 3 (39), С. 48-56. <https://www.elibrary.ru/item.asp?id=27444224>
3. Гладилин В.А., Гладилин А.В. Регрессионное моделирование и прогнозирование в туристско-рекреационном комплексе региона // Международный научный журнал «Инновационная наука», 2016. №4. <https://cyberleninka.ru/article/n/regressionnoe-modelirovaniye-i-prognozirovaniye-v-turistsko-rekreacionnom-komplekse-regiona>
4. И.Л. Полякова. Туристско-рекреационный комплекс: сущность, функции и структура // ВЕСТНИК ОГУ, 2011. №13 (132). [http://vestnik.osu.ru/2011\\_13/61.pdf](http://vestnik.osu.ru/2011_13/61.pdf)
5. Иволга А.Г., Чаплицкая А.А., Варивода В.С., Молчаненко С.А., Радишаускас Т.А., Михайлова К.Ю., Селеванова Е.В., Адамчевская В.Г., Елфимова Ю.М., Мовсесян Г.Г., Скорых Г.А., Трухачев А.В., Рассохина Т.В. Проблема развития туристско-рекреационных комплексов в регионе. Монография. Издательство "АГРУС" (Ставрополь). 2015. 194 с. <https://www.elibrary.ru/item.asp?id=24014133>
6. И.Л. Полякова. Развитие малого предпринимательства в туристско-рекреационном комплексе Северо-Кавказского федерального округа // Фундаментальные исследования. – 2014. – № 11 (часть 2) – С. 444-449. <https://www.fundamental-research.ru/ru/article/view?id=35544>
7. Миненкова В.В., Максимов Д.В., Волкова Т.А., Филобок А.А., Сидорова Д.В., Ходыкина М.Ф. Инвестиции в туристско-рекреационном комплексе Краснодарского края: оценка эффективности и территориальная дифференциация. Монография. Издательство: Директ-Медиа (Москва). 2017. 215 с. <https://www.elibrary.ru/item.asp?id=30706078>
8. Миненкова В.В, Сидорова Д.В., Филобок А.А., Максимов Д.В. Особенности инвестиционной политики в туристско-рекреационном комплексе Краснодарского края // Вестник национальной академии туризма. – 2016. – № 3 (39) – С. 57-60. <https://www.elibrary.ru/item.asp?id=27444225>
9. Гладилин В.А., Нечаева С.В., Карасева С.А. Инновации в развитии туристско-рекреационного комплекса региона на основе повышения его инвестиционной привлекательности (на примере региона КМВ) // Экономика и предпринимательство. – 2016. – № 2-2 (67) – С. 250-254. <https://www.elibrary.ru/item.asp?id=25821089>
10. Жуковская И.Ф., Краснова М.В. О влиянии реальных доходов населения и колебаний валютного курса на развитие туристско-рекреационного комплекса страны // Экономика и



управление: проблемы, решения.–2019.–№3–С. 135-143.  
<https://www.elibrary.ru/item.asp?id=38211641>

11. Григорьев В.И., Симонов В.С. Стратегия формирования индустрии рекреации. - СПб.: Изд-во СПбГУЭФ, 2006. с. 37.
12. Бойжигитов, С. К. Совершенствование использования технологии бенчмаркинга в условиях цифровой экономики / С. К. Бойжигитов // Экономика и социум. – 2020. – № 11(78). – С. 527-533.
13. Бойжигитов, С. К. у. Практика использования мобильного маркетинга на предприятиях в цифровой экономике / С.К.у.Бойжигитов // Российская экономика: взгляд в будущее: Материалы VI Международной научно-практической конференции (очно-заочной), Тамбов, 20 февраля 2020 года / Отв. редактор Я.Ю.Радюкова. – Тамбов: Тамбовский государственный университет имени Г.Р.Державина, 2020. – С. 43-48.