

Factors of competitiveness of the tourism sector

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Abstract. In the article, the business environment, safety and security, health and hygiene, human resources and labor market, readiness to use the act, priority given to tourism and travel, international openness, price competitiveness, environmental sustainability, air transport infrastructure, land and the degree of impact of indicators such as port infrastructure, tourist service infrastructure, cultural resources and business trips on the development of the tourism industry in this area is researched. The level of influence of the competitive factors included in the sample on the "number of incoming tourists" and "revenue from the tourism industry" which are considered as the result indicators. The theoretical and practical aspects of competitiveness and its achievement in the field of tourism have been studied. Based on the results of the analysis, conclusions and suggestions that should be taken into account in the development of tourism in the Republic of Uzbekistan have been developed.

1 Introduction

For the previous two decades, tourism has been recognized as one of the world's leading industries, with its growth rates and proportion of global macroeconomic indices leading to recognition as the industry of the future. According to the World Tourism Organization, Italy, France, the United States, Spain, Germany, the United Kingdom, China, Turkey, Thailand, Mexico, and other tourist locations with tourist potential accounted for 49 percent of foreign visitor visits in recent years is taking part in a heated competition.

In the post-pandemic world, significant attention is being devoted to new scientific investigations dedicated to concerns of tourist redevelopment and restoration of its place in socioeconomic development. The importance of researching the methodological and practical aspects of this issue from the standpoint of improving the theoretical and

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methodological foundations of increasing its competitiveness based on the attraction of new opportunities for effective use of the potential of the tourist area in the context of the digital economy cannot be overstated. Evaluation of the competitiveness of the tourist area, as well as the creation of competitiveness indicators in the tourism industry

The goal of this study is to determine prospective demand parameters by assessing the impact of country competitiveness indices on the formation of demand for individual countries' tourist products in the international tourism market (incoming tourist flow, tourist revenue). Based on the foregoing, the statistical selection of the model developed to determine the prospective demand for national tourism products included indicators such as the competitiveness indicators of 70 countries during 2017-2018, the number of tourists entering these countries during this period, and the amount of income generated by the tourism sector. The level of effect of the factors included in the sample on the "number of arriving visitors and income from the tourism sector" estimated as the result indicators was determined (the number of observations in the statistical sample is $n=140$, the number of factors is $k=24$). The interdependence of components was determined using correlation-regression analysis methods.

2 Literature view

The examination of methods to competitiveness research revealed that the scientific directions in this sector are numerous. However, given the goal of our research, a specific focus was placed on competitiveness theories that do not depend on price, in this case, the American economist M. Porter's (1990) competitive advantage theory is significant. The key notion of the above-mentioned economist's thesis is that, contrary to popular belief, elements of competitiveness in a country are generated rather than inherited. The efficiency with which factors are used, the speed with which they are created, and the process for improvement are all critical [1]. The theory of competitiveness A follows. Boltho creates it, and he incorporates the temporal dimension (short and long term) into the field of study to define national competitiveness [2]. Clark J. and K. Guy contend that a country's competitiveness is ultimately determined by its producers, or the companies and organizations that can compete in both local and foreign markets [3]. Aside from the views on the concept of national competitiveness, K. Tefertiller, R. Ward, N. Newman, A. Porter, J. Roesner, A. Confong, and H. Jin list a variety of other elements that may impact national competitiveness. Labor productivity, an effective service marketing and distribution system, national government policy and citizen approach, manufacturing capacity, and infrastructure investment are examples of such elements. The aforementioned criteria are also taken into account in a cross-section of various businesses and sectors.

According to a review of specialized scientific literature, most studies in the field of tourism and hotel industry focus primarily on enterprises as the unit of evaluation, resulting in some limitations in assessing the competitiveness of tourist objects at the meso and macro levels. However, E. Bordas defines tourism business as "a holistic notion that comprises the market, goods, and technology that meet people's requirements for recreation and leisure." In 1994, he invented the idea of destination competitiveness, which is based on the vision of a cluster of tourism attractions, infrastructure, facilities, services, and organizations, as well as how the destination (territory) gives its tourists. outlines the products and services that it can provide E. is correct in this aspect. Bordas argues that competitiveness exists not between nations but rather between clusters and the tourist industry [4]. Cizmar S. and S. Weber, the final and most crucial choice made by visitors regarding selection is the adoption of this decision, which is dependent on the country's image, popularity, beauty, security, and a number of other external considerations [5].

Foreign scholars provide new insights to the idea of destination competitiveness, which influences its assessment. This is, first and foremost, the ability of the visiting destination to provide a high standard of living for citizens living on its territory [6], to strengthen the addressee's resource base, which is important for maintaining its market position compared to competitors, and to create high-value-added products, which are considered extremely important in their development and current ability to achieve [7], the ability of the destination to maintain its position in the market [8]. Destination competitiveness includes objectively measurable indicators such as visitor volume, market share, tourism employment, and added value created by the tourism industry, as well as subjectively measurable variables such as rich culture and heritage, accumulated tourism experience [9], and firstly, it is related to the sustainable development of tourism [6]. As a result, not only economic, but also environmental, social, cultural, and political stability were increasingly incorporated to the definition of the destination's competitiveness.

Foreign researchers have developed several theories of destination competitiveness. Researchers evaluate the competitiveness of tourism destinations in each of these models and defend the possibility of integrating one or more determinants in its evaluation. Cluster analysis, study of predicted benefits and costs from tourism to the economy, multiplicative analysis, use of multidimensional tables, component analysis, and expert assessment methods are commonly used by researchers in this respect.

Dj. Ritchie and G. Crouch's model is widely recognized as the first general model of tourist destination competitiveness (1994). It is composed of five interconnected and time-consuming parts that link micro- and macro-environmental aspects: primary resources and attractions, supporting resources and factors, tourist destination policies, planning and development, and area management. This model's drawback is the absence of assessment of competitive forces. Not all traits are equally essential in terms of their contribution to a tourism destination's competitiveness. DJ Ritchie and G. Crouchs emphasize that their model is far from flawless and should be utilized with caution in practice in 2003 [10].

S. L. Dwyer and Kim's model not only combined a number of determinants into expanded categories, but it also simplified the previous model and slightly expanded the scope of analysis, taking into account the factors that create demand and clarifying the competitiveness elements that serve to achieve socioeconomic development. According to the authors, the qualitatively distinctive elements of destinations are especially important for discriminating and discerning tourists, which boosts the attraction and uniqueness of these places [11]. However, academics have challenged the fact that the majority of the determinants chosen within the scope of this model have not been supported by any empirical studies, as well as the lack of causal linkages between them (Hanafiah M.H., Hemdi M.A., Ahmad I.) [12].

T. Vavra 's approach is based on the measurement of indicators in the form of a two-dimensional table that provide the structural image of customer satisfaction. The evaluation method is based on determining the importance of a relatively large number of variables chosen by the customers themselves and comparing the ratings of importance with respect to the ratio of specific providers of destination services to non-obvious derivative indicators of productivity. This allows us to differentiate three types of satisfaction determinants: effective, satisfactory, and unsatisfactory results [13]. Later, however, this model K. It has been questioned by scholars such as Matzler K., Sauerwein E., Heischmidt A. (2003) [14]. According to one of the objections, this theory cannot explain how multiple pleasure components might be attained inside the goal.

Destination benchmarking. Fuchs M. and Weirmair K. critically reviewed the Austrian government's benchmarking indicator system, which was focused solely on price and quality, and expanded this approach to comparative analysis by relating it to metrics to suit

the demands of visitors. They classified tourist quality qualities into three categories (basic or core factors, motivational factors and performance factors) [15].

Taking into mind the complexities of issues connected to the notion of sustainable tourist development, Cernat L. and Gourdon J. uses benchmarking to try to build a uniform technique for measuring tourist sustainability based on a range of quantitative metrics. Based on it, the researchers created the methodological foundation for *the Sustainable tourism benchmarking tool (STBT)*, which gives a set of criteria for assessing the sustainability of tourism in various nations [6].

The TTRI Research Institute and the World Travel & Tourism Council collaborated to produce *the Competitiveness Monitor* in 2005. (WTTC). The study is based on WTTC data. Guruchurn and G. offered eight categories of indicators (for a total of 54). Sujuarto, in the form of indices, shows each country's level of competitiveness in the sector of tourism in comparison to other nations. The model is built around the computation of the following indicators: pricing competitiveness, market openness for international commerce, technical advancement, infrastructural development, human effect of tourism, social development, environmental protection, and human resources [16].

The World Economic Forum created the Travel and Tourism Competitiveness Index. This index is generated every two years using information from tourism and travel specialists, international organizations, and open data sources. In 2007, the first study on the competitiveness of travel and tourism was released. It included 124 nations with established and emerging markets, and in 2019, it highlighted tourist competitiveness challenges in 140 countries throughout the world.

Although experts do not consider the TTCI index to be an ideal index, it is the most generally used model for analyzing nations' competitiveness in terms of tourist growth.

The World Economic Forum in Geneva measures the competitiveness of the world's tourist sectors, which it publishes yearly in the Tourism and Tourism Sector Competitiveness Report. The technique proposed by Gooroochurn and Sugiyarto (Gooroochurn and Sugiyarto, 2005) is employed in the report's development. The Travel and Tourism Competitiveness Index (TTCI) is made up of fourteen individual indexes. These fourteen indices are grouped into four categories, from which four sub-indices are calculated: I - Conditions and opportunities; II - Tourism and Travel Policy; III - Infrastructure; and IV - Natural and cultural resources. Fourteen indexes are made out of 90 indicators, which we shall go over in depth.

The sub-index of conditions and opportunities is made up of five indicators that indicate the overall business circumstances in the country:

1. *The business environment index* measures the policy environment that is favorable for enterprises and organizations to do business in the country, how well the parties' property rights are protected, distortions in tax and competition policies, including the domestic and international competition environment in terms of attracting foreign direct investment, construction permits are made up of 12 indicators that show the procedure for obtaining them.
2. *The security and protection index* is made up of five indicators that show the prevalence of crime and violence, terrorism in the country, the ability to rely on police services to provide protection from crime, the business costs of crime and violence, and the reliability of police services ability to rely on police services to provide protection from crime.
3. The health and hygiene index is comprised of six variables, including the provision of clean drinking water and sanitation facilities in the country, the availability of physicians and hospital beds, and the incidence of AIDS and malaria.
4. The Human Resources and Labor Markets Index assesses the extent to which countries develop skills through education and training, as well as the best distribution of these skills through an efficient labor markets, the formal level of education and the involvement of the

private sector in training, investment in training services, and customer service. It consists of nine indicators, including the labor markets's flexibility, speed, and openness, the participation of women in it, the strength of the country's talent base, and the quality of the country's talent base.

5. *The ICT readiness index* is made up of eight indicators that show the availability of internet services and business operations in the country, the availability of modern hard infrastructure (such as cellular network coverage and electricity supply quality), and the ability of businesses and individuals to use and provide online services.

6. *The index of priority given to tourism and travel in the country* is directed to important development projects of government funds and coordination of actors and resources required for the sector's development, ensuring the stability of public policy, direct attraction of tourists through the government's national marketing companies, public spending, marketing companies, and the country's brands. It consists of six indicators that address topics such as the efficiency, accuracy, and timeliness with which information on tourist statistics is sent to international organizations, as well as the significance the country places on the tourism sector.

7. *The international openness index* is comprised of three indicators that address issues such as visa formality in the country, government agreements signed, the availability of air connections with other countries, the openness of regional trade agreements, the existence and openness of bilateral air travel agreements, and the provision of international tourism services.

8. *The Price Competitiveness Index* considers factors such as the low cost of travel within a country, price competitiveness, air ticket taxes and airport fees, the relative cost of hotel accommodation, the purchasing power parity cost of living, and the cost of fuel, which directly affects the cost of travel 4.

9. Because the importance of the natural environment in maintaining the appealing location of tourism is incalculable, regulations and variables that improve environmental sustainability are a significant competitive advantage in ensuring the country's attractiveness as a potential destination. *The ecological stability index* is made up of ten indicators, which include the country's ecological norms' stability, assuring compliance with ecological norms, indicators of water resources, marine resources, and fish stocks as a factor affecting the status of marine life.

10. *Air transport infrastructure* is made up of six indicators that assess air transport volume, available seats, departures, airport density, and the number of operational carriers, as well as the quality of domestic and international flights.

11. The provision of fast and convenient transportation to major commercial locations and tourist sites is critical to the tourism industry's rapid development. *Land and Port Infrastructure* An extensive road and rail network with high road and rail density, as well as road, rail, and port infrastructure meeting international convenience and safety standards, as well as the presence and length of paved roads providing local connections 7 is made up of indicators.

12. The availability of enough quality lodging, recreational amenities, and entertainment facilities may provide a country with a significant competitive edge. *The tourist service infrastructure index* is comprised of four variables, the number of hotels in the nation, as well as the amount of use of services such as car rental and ATMs.

13. *The natural resources index* is made up of five measures, which include the number of UNESCO World Heritage sites in the nation, the number of notable locations, general protected areas, digital demand for natural tourism, and the attractiveness of natural assets.

14. *Cultural resources and business travel* are comprised of five indicators: UNESCO World Heritage sites, the number of major stadiums capable of hosting major sports or entertainment events, a new measure of digital demand for cultural and entertainment -

online searches related to a country's cultural site, and the number of international association meetings.

The Tourism and Travel Competitiveness Index (TTCI) is based on data from international organizations, with the remaining one-third based on the World Economic Forum's annual Expert Opinion Survey. This survey, which was performed among more than 16,000 business executives who play a vital role in the global economy, is a one-of-a-kind source of information on the critical qualitative features of the Tourism and Travel Competitiveness Index (TTCI) rating process.

Yale-CIESIN Environmental Performance Index, Bloom Consulting, ICCA, IUCN, UNESCO, UN Statistics Division, UNAIDS, IATA, UNWTO, STR, WHO, World Road Statistics, CIA World Factbook, WTO, WTTC, WDP, ILO, ITU, official information from organizations such as the World Bank, World Resources Institute are among the statistical data sources. Total Tourism and Travel Competitiveness Index (TTCI) value is computed by sequential summing from indicator level (i.e. lowest, most allocated level) through column and sub-index levels, and component summation is done using simple average (i.e. arithmetic mean). Each indicator's score is first adjusted to the overall scale. Qualitative indicators are scored from 1 to 7. The procedure described below is used to normalize quantitative indicators:

$$I_k = 6 \times \left(\frac{X_k - X_{\min}}{X_{\max} - X_{\min}} \right) + 1, \quad (1)$$

3 Methodology

In the international tourism industry, we employed the multi-factor linear regression equation to identify the key elements influencing the development of demand for each nations' tourist products (incoming tourist flow, tourist revenue). In multivariate regression theory, the following model is explored:

$$y = \hat{y}(x) + \varepsilon, \quad \hat{y}(x) = a_0 + \sum_{i=1}^k a_i x_i \quad (2)$$

here:

$\hat{y}(x) - x_1, x_2, \dots, x_k$ factor dependent variable; ε while $M\varepsilon = 0$, $D\varepsilon = \sigma^2$ is a random variable; $a_0, a_1, a_2, \dots, a_k$ are the unknown regression coefficients, $y_j, x_{1j}, x_{2j}, \dots, x_{kj}, j = 1, \dots, n$, $n > k + 1$ evaluated on a selective basis; k – the number of factors affecting the final indicator; n – number of observations.

K., a German scientist, participated in the study. When solving the regression equation's unknown parameters a_0, a_1 , and a_2, a_k . F.Gauss (1794-95y.) and the French mathematician from the sides of the A. Lejandr, the proposed "smallest squares" approach was employed (1805-06y). The method of the least squares is used to examine multi-dimensional regression as if it were a one-dimensional regression:

$$Q^2 = \sum_{j=1}^n \left(y_j - a_0 - \sum_{i=1}^k a_i x_{ji} \right)^2 \rightarrow \min, \quad (3)$$

Thus, we set a goal in the worldwide tourist industry of calculating the econometric expression illustrating the reliance of the outcome indicator "y" on the elements x_1, x_2, \dots, x_k using the "Least Squares" approach.

Multifactorial correlation is distinguished by the inclusion of numerous major and significant components in its regression equation. It is critical to identify the most essential of these components and incorporate them in the regression equation accurately. The selection of factors is based on qualitative theoretical analysis and is done in three stages: in the first stage (initial analysis), factors are chosen without regard to any conditions; in the second step, they are analyzed using pair correlation coefficients, for which a matrix of pair correlation coefficients between characters x_1, x_2, \dots, x_k is created; and in the third stage, the regression equation is determined and its parameters are evaluated using special criteria. We create a matrix of pairwise correlation coefficients between elements to identify which factors should be included in the regression equation.

The pairwise correlation coefficients between the components are calculated using the formula below:

$$r_{ij} = \frac{(\sum x_i x_j - \sum x_i \times \sum x_j / n)}{\sqrt{(\sum x_i^2 - (\sum x_i)^2 / n)(\sum x_j^2 - (\sum x_j)^2 / n)}}, \quad i, j = \overline{1, k} \quad (4)$$

$i = j = \overline{1, k}$ is for all $r_{ii} = 1$ s, as can be seen.

The pairwise correlation coefficient between the components r_{ij} x_i and x_j in this case is r_{ij} . Strong linear correlation is defined as the pair correlation coefficient (r_{ij}) of two components above their critical value (r_{kr}) in absolute value ($r_{ij} > r_{kr}$). Usually, a strong correlation relationship is considered to exist when $r_{kr} = 0,7$.

It is well recognized that strongly linked components shouldn't be included simultaneously in the multifactor regression equation. Because they somewhat replicate each other and mess with the parameters of the regression equation.

Analyzing the data, it can be seen the presence of factors I_{14} and I_{13} , SI_1 and SI_3 , which are strongly interconnected, greater than the critical value (r_{kr}). Therefore, we considered it appropriate to remove factors I_{13} and SI_1 from the regression equation.

The most important step in the analysis of socio-economic development using the method of correlation-regression analysis is to choose an econometric expression that describes the dependence of the result indicator on the selected factors. The quality, significance and reliability of the constructed econometric expression are evaluated based on the following criteria:

- 1) The multifactor correlation coefficient and determination coefficient are used to assess the overall effectiveness of the econometric model;
- 2) the Fisher's criteria and approximation error are used to determine the significance of econometric models;
- 3) The Student's test is used to assess the relevance of the econometric model's parameters.

The quality of the derived regression equation is assessed using the coefficient of determination (R^2), which is obtained using the formula below:

$$R^2 = 1 - \frac{\sum_{i=1}^n (y_i - \hat{y}_i)^2}{\sum_{i=1}^n (y_i - \bar{y})^2}, \quad (5)$$

here:

y_i - observed quantities of the outcome measure;

\bar{y} - arithmetic average value of the resulting indicator;

\hat{y} - determined, forecasted, leveled quantities of the resulting indicator; n – number of observations.

The coefficient of determination displays how much of the variation of the final variable is explained by the given model, or how much the factors under consideration had an impact. The allowed range for this parameter is "0" to "1". The more closely it approaches "1," the more strongly the variables in the regression equation support the behavior of the generated indicator.

The formula below determines what Fisher's criterion's actual value is:

$$F = \frac{\sum_{i=1}^n (\hat{y}_i - \bar{y})^2 / k}{\sum_{i=1}^n (y_i - \hat{y}_i)^2 / (n - k - 1)} = \frac{R^2}{1 - R^2} \times \frac{(n - k - 1)}{k}, \quad (6)$$

here: $\sum_{i=1}^n (\hat{y}_i - \bar{y})^2 / k$ – factor variance corresponding to one degree of freedom (the number of degrees of freedom $\gamma_1=k$); $\sum_{i=1}^n (y_i - \hat{y}_i)^2 / (n - k - 1)$ – residual variance corresponding to one degree of freedom (number of degrees of freedom $\gamma_2=n-k-1$); n – number of observations; k – the number of factors (parameters) in the multivariate regression equation.

F- The true value of Fisher's criterion (F_{real}) is compared with the critical ($F_{\text{table}}(\alpha; k; n-k-1)$) value of the criterion. If $F_{\text{real}} > F_{\text{table}}$, then the identified model is significant

Fisher's test yields a table value of $F_{\text{table}}=3,909$ when the degrees of freedom are equal to $\gamma_1=1$ in the sum and $\gamma_2=138$ in the denominator (at a significance level $p=0,95$). Therefore, Fisher's F-true test's value of $F_{\text{real}}>3,909$ indicates that our multivariate regression equation is significant.

Fisher's test yields a table value of 2.175 when the degrees of freedom are equal to $\gamma_1=14$ on the sum and $\gamma_2=125$ on the denominator (at significance level $p=0,95$). Therefore, when the true result of F-test Fisher's is $F_{\text{real}}>2,175$, our multivariate regression equation is significant.

Fisher's criteria table value (at significance level $p=0,95$) when degrees of freedom are equal to $\gamma_1=19$ on the sum and $\gamma_2=120$ on the denominator $F_{\text{table}}=1,673$, respectively. When the true result of F-test Fisher's is $F_{\text{real}}>1,673$, our multivariate regression equation is therefore deemed significant.

Using the Student's test, the significance of each multifactor regression parameter is assessed in the study (t-statistic). In this instance, the formula below is used to obtain the criterion's real value:

$$t_{b_j} = \frac{b_j}{m_{b_j}} \left(\text{ëки } t_a = \frac{a}{m_a} \right), \quad (7)$$

here:

b_j (a) – regression coefficients (parameters);

m_{b_j} (m_a) – by b_j (a) standard error of the parameter.

The critical point of the Student distribution, $t(\alpha; n-k-1)$, is compared with the t-statistic calculated by expression 12 for the pertinent regression equation parameters. The "null

hypothesis," represented as $H_0: b_j=0$ or $H_0: a=0$, is rejected if $|t| > t(\alpha; n-p-1)$. If not, the parameter is significant and the "null hypothesis" is accepted.

4 Results

We emphasized the extremely relevant and significant components present in our model in light of the analysis's findings (tables 1-15).

Table 1. 1-The structural composition of the model

Result indicator (Y1) - number of incoming tourists (thousands of people)						
Important factors		Unstandardized coefficients		Standardized coefficients	t-statistics	p-value
		B	Standard error			
	Constanta	-59957,532	9419,045		-6,366	4,3E-9
TT CI	Tourism and travel competitiveness index	17538,171	2192,730	0,601	7,998	1,2E-12
$Y_1 = -59957,532 + 17538,171 \times \text{TTCI}$						

Table 2. 1- Criteria for checking the quality and significance of the model

Multifactor correlation coefficient R	The coefficient of multivariate determination is R-squared	Correction R-squared	F-real	P-кыймат
0,601	0,361	0,356	63,973	1,2E-12

Table 3. 2-The structural composition of the model

Result indicator (Y2) - tourist revenue (million US dollars)						
Important factors		Unstandardized coefficients		Standardized coefficients	t-statistics	p-value
		B	Standard error			
	Constanta	-24282,601	13359,557		-1,818	6,4E-7
TT CI	Tourism and travel competitiveness index	-2674,346	3321,184	-0,056	-0,805	3,8E-9

Table 4. 2- Criteria for checking the quality and significance of the model

Multifactor correlation coefficient R	The coefficient of multivariate determination is R-squared	Correction R-squared	F-real	P-value
0,502a	0,252	0,246	40,411	3,8E-9

Table 5. 3-The structural composition of the model

Result indicator (Y1) - number of incoming tourists (thousands of people)						
Important factors		Unstandardized coefficients		Standardized coefficients	t-statistics	p-value
		B	Standard error			
	Constanta	-24282,601	13359,557		-1,818	0,072
SI₂	Tourism and Travel Policy	-2674,346	3321,184	-,056	-0,805	0,422
SI₃	Infrastructure	5775,578	1428,339	,307	4,044	9,6E-5
SI₄	Natural and cultural resources	8432,270	1013,106	,578	8,323	2,3E-13
$Y1 = -24282,601 + 5775,578 \times SI_3 + 8432,270 \times SI_4$						

Table 6. 3-Criteria for checking the quality and significance of the model

Multifactor correlation coefficient R	The coefficient of multivariate determination is R-squared	Correction R-squared	F-real	P-value
0,746	0,557	0,545	46,957	9,9E-20

Table 7. 4-The structural composition of the model

Result indicator (Y2) - tourist revenue (million US dollars)						
Important factors		Unstandardized coefficients		Standardized coefficients	t-statistics	p-value
		B	Standard error			
	Constanta	-31459,187	24926,957		-1,262	0,209
SI₂	Tourism and Travel Policy	-5229,006	6323,887	-0,069	-0,827	0,410
SI₃	Infrastructure	10083,772	2705,460	0,342	3,727	2,97E-4
SI₄	Natural and cultural resources	9209,041	1959,974	0,387	4,699	7,09E-6
$Y2 = -31459,187 + 10083,772 \times SI_3 + 9209,041 \times SI_4$						

Table 8. 4- Criteria for checking the quality and significance of the model

Multifactor correlation coefficient R	The coefficient of multivariate determination is R-squared	Correction R-squared	F-real	P-value
0,598	0,357	0,341	22,025	2,05E-11

Table 9. 5-The structural composition of the model

Result indicator (Y1) - number of incoming tourists (thousands of people)						
Important factors		Unstandardized coefficients		Standardized coefficients	t-statistics	p-value
		B	Standard error			
	Constanta	-54607,000	22733,755		-2,402	0,018
I₁	Business environment	-5435,273	3194,171	-0,199	-1,702	0,092
I₂	Security and protection	-1612,855	2105,302	-0,065	-0,766	0,445
I₃	Health and hygiene	-2033,652	2339,986	-0,083	-0,869	0,587
I₄	Human resources and labor market	7602,619	5055,510	0,191	1,504	0,136
I₅	Readiness to use ICT	-62,300	230,375	-0,017	-0,270	0,787
I₆	Prioritizing tourism and travel	3951,705	2188,193	0,146	1,806	0,074
I₇	International openness	3929,715	1766,145	0,180	2,225	0,028
I₈	Price competitiveness	4738,305	1774,580	0,205	2,670	0,009
I₉	Environmental sustainability	-894,861	2282,383	-0,030	-,392	0,696
I₁₀	Air transport infrastructure	2473,876	1781,382	0,164	1,389	0,168
I₁₁	Land and port infrastructure	1933,522	1775,692	0,112	1,089	0,279
I₁₂	Tourist service infrastructure	3753,318	1853,001	0,237	2,026	0,045
I₁₄	Cultural resources and business trips	6393,667	942,192	0,591	6,786	8.07E-10
Y₂ = -54607,000 + 7602,619 × I₄ + 3951,705 × I₆ + 3929,715 × I₇ + 4738,305 × I₈ + 2473,876 × I₁₀ + 1933,522 × I₁₁ + 3753,318 × I₁₂ + 6393,667 × I₁₄						

Table 10. 5- Criteria for checking the quality and significance of the model

Multifactor correlation coefficient R	The coefficient of multivariate determination is R-squared	Correction R-squared	F-real	P-value
0,796	0,634	0,586	13,431	9.4E-17

The method for determining the relative impact of the fictitious factors of the "region" on the final indicator excludes one of the fictitious factors of the "region" (in our example, "Asia-Pacific") from the model during analysis, and the influence of other fictitious "regional" factors on the final indicator is measured against it.

By using this way of study, it is feasible to compare the effect of elements like "CIS nations region," "European region," "American region," "Middle Eastern countries region," and "African region" on the final indicator (Table 11).

Table 11. The relative importance of geographical regions in the formation of external demand of competitiveness factors

Factors		B	Standard error	Standardized coefficients	t-statistics	p-value
R_2	"Europe and Eurasia"	7190,841	4051,128	0,198	1,775	0,079
R_3	"America"	- 1056,962	4603,026	-0,023	-0,230	0,819
R_4	"Middle East"	- 4518,791	5608,712	-0,079	-0,806	0,422
R_5	"Africa"	359,705	9999,293	0,003	0,036	0,971

As a consequence, the following qualitative factors were established in the formulation of demand for national tourist products and tourism income according to the results of the econometric analysis in Tables 1–11:

1. The country's tourism and travel competitiveness index has a favorable impact on the development of future demand for the nation's national tourist products, and a one-unit improvement in this index creates the circumstances and opportunity for a 17.538,000 increase in demand;
2. The "Infrastructure" and "Natural and cultural resources" sub-indices have a considerable influence on the creation of prospective demand, and their growth by one unit results in an increase in demand of 5,775 and 8,432,270 thousand persons, respectively;
3. If we examine each indicator of regional competitiveness separately, the "Cultural resources and business trips" index is thought to have the greatest impact on the development of future demand, increasing demand by 9209 thousand people for every unit it increases;
4. Indices like "human resources and the labor market," "international openness," "price competitiveness," "air transport infrastructure," "land and port infrastructure," "tourist service infrastructure," and "cultural resources and business trips" have a disproportionately large impact on the development of future demand for national tourism products;
5. The "Infrastructure" and "Natural and cultural resources" sub-indices are thought to have a substantial impact on the development of tourist income, and their growth by one unit results in an increase in tourism income by 10,083 and 9,209 thousand people;
6. The results of the comparative analysis show that the model's fictitious factors, "America," "the Middle East," and "Africa," when compared to the fictitious factor "Asia and Oceania," have a negative impact on the final indicator, whereas the effect of the region "Europe and Eurasia" is largely positive.

5 Conclusion

The following findings and recommendations may thus be drawn from the examination of the elements influencing the development of potential demand for the nation's national tourism products:

- the plan for the growth of the tourist industry in a particular nation and distinct region should be based on in-depth analytical findings resulting from the development of this industry at the global level as well as regional peculiarities;
- increasing the competitiveness of tourism destinations in Uzbekistan by learning from the experiences of European and Asian nations is crucial;

- national cultural heritage items form the cornerstone of our nation's tourist industry's explosive growth;
- the key reason fostering the tourist sector's rapid expansion is the improvement of regional tourism infrastructure.;
- MICE tourism is regarded as a lucrative tourist destination and is particularly significant in the quick growth of the tourism sector in our nation;
- the ability of labor resources functioning in the sector and the effectiveness of their usage will determine how competitive the tourism region is, boosting the flow of tourists to the area;
- the basis of environmental stability elements in the formulation of the offer is a result of the rising trend of environmental factor effect on the primary motivations driving the tourist trip;
- it is suitable to construct the criteria and indicators of the competitiveness of the tourist regions of the Republic of Uzbekistan using the methodological foundation of the WEF's (World Economic Forum) Tourism and Travel Competitiveness Report;
- a topic of special importance is the creation and use of organizational measures to represent the Republic of Uzbekistan in the global rankings of the competitiveness of tourism and travel;
- the successful growth of the tourist network is ensured by the formulation and execution of tourism area development measures in accordance with the region's competitiveness metrics.

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