

Improving the Management Mechanism of Tourist- Recreation Activities in Uzbekistan Based on Multi-Factor Models

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Abstract

The article explores the methodological aspects of management of the tourism and recreation sector, which is able to rapidly develop the national economy of Uzbekistan. In the process of theoretical research, developed the author's definition of the specific category tourist-recreation on the basis of the study of the research of foreign and local scientists.

In the article, based on the analysis of the level of use of the potential of tourist recreation facilities in Uzbekistan, has been improved the mechanism of digital reservation of tourist recreation services on the basis of digital management platforms and recommended for practical use.

By using the econometric model representing the private situation in Uzbekistan, calculated the forecast indicators for 2022-2025 years. Evaluated the quality of the econometric model and the quality of the model parameters within the framework of the main criteria.

Keywords: tourism, tourist-recreation, tourist-recreation activities, management, management of tourist-recreation activities, resource component, electronic reservation, digital management platforms, indicators that characterize the resource base, multi-factor analysis, econometric model, model quality assessment, forecast.

INTRODUCTION

Trends of global changes in the world indicate that in the recent period, the growth rate of the tourist recreation sector in the composition of the created gross domestic product is increasing. The factors associated with the health of people are the need to ensure economic development through the expansion of tourist recreation activities and the improvement of its management processes. According to the data of the UNWTO, "10 percent of the turnover of the planet's production-services market falls on the contribution of the tourism sector. It is projected that revenues from international tourism trips by 2022 will amount to 2,0 trillion US dollars a year"[1]. Therefore, the development of the tourist-recreation sector in the development of the world economy has a relatively high priority, which requires the improvement of the methodology associated with management in the field.

Scientific research is carried out on the development of tourist and recreational activities in the world on the basis of the law on demand and supply, increasing its change in the volume of gross domestic product and per capita services, provision of population of new jobs in the regions and improvement of organizational and economic principles of management in enterprises of the industry. In this regard, the expansion of the horizontal and vertical management structures in the tourist and recreational enterprises, the global and local use of digital booking systems, the improvement of the management models and processes that provide operational efficiency by filling them with the necessary elements (structure participants, management methods, resource components), as well as the development of the multiplicative effect at the regional (mezo, macro), research on improving the methodology of management of tourist and recreational activities in countries with a recreational resource base is one of the priority areas.

In the world on improvement of methods of management of tourist and recreational activities, research is carried out in the following areas: improving the implementation of digital technologies for effective management of the activity of sphere, assessment of the concentration of regional units and stratification of the proposal on the level of development of the activities of sanatoriums and resorts in the development trend of the market of tourist recreation services, development of options for placement of tourist and recreational facilities in the regions and improvement of the multi-factor econometric-gravity model of attraction of recreational facilities by the number of recreational facilities, quality of services and cost and volume of resources, evaluation of the effectiveness of cross-sectoral innovations in the development of the industry on the basis of analysis of investment and innovation projects, etc.

Today, the tourism industry has become one of the leading sectors of the world economy. Therefore, special attention is paid to modernization of the tourism sector in Uzbekistan, development and improvement of the base of normative-legal documents for the sustainable development of the sphere, provision of services to foreign visitors in accordance with international standards. The main goal is to develop the tourism sector in Uzbekistan, including respect for historical and cultural heritage, create an infrastructure that fully meets international standards, strengthen international relations, make our state one of the countries most visited by tourists.

RELATED LITERATURE ANALYSIS

The tourist-recreational activities and potential of the countries are directly related to the level of their development, socio-economic, natural conditions, that is, the development of natural resources, technical infrastructure, with the development of industrial networks, service systems, culture, art science, that is, in a word, the natural and economic geographical role of the countries.

In order to develop the recreational tourism sector in Uzbekistan, it is necessary to study the potential reserves of tourist and recreational activities, to develop measures for the effective use of the existing potential and zoning of the regions and regions. The first task in the development of this sphere of the tourist services market is the creation of theoretical bases of this direction for the rapid development of the recreational tourism sector, using these resources effectively.

When we say “recreation” (“rekreacja” (pol.) means rest, “recreation” means recovery), it is understood that a person will regain the forces that he lost during his labor activity[2].

Today, recreation is becoming a shell that relieves production stresses, nervous-psychological pressure[3].

Despite the fact that this word is used as a term by a number of researchers of the field, there are different approaches to its meaning.

Russian scientists A. M. Vetitnev, L. B. Juravleva said that the term recreation was originally introduced into scientific literature in the US in the sense of working days, holidays and

holidays, which were normalized in the 90-ies of the XIX century, and meant the restoration of Health, Wellness and the content of the space in which this activity is carried out[4].

V. A. Kvartalnov believes that recreation is the process of an expanded restoration of the physical, mental and emotional strength of a person. According to the definition of the US National Center for Tourism Policy Studies, recreation is the process of the person's free time[5].

Z. Usmonova's research, the concept of recreation is interpreted in the form of restoring health and labor through recreation outside the home, for example, on tourist trips to nature, in sanatoriums, health resorts [6].

The researchers, who conducted a scientific study on the term Recreation, gave different definitions, summarizing them in the form of Z.T.Abdulhakimov developed the definition of: "Recreation is a socio-economic process, which includes places where a person can regain his or her working capacity and rest in a natural environment (landscape areas of nature, high mountainous mountainous areas, water bodies, lakes, waterfalls, natural monuments and nature reserves, sanatorium intended for treatment and Recreation, tourist bases, historical monuments, museums, various sights, theaters, various cultural evenings and events)"[7]. Because recreation - involves not only the restoration of working capacity, but also spiritual rest, physical and spiritual strength.

In our opinion, it is worthwhile to understand the recreation in the sense that people restore their health and ability to work in recreational facilities, go to different places of nature by tourist route, visit architectural and historical monuments. Recreation consists of several areas in itself, to restore health in them resort-sanatorium and other similar facilities, to the beautiful meat of nature by tourist route (river, lake, forest, mountain, cave, waterfall, etc.) go in for sports and get acquainted with unique historical and architectural monuments.

RESEARCH METHODS

In the research, a study of the methodology for the management of tourist-recreational activities and the evaluation of activities was carried out on the basis of monographic studies, which were theoretically extensively studied. On the basis of official statistics of the Republic of Uzbekistan using Eviews10 multifactorial analysis program, the volume of recreation services considered as the main indicator and the resource component indicators affecting it were determined econometric model on the basis of time series, evaluated trends of changes in the main parameter and determined forecast indicators for the middle-term period.

In the process of carrying out the research, used methods of scientific abstraction, correlation-regression analysis, analysis and synthesis as research methodology.

ANALYSES AND RESULTS

At the present stage of the development of socio-economic systems, the level of development of the services sphere in the economic sectors is much higher than in other sectors and spheres. The main factor for this is the digitization of the economy. Because with the wide introduction of the digital economy, other sectors of the economy from the services sector also have to carry out their activities through the mediation of services.

In the conditions of digital transformation, the organization and management of activities are formed on the basis of digital technologies, taking into account the fact that the initial and final linkage of the chain of activities of all economic structures to the relations with consumers. The role of digital technologies in the development of tourism services, including the tourist recreation services market, which is rapidly developing in the current period, taking into account the spatial scale of this market, is very high. Because the distance of the customers who are consumers of recreational products from the region where the product is being created is not of great importance for the creators of the services, the content of the activity, the assortment of basic, complementary services, the form of the offer and how the information on their purchase

is placed in the information space. With the formation of digital management systems (ISO – quality management, CRM – customer management, ERP – resource management, etc.), which arose as a result of the development of digitization processes in the organization of economic activities, the process of organization of activities by product creators in the recreational services market also suffered quality changes. With the optimal management of resources in the organization of activities, the management of the quality of services provided, as well as the effective implementation of digital booking systems for attracting customers and placing orders by them, along with the quantity and quality of the proposed recreational product, it is possible to monitor changes in the processes of attracting potential buyers and selling.

Today, in the conditions of rapid digitalization of services, the market of tourist-recreation services includes information on the areas of activity by tourist-recreation enterprises (sanatoriums, holiday homes, clusters, complexes) on the basis of the full formation of demand, that is, the formation of potential demand on the basis of the adaptation of hidden demand to the existing real demand, the types and characteristics, in addition to digital platforms, etc., the availability of a reservation system for places and services in which tourist-recreation services are provided has a huge impact. Because, the services in this direction have the feature of getting potential demand into real demand by working with customers remotely (making orders).

At present, the above-mentioned digital reservation system is widely used in institutions operating in the developed countries of the world in the direction of recreational services, and this is mainly achieved in two different ways[8]:

Through the Global reservation system. Today, there are 4 main reservation systems (Global Distribution Systems – GDS) - Amadeus, Galileo, Sabre and Worldspan reservation systems operating worldwide. More than 400 thousand tourist agencies around the world are coming using the services of these systems.

There are positive and negative sides to the use of the services of these systems. The positive aspects of using the Global reserve system are that customers who are familiar with the database for the use of certain services will be fully informed about the provider of these services. In the Global reserve system, there is complete information about the enterprise (types of services, prices, additional services, addresses, etc.), and this information is also provided to consumers in the process of viewing other information.

The negative side of the use of the Global reserve system is that the enterprise is connected with its own GDS terminals, through which it is necessary to conclude contracts with hotel reservation systems for payment, conduct communication networks, install the necessary equipment, teach employees to work in them and many other similar works. And in order for the costs to be borne by itself, it will be necessary to carry out a large number of orders from the GDS on an absolute basis.

1. Through the reservation system using Internet servers. The advantages of the reservation system with the help of Internet servers - the possibilities of the Internet network are not limited only to GDS.

The main advantage achieved when using the internet is the breadth of the circle of customers covered 100 million inhabitants of the Earth and the costs of the master are cheaper than the GDS.

Since the system of attracting customers used in Uzbekistan is an automated system, the level of use of existing place in recreational facilities is considered to be significantly lower. If it is taken into account that the period of one client's use of a place (place) in a recreational facility is an average of 12 days, the maximum employment of one place in 360 days of the year is 30 times, or in other words, one place in a recreational facility can be used by 30 clients in the maximum. However, in the past five years, the maximum level of use in recreational facilities by the number of people using both groups are much lower.

If a digital reservation system is used by customers in recreational facilities, the maximum use of available capacity is enlarging, and in connection with this, the financial stability of the facilities is also increased. Of course, the introduction of a digital reservation system into circulation will be introduced by the recreational institution into the account of a certain amount of additional costs, but these costs will be covered by the benefits that will be credited to the account of the scale effect.

Today, there is no digital reservation system in the existing recreational facilities in Uzbekistan, that is, the main part of the tourist-recreation enterprises does not even have their own website, at the same time they are not connected to the GDS system. Currently, electronic reservation of recreational services in our country on the basis of very short data through the web portal <https://putevka.uz/hotels/luchshie-sanatorii-uzbekistana>, the booking of roads is carried out on the back, and the recreants themselves are interested in the directions of recreation services in each tourist-recreation enterprise, at the same time they cannot find information that is considered important in the formation of demand.

In the future, we will offer a wide introduction of the digital reservation system in the use of tourist recreation services. It can be said that this system is now being used effectively in most service sectors (hotels, restaurants, tour companies, tour operators, ticket offices, railway ticket offices, etc.) in the field of tourism services.

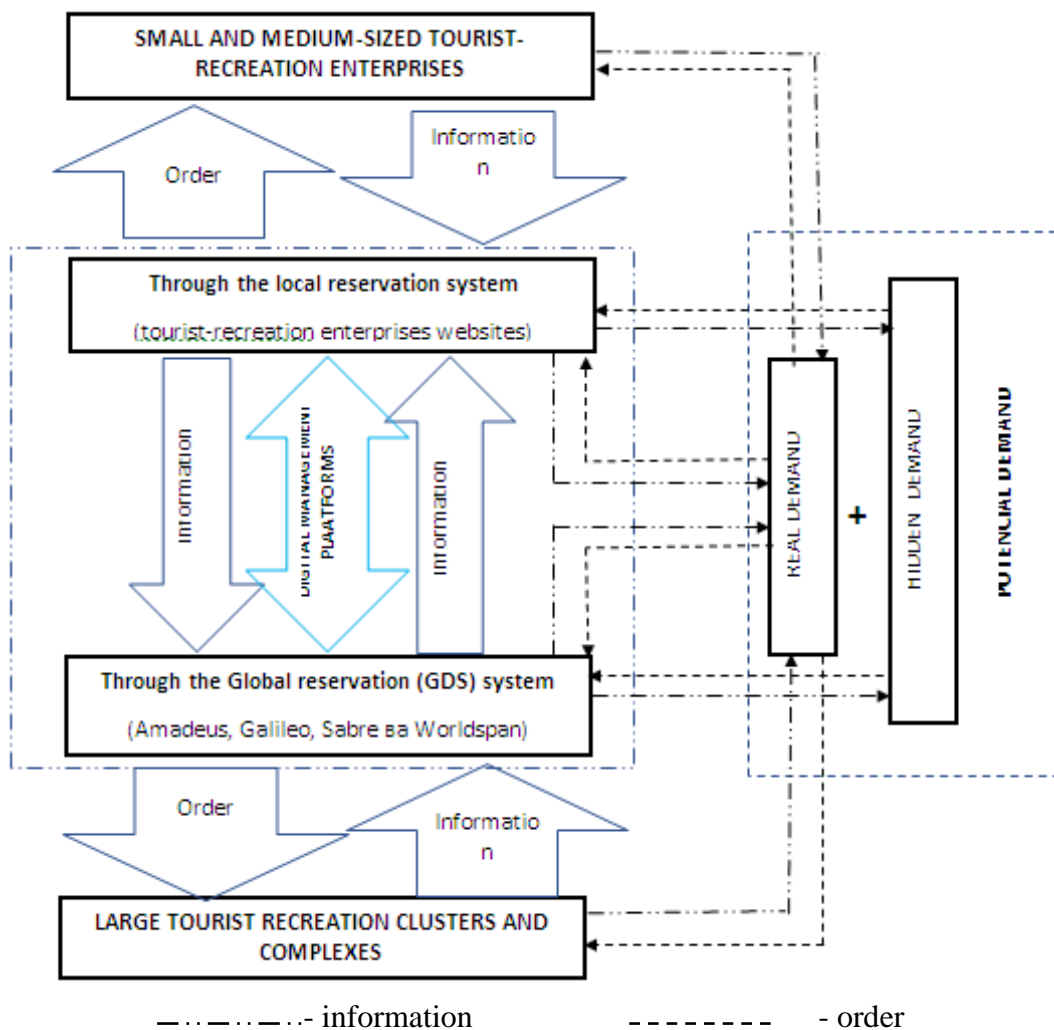


Figure 1. The mechanism of digital reservation of tourist-recreation services on the basis of digital management platforms¹

¹ Developed by the author.

The mechanism of using the proposed digital reservation system includes contacts that are equally effective for small or medium-sized tourist and recreational enterprises, as well as for large recreational enterprises (clusters, complexes), depending on the financial capacity and the volume of recreational products (Fig. 1).

In the case of the introduction of the mentioned digital reservation system, a request for the reservation of a place in the recreational facility (reservation) can be received through various channels (digital reservation system, e-mail, fax, telephone, telex). When the request is received, the following information about the client is recorded:

- ✓ name, number of persons, address of residence;
- ✓ what place and for how long it is necessary;
- ✓ fee guarantee and who will pay the fee;
- ✓ special wishes of the client (flowers in the number, a parless pillow to avoid allergic states, etc.)[9].

Each order is assigned a number, while the guarantee of a digital reservation is made by a deposit or credit card. The employee who accepted the order must check the client's history and, according to its results, put the appropriate marks or refuse to make a reservation².

Reservation as a group (more than 10 places) differs from individual reservation, first of all, in that the manager of the reservation service can meet specifically with an authorized or intermediary person for negotiation and conclusion of a contract [10, 11].

During the analysis below, we tried to determine the possibility of using the location as a result of the transfer of first and second group recreation systems to a complete digital reservation system using some computational formulas.

$$Q_{\max} = P \cdot \frac{360}{t} \cdot 0,9$$

There are:

Q_{max} – maximum capacity of recreational facilities (people);

P – number of available places in recreation facilities;

360 – number of days used by place people throughout the year;

t – average duration of use of a client from one place (average amount is 12 days);

0,9 – indicator of the maximum effectiveness of the use of a digital reservation system (taking into account the average loss of 10%).

$$Q_{\max 2011} = P_{2011} * (360/t) * 0,9 = 17000 * (360/12) * 0,9 = 459000$$

According to official statistics, in 2011 year a total of 255096 people used the services provided in recreational facilities. According to the calculations, the digital reservation system will have access to 459000 people from recreational services in one year in the system we offer, which is fully implemented (Table 1).

² <http://uz.denemetr.com/docs/768/index-32772-1.html?page=4>.

Table 1. Sanatorium and sanatorium profile capacity utilization rate in recreational tourism system³

Years	Using the power of sanatoriums and sanatorium profiles, the person		
	Total maximum capacity	Used in reality	Level of use, %
2011	459000	255096	55,5
2012	464400	275682	59,3
2013	488700	265516	54,3
2014	569700	291602	51,2
2015	594000	310241	52,2
2016	594000	334791	56,4
2017	599400	355671	59,3
2018	704700	426571	60,5
2019	757971	528308	69,7
2020	758943	448583	59,1

In this table, which reflects the Real situation, it is taken into account that the level of use in 2011 year amounted to 55,5%, it seems that there is a huge opportunity on the account of the formation of new types of organizational systems in recreational facilities.

In 2014-2015, despite the fact that during the year the number of users of recreational services increased, the number of available seats significantly lower than the maximum capacity, depending on the problems with the introduction of the digital reservation system. By 2020, the effectiveness of the use of seats in relation to the target performance of the proposed system was 59,1%. If a digital reservation system (connected or disconnected reservation system) is introduced by recreational facilities, the volume of their total proceeds can reach an increase of an average of 40 % [12,13].

Increase in the level of use of recreational facilities, formation of Real demand and increase in its volume depends on the implementation of organizational and management measures aimed at the full commissioning of the maximum available capacity by recreational services enterprises, as well as increasing the revenues from the services rendered on this basis.

In the econometric analysis of socio-economic development processes, taking into account the extensive use of the above-mentioned multi-factor production functions and the functions arising from them, we determine the flow volume change of the recreants that forms the gross volume of services of the tourist recreation services sector on the basis of a multi-factor link, the econometric models. The identified models will help to determine the target forecast indicators for the medium and long-term period on the basis of determining the factors management trends affecting the number of users of tourist-recreation services, as well as to determine the measures necessary to ensure these indicators [14].

A multi-factor analysis carried out on the change in the number of users of services in the recreation sector in the impact of its main factor (resources), taking the change as an endogen factor. On the basis of expert analysis conducted with the participation of leading experts of the state agency for tourism development of the Republic of Uzbekistan, the following indicators selected, having determined the high peak of the function, that is, the resultant factor, the number of users of tourist-recreation services (Table 2):

X_1 – the volume of investments included in the main capital;

X_2 – number of places available in tourist-recreation destinations;

³ Calculated on the basis of author's research.

X_3 – the volume of real total revenues per capita;

X_4 – the volume of services per capita.

Table 2. Indicators of the number of recreational users of tourist-recreation services in the Republic of Uzbekistan and the factor affecting its change⁴

Years	Number of recreation users of tourist recreation services, thousand persons (Y)	The volume of investments included in the main capital, billion. sum (X_1)	Number of seats available in tourist-recreational destinations, unit (X_2)	The volume of real total revenues per capita, thousand soums (X_3)	The volume of services per capita, thousand soums (X_4)
2011	255,1	19500	16999	2264,8	1199,6
2012	275,7	24455,3	17228	2831,6	1490,7
2013	265,5	30490,1	18182	3142,1	1847,4
2014	291,6	37646,2	21350	3601,3	2211,9
2015	310,2	44810,4	22098	4805,2	2509
2016	334,8	51232,0	22215	5503,5	3047,3
2017	355,7	72155,2	22625	6227,8	3668,3
2018	426,6	124231,3	27293	7300,2	4578,5
2019	528,3	195927,3	28073	8963,7	5768,2
2020	448,6	202000,1	28109	9264,7	6393,2
2021	500,0	194293,4	29931	9900,1	6446,3

If the essence of the indicators of the endogen factor and the exogen factors affecting it are seen, it will have a link close to the model in the form of a production model based on the indicators of the factors, which has a significant influence on the level of use of capital, resources and services as factors of impact. The data in the form of the above time series analyzed by using the EViews10 software in order to determine the trends of change in the number of users of tourist recreation services based on the correlation of the main endogen and exogen factors.

On the basis of the trend models identified using the software package in 2021-2025, the prospective indicators of the change in the number of users of tourist recreation services and presented the list of the most favorable models for their calculation (Table 3).

Table 3. Trend models of indicators of the number of users of tourist-recreation services and factors affecting it, and forecast indicators for 2021-2025 years⁵

Indicators and their trend models	Forecast			
	2022	2023	2024	2025
Number of recreation users of tourist recreation services, thousand persons $y = 0.00172 \cdot x_1 + 0.00602 \cdot x_2 + 0.06314 \cdot x_3 - 0.11821 \cdot x_4 + 122,539$	527,4	554,8	582,2	609,7
The volume of investments included in the main capital, billion. sum $x_1 = 20736,12 \cdot t - 33803,9$	215029,5	235765,7	256501,8	277237,9
Number of seats available in tourist-recreational destinations, unit $x_2 = 1366,07 \cdot t + 14903,8$	31297	32663	34029	35395

⁴ Developed by the author on the basis of data of the State Statistics Committee of the Republic of Uzbekistan.

⁵ Developed by the author based on the results of the research.

The volume of real total revenues per capita, thousand soums $x_3 = 819,93 \cdot t + 880,83$	10720,0	11539,9	12359,9	13179,8
The volume of services per capita, thousand soums $x_4 = 877,26 \cdot t + 96,48$	7023,6	7600,9	8178,1	8755,4

Using the identified data, a multi-factor econometric model of the change in the number of recreants using tourist-recreation services and the impact of factors affecting it was drawn up. According to this, representing this process:

$$y = 0.00172 \cdot x_1 + 0.00602 \cdot x_2 + 0.06314 \cdot x_3 - 0.11821 \cdot x_4 + 122,539$$

(1) - regression equation concluded.

When using the software package, it is necessary to check the reliability and adequacy of the configured model and its parameters on the basis of several criteria and make sure that the results are accurate. In the trend identified, autocorrelation was found to be slightly higher than the specified optimal threshold (DW=2.28) and above the requirement for other criteria (1) - the regression equation was found to be reliable and proved to be adequate.

With the use of a multi-factor econometric model, the user of tourist recreation services expressed the appearance on the graph of the values of the number of recreations in the medium term, that is, in 2011-2025 years (Figure 2).

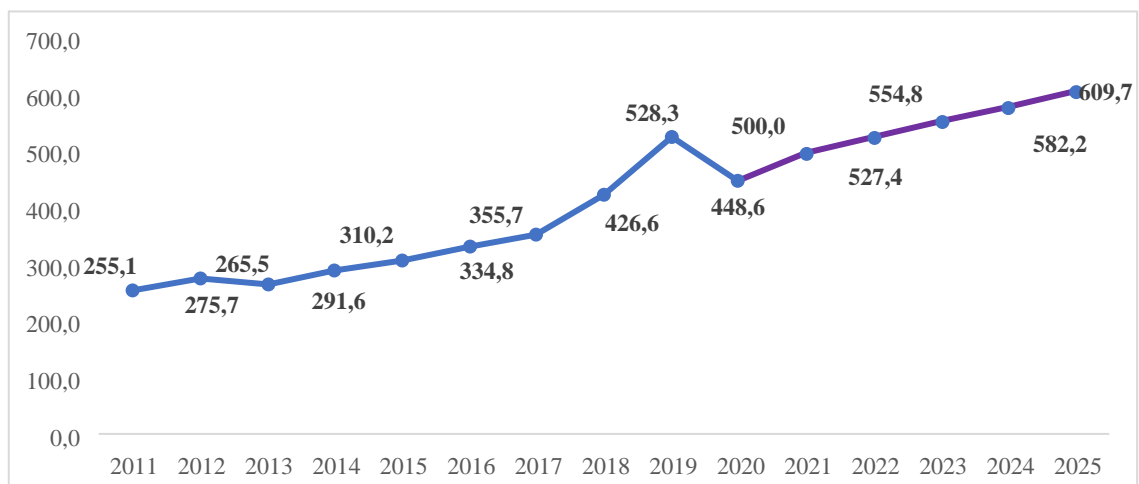


Figure 2. Changes of the volume of the number of users of tourist-recreation services in 2011-2025⁶ (thousand persons)

On the basis of the coefficients of variables in the structured multi-factor model, we can evaluate how much the value of the resulting factor changes to the account of one unit of the addition of the value of each factor. In particular, an additional 1 billion soums increase in the volume of investments in the main capitalalga leads to an increase in the number of users of tourist-recreation services by 1720 units, an increase in the number of seats available in tourist-recreation destinations by 1000 units, an increase in the number of users of tourist-recreation services by 6020 units, an increase of 1000 soums of Real total revenues per capita leads to an increase in the resultant figure by 63 units and an increase in the volume of services produced per capita by 1000 soums leads to a decrease in the number of recreants by 118 people.

⁶ Developed on the basis of author's research.

On the basis of the above factor links, we developed a development scenario based on the impact of factors on the number of recreational users of tourist-recreation services, which is considered as a result of the indicators most important in the development of the tourist-recreation sector.

The use of identified trends makes it possible to optimize the efficiency obtained from the resource unit with the correct allocation of the volume of resources included in the field [15].

Trend models, which are determined on the basis of a multi-factor link, allow to predict in advance the change of the main indicators of the activity of the sphere in the coming period, taking into account the errors of a certain boundary in the influence of selected factors. In the process of the research, the change in the number of users of tourist-recreation services in the National Tourist-recreation sector is also used in determining the projected values for the next period under the influence of 4 main factors.

At the verification stage of econometric modeling, the significance of the model and its parameters developed under the influence of certain factors is checked in four directions:

- the quality of the model is assessed by the correlation and determinant coefficient;
- the quality of the model is assessed by the MAPE and Fisher criterion;
- reliability of the parameters of the model is assessed by the criteria Student;
- on the base of the Darbin-Watson criteria, the conditions for the execution of the “method of the Least squares” are checked, that is, the presence of an autocorrelation or multicollinearity level in the structured trend model is assessed.

The dynamics of the analyzed rows is always the selection of the longest time series, even for the econometric model determined by us used 10 years’ time series. Therefore, it is necessary to thoroughly check and evaluate the reliability of econometric models obtained on the basis of correlation-regression analysis.

The use of the model in practice without assessing the importance of the econometric model, which is determined on the basis of the above calculations and the quality of its parameters, leads to the occurrence of large errors. Taking into account this, we evaluate the role of the model of change in the number of users of tourist recreation services, which forms the volume of services in the field of tourist recreation services, and the quality of model parameters.

The parameters identified during the regression analysis carried out using the Eviews10 software package, as well as the importance of the model, were evaluated through the main evaluation indicators calculated by the program (Table 4).

Table 4. The main characteristics of the linkage of factors and the quality of the structured factor model⁷

Dependent Variable: Number of recreation users of tourist recreation services, Y				
Method: Least Squares				
Date: 13/06/22 Time: 14:31				
Sample: 2011 2021				
Included observations: 11				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
The volume of investments included in the main capital, X₁	0,001722	0,000526	3,275966	0,0221
Number of seats available in tourist-	0,006019	0,006035	0,997340	0,3644

⁷ Developed by the author.

recreational destinations, X_2				
The volume of real total revenues per capita, X_3	0,063136	0,025137	2,511715	0,0537
The volume of services per capita, X_4	-0,118216	0,047027	-2,513814	0,0536
Noticeable value of the impact of random factors C	122,5386	84,64866	1,447614	0,2074
R-squared	0.974951	Mean dependent VAR	349.2100	
Adjusted R-squared	0.954911	S.D. dependent VAR	90.85951	
S.E. of regression	19.29326	Akaike info criterion	9.064242	
Sum squared resid	1861.150	Schwarz criterion	9.215534	
Log likelihood	-40.32121	Hannan-Quinn criter.	8.898274	
F-statistic	48.65131	Durbin-Watson stat	2.283997	
Prob(F-statistic)	0.000341			

The analysis carried out on the basis of a software package shows that the correlation of the resultant with the factors affecting it is equal to $r=0,9874$, the determinant coefficient $R^2=0,9749$. This suggests that the causative factor with the influencing factors has a high-density correlation, and the difference between the calculated indicators and the real indicators is that the residues in the quality are also densely correlated.

The importance and quality of the parameters of the econometric model, compiled using the values of the indicators shown in the table, is assessed. For the endogen factor in the model identified, the Fisher criterion value is equal to 48,65, and its value is equal to 0,000341. From this it can be seen that the structured trend can be applied in practice in terms of the importance of the model.

Model quality assessed through Akaike information criterion (9,06), Schwarz criterion (9,22) and Hannan-Kuinn criterion (8,90) in the software package tool. The value of these criteria also indicates that the trend model can be used in practice.

The Durbin-Watson (DW) criterion, which allows to determine the presence of autocorrelation or multicollinearity in a structured econometric model, is equal to 2,28, given that the optimal limit is around 2,0, it is possible to see that the quality of the model is relatively high, that is, the degree of autocorrelation is almost nonexistent.

Using the EViews10 software package, we formulate the trend of change in the statistical error limits ± 2 of the number of users of tourist-recreation services, which is considered the main base indicator for the development of the tourist-recreation sector, as well as evaluate the indicators that characterize the significance of this trend.

These listed indicators reflect the importance and adequacy of the structured model. In particular, given the fact that the limit for symmetrical MAPE is up to 10, it is possible to see that the degree of error of approximation is smaller than the specified limit, that is, MAPE: $2,99 < 10$.

Based on the above analytical data and evaluation of the values of indicators, the following trend model, which takes into account the number of recreants and the influence of factors on the user of tourist recreation services, which is considered the most important in the development of the tourist recreation sector, can be applied in the process of developing scenarios based on.

$$y = 0.00172 \cdot x_1 + 0.00602 \cdot x_2 + 0.06314 \cdot x_3 - 0.11821 \cdot x_4 + 122,539$$

The determination of the volume of resources (exogen factors) introduced into the network when using the structured trend Model, taking into account the effect of each unit of additional resource unit, allows to ensure optimal resource efficiency, as well as ensure the stable development of the network in equilibrium.

CONCLUSION AND RECOMMENDATIONS

Based on the results of the research work, developed the following scientific conclusions and suggestions as well as practical recommendations:

1. World practice shows that the development of the tourism sector, in particular, tourist and recreational activities, allows to solve a wide range of socio-economic issues, such as promoting entrepreneurial activity, increasing the level of employment and real income, as well as balanced development of territories. Tourist-recreational activity is a socio-economic system that fulfills the social, economic, environmental, cultural, educational and other interests of people and their social groups and satisfies the relevant needs [16,17];
2. Expansion of the material technical base of the sphere on the basis of regular and planned attraction of domestic and foreign investments to tourist recreation activities and wide involvement of innovations in the sphere;
3. Restoration of tourism clusters in tourist-recreation areas (construction of a complex of tourist facilities covering all areas of tourism in addition to sanatoriums, boarding houses and recreation areas in all regions and regions of Uzbekistan and through this attraction of domestic and international tourists to the territory);
4. On the basis of practical and methodological research of the possibilities of converting the hidden demand for tourist-recreation services into real demand through the digital reservation system in the conditions of digitization of socio-economic systems, practical proposals on improving the digital reservation of tourist-recreation services on the basis of digital management platforms have been developed. The practical use of the proposed CPM by tourist recreation enterprises to turn the hidden demand of customers for services into real demand and increase the volume of services using the available resource potential [18,19].
5. Through multi-factor econometric modeling on the basis of economic and mathematical methods, it is possible to determine the development legislation of any socio-economic activity in the form of models, as well as to develop the most effective scenarios of activities through omillarni Management, which affects the identified models. In the process of the research, determined the econometric model by choosing the indicator of the number of recreational users of tourist recreation services as a resultant factor, and on the basis of this model, developed forecasting scenarios of changes in the medium term, namely in 2021-2025 years [20].

The development of effective use of the method of application of the resource component of innovation capacity in the industry in order to maximize the level of use of existing tourist-recreation services on the basis of effective management and planning of tourist-recreation activities and effective organization of the offer of services further reduces the development period of the industry. This will be the basis for determining the high saturation point of demand and supply relations in the recreation services market, as well as accelerating the development diffusion of the tourist and recreation services market in the cross-border regions, creating new jobs, ensuring effective employment of the population.

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