

Assessment of the Role of the Tourism Sector in the Formation of Employment Indicators in Uzbekistan



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ABSTRACT: The current state of tourism services in Uzbekistan, some of the problems and shortcomings observed in it are analyzed in detail in the article. In this, the rapid development of the field of tourism services, strengthening of its role in ensuring the employment of the population, and the level of factors affecting it are highlighted. At the end of the article, appropriate conclusions are drawn based on the research results and recommendations for the development of the field are given.

KEYWORDS: Tourism services, population employment, factors affecting employment, econometric analysis.

I. INTRODUCTION

Increasing the income of the population in the country, ensuring their well-being and creating a decent lifestyle requires creating new jobs, reducing the unemployment rate, and supporting the needy population in the labor market. Because, by the number of people, Uzbekistan ranks first among Central Asian countries, third among CIS countries (after Russia and Ukraine), and 42nd among the countries of the world [1]. In addition, the average age of the population of Uzbekistan is much higher than that of many countries of the world, and the natural growth rate of the population is also relatively high. One of the unique processes taking place in Uzbekistan in recent years is that the rate of growth of the working population is higher than the rate of population growth. In 2000-2021, the number of permanent residents in Uzbekistan increased by 1.4 times, while the number of working-age population increased by 1.5 times [2]. Effective use of such huge resources, on the one hand, allows to solve the important social problem of ensuring the employment of the population, on the other hand, it creates great opportunities to accelerate the country's economic development and economic growth, and to sharply increase the volume of GDP per capita.

In 2016-2021, the employment rate in Uzbekistan decreased from 68.7 percent to 66.9 percent, that is, during this period, it decreased by 1.8 percentage points. The unemployment rate increased by 1.8 times during the same period and made 9.6% (Table 1). This situation indicates that the balance of supply and demand for labor resources in the labor market of Uzbekistan has been disturbed. In addition, the level of employment in the country is much higher than international standards. Today, the average level of unemployment in developed countries is 4-5% [3].

Table 1. Indicators of economically active population and unemployment rate in Uzbekistan in 2016-2020[2]

Years	Economically active population, thousand	Of them		Employment rate of the population, in percent	Unemployment rate, in percent
		Number of employed people, thousand	Number of unemployed people, thousand		
2016	14022,4	13298,4	724	68,7	5,2
2017	14357,3	13520,3	837	69,2	5,8
2018	14641,7	13273,1	1368,6	67,4	9,3
2019	14876,4	13541,1	1335,3	68,3	9,0
2020	14797,9	13239,6	1561,0	66,1	10,5
2021	14980,7	13538,9	1 441,9	66,9	9,6

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II. ANALYSIS OF LITERATURE

Many scientists have conducted research on the development of the field of tourism services in the country, strengthening its role in the formation of employment indicators of the country's population. In particular, during the study, foreign researchers N.A. Sorokina [4], R. Davidson[5] and A.Yu. Alexandrova[6], local researchers S.S. Samiev[7], I.U.Ibragimov[8], G.A. The results of Egamberdieva's[9] scientific research were studied.

III. RESEARCH METHODOLOGY

In the research process, logical thinking, scientific observation, systematic approach, statistical and comparative analysis methods were used in the study of statistical data and theories related to the topic. Also, the mathematical modeling method is very effective in assessing the impact of tourism services on quality and efficiency indicators from the point of view of providing employment. The main of these methods are correlation and regression methods. In particular, based on the results of the research, the Gauss method was also used.

IV. RESULTS

IV.A. The impact of tourism on employment

The development of tourism services in the country and the assessment of its place in the formation of population employment indicators allow to determine the level of influence of the tourism sector on population employment. However, in our opinion, the quantitative analysis of the results of tourism activity is a more complex process. As evidence of our opinion, we would like to cite the following:

First, all goods and services related to the tourism industry were consumed by both guests (tourists) and local residents at the same time. That is, both visitors and local residents simultaneously eat at restaurants and cafes, use direct air travel, and consume other goods and services. This makes it difficult to determine how much of the demand for goods and services is accounted for by tourists.

Second, tourists can consume both tourist and non-tourist goods and services depending on their needs. For example, in addition to eating in restaurants and cafes, tourists can often buy food, soft drinks and alcohol in convenience stores, use banking and other household services. Food and beverages purchased from a retail chain are generally not considered tourist products. The reason is that most of the demand for them is made by ordinary local residents. In addition, visitors can buy books, clothes, medicine and other goods during their trip. At the same time, such goods are not considered tourist goods, as local residents can also purchase and consume such goods. This, in turn, complicates the determination of which goods and services are in high demand among tourists.

Third, tourism activities produce tourist and non-tourist goods and services. For example, hotels provide laundry, dry cleaning, interstate telephone and fax services, and other such ancillary services in order to create a variety of amenities for guests. They also sell jewelry, various perfumes and other non-tourist products through small retail chains within the hotel. In this case, these goods and services are offered to foreign and domestic tourists at the same time. This also reduces the ability to quantitatively determine the demand of tourists for tourist goods and services.

Fourth, economic entities engaged in non-tourism activities sometimes also produce tourism products. For example, in large shopping complexes in some developed European countries, activities such as restaurants and travel agencies, car rental and bus ticket sales are organized at the same time. There are many examples of such large shopping complexes that have organized additional tourist and non-tourist activities. In this case, keeping records of tourist services provided to tourists by business entities that provide services to tourists is considered a complicated process.

The above comments indicate the complexity of directly determining the role of tourism using generally accepted approaches of economic evaluation in the context of a mixture of tourist and non-tourist goods and services produced simultaneously by tourist and non-tourist industries.

IV.B. The role of tourism in providing employment

Evaluating the place of the tourism services sector in the formation of population employment indicators in Uzbekistan requires, first of all, an analysis of the real situation in the country's labor market. Since the statistics of labor supply and demand indicators in the country have been maintained by the Ministry of Employment and Labor Relations since 2017, we tried to analyze the data of these indicators for 2017-2021.

In the course of research, it was found that demand and supply of labor force in the labor market of Uzbekistan are inconsistent with each other, and in recent years, the supply of labor force has significantly exceeded the demand. As evidence of our opinion, we would like to give the data of Table 2.

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According to the table, the total labor supply in Uzbekistan increased by 26.4% in 2017-2021. In this case, the largest growth rate and the largest share correspond to the number of unemployed population in need of employment. During this period, their number increased by almost 2 times. The increase in labor supply is interpreted as a reserve labor resource for the development of the country on the one hand, and on the other hand it is interpreted as labor resources not used effectively and lost GDP. In addition, the supply of labor force in the country, in turn, creates the need for the formation of a corresponding demand for it.

Table 2. Changes in labor supply and demand in the labor market of the Republic of Uzbekistan (thousands of people)[2]

№	Indicators	Years					Ratio of 2021 to 2017, %
		2017	2018	2019	2020	2021	
1	Total labor supply	1 464,6	2 111,0	2 105,6	2 057,5	1851,7	126,4
1.1	The number of persons entering the labor market for the first time	557,1	556,8	586,1	278,5	125,2	51,8
	Among them are graduates						
	academic lyceums	32,7	31,6	46,5	16,9	17,3	52,9
	colleges	457,0	454,9	468,8	177,7	4,0	0,01
	- Higher educational institutions	67,4	70,3	70,8	83,9	103,9	154,1
1.2	Number of unemployed population in need of employment	724,0	1368,6	1335,3	1561,0	1441,9	199,1
1.3	Number of returned labor migrants	157,1	160,1	158,8	191,0	256,8	163,4
1.4	Others (those who have returned from long-term military service, those who have been released from serving a sentence)	26,4	25,5	25,4	27,0	27,8	105,3
2	Total labor demand	544,7	590,2	632,4	674,8	707,5	129,8
2.1	Natural resignation of employees (retirement, death, etc.)	129,1	134,0	132,0	135,0	137,0	106,1
2.2	The number of jobs provided by employers to labor institutions	79,5	84,1	111,9	112,0	112,4	141,3
2.3	Number of newly created jobs	336,1	372,1	388,5	427,8	458,1	136,2

Also, during 2017-2021, the demand for labor force in the country has a tendency to increase, during this period it increased by 29.8%. The number of newly created jobs made up the largest part of the total demand for labor force, and it increased by 36.2% to 458.1 thousand in the studied period (336.1 thousand in 2017) [10]. In our opinion, the growing demand for labor in the country indicates the development of the manufacturing and service industries in the country. This ultimately leads to an increase in the country's gross income and per capita income.

However, the analysis showed that the new jobs created in the country in recent years do not correspond to the total labor force supply, the labor force supply in these years is several times more than the jobs created (Table 3).

Table 3. Dynamics of the number of new jobs created in Uzbekistan in 2017-2021[11]

№	Indicators	Years					Ratio of 2021 to 2017, %
		2017	2018	2019	2020	2021	
1	Jobs created (thousand people)	336,1	372,1	388,5	427,8	458,1	136,2
2	Labor supply (thousands)	1 464,6	2 111,0	2 105,6	2 057,5	1851,7	126,4

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According to Table 3, the number of jobs created in 2017-2021 increased by 36.2%, and the labor supply increased by 26.4%. A similar trend was observed in previous years. The reason for this can be explained by the lack of vacancies in the country during these years or the fact that some of the people who want to work are not provided with suitable jobs.

In our opinion, the main reason that the new jobs created do not correspond to the supply of the labor force is that the parameters of the need for a job do not correspond to the principles of the labor market, the socio-economic development factors of the country that affect the balance of demand and supply of labor force. However, in the labor market, there will also be employees who will become vacant as a result of modernization and diversification of the economy, new technological innovations. Structural changes in the economy do not always correspond to the principles and rules of the labor market, the balance of demand and supply of labor. That's why, in our opinion, it is not possible to achieve compatibility between supply and demand for labor force in the labor market in Uzbekistan. In our opinion, in order to ensure the employment of the population and create new jobs, the need for manpower resources in all sectors and areas of the economy, as well as young people who are entering the labor market for the first time, employees who are becoming vacant as a result of structural changes in the economy and the development of science and technology, in addition, It is appropriate if it is based on the ever-increasing demand for labor force as a result of the development of industry, agriculture and other sectors of the economy, tourism and services, small business and private entrepreneurship and infrastructure.

IV.C. Econometric analysis of factors affecting employment in tourism

In the conditions of today's digital economy, the problem of population employment becomes more acute as a result of the acceleration of techniques and technologies, the increase of intensive development in production sectors. In solving this problem, the service sector, especially tourism services, has a big role to play. The reason is that its role in the socio-economic development of the country, in the production of GDP, in providing employment to the population, in raising the standard and quality of life, and in the formation of the state budget is increasing more and more. In addition, the comprehensiveness of the tourism sector, low demand for material resources, high working capital compared to other sectors, as well as short-term reimbursement of expenses and other specific aspects create a great opportunity to accelerate the pace of socio-economic development of the country.

According to experts, every 30 tourists who come to the country contribute to the creation of 1 job in the field of tourism and 2 jobs in the fields related to tourism. From this point of view, ensuring the employment of the population based on the development of the tourism sector, especially in the post-pandemic period, increasing its role in ensuring the employment of the population, raises the need to analyze the factors affecting it.

In our opinion, the number of economically active population in the country, total income per capita, GDP per capita, labor productivity in the field of tourism services, and the number of visitors to the country can be included among the factors affecting the number of people employed in the field of tourism services.

We found it appropriate to conduct an econometric analysis to determine the level of influence of the above-mentioned factors affecting the employment of the population in the field of tourism services. The following factors were taken for econometric analysis:

x_1 - number of economically active population, thousand people;

x_2 – total income per capita, thousand soums;

x_3 – GDP per capita, thousand soums;

x_4 – labor productivity in tourism, thousand soums;

x_5 – number of visitors, unit;

Y is the number of people employed in the field of tourism services, thousand people.

Correlational analysis methods were used to determine the effect of these factors on the resulting score. Then, using regression-correlation methods, a multifactor regression equation was constructed.

Statistical data of the tourism services sector of the Republic of Uzbekistan for the years 2011-2021 were used in this correlation-regression analysis (Table 4).

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Table 4. Factors influencing the employment of the population in the field of tourism services of the Republic of Uzbekistan

№	Indicators	Years											
		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
1	The number of people employed in tourism services, thousand people (Y)	356,6	322,5	310,2	308,9	313,1	311,1	319,8	352,6	380,4	382,6	298,4	313,5
2	Economically active population, thousand people (X_1)	12286,6	12541,5	12850,1	13163,0	13505,4	13767,7	14022,4	14357,3	14641,7	14876,4	14797,4	14980,7
3	Total income per capita, thousands of soums (X_2)	2192,8	2928,9	3501,8	4175,1	4759,6	5410,6	6215,9	7314,1	9128,6	10891,3	12125,6	14769,0
4	GDP per capita, thousand soums (X_3)	2763,7	3518,6	4285,2	5069,3	6074,2	7072,2	8020,1	9802,1	12887,7	15764,9	17591,5	21039,3
5	Labor productivity in tourism, thousand soums (X_4)	134,1	187,4	245,8	280,4	329,8	345,8	752,7	1343,9	2351,4	3207	837,6	1665,1
6	Number of visitors, unit (X_5)	975,0	1393,0	1895,0	1969,0	1862,0	1918,0	2027,0	2690,0	5346,0	6749,0	7010,0	1700,0

When creating a regression equation, the degree of importance of the influence of the factors involved in it on the resulting sign is evaluated. Accordingly, it was found that the influence of factors x_4 and x_5 on the change of the resulting sign is greater than that of the remaining factors. In all types of regression equations, it was determined that different factors depend on the employment of the population in the field of tourism services in different degrees.

Table 5. Correlation of factors affecting population employment in the field of tourism services

№	Factors	Correlation coefficient
1	Economically active population, thousand people	0,190510917
2	Total income per capita, thousands of soums	0,106683148
3	GDP per capita, thousand soums	0,125248503
4	Labor productivity in tourism, thousand soums	0,710476596
5	Number of visitors, unit	0,372140535

The following linear function was chosen to construct the multivariate regression equation:

$$y = a_0 + a_1x_1 + a_2x_2 + a_3x_3 + a_4x_4 + a_5x_5$$

A multifactor correlation coefficient was calculated on these selected functions.

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Table 6. Regression statistics

Multiple R	0,962849477
R-square	0,927079115
Normalized R-square	0,866311711
Standard error	10,70466884
Observations	12

Table 7. Analysis of variance №1

Indicator	df	SS	MS	F
Regression	5	8741,029557	1748,205911	15,25619081
Remainder	6	687,5396094	114,5899349	
Total	11	9428,569167		

Table 8. Analysis of variance №2

Indicator	Coefficients	Standard error	t - statistic	P-Value
Y-intersection	55,5005459	194,2356261	0,28573824	0,784686923
x ₁ – variable	0,028931711	0,017586101	1,64514641	0,151041944
x ₂ – variable	-0,114931762	0,040955648	-2,806249416	0,030908444
x ₃ – variable	0,07029142	0,025955816	2,708118227	0,035193995
x ₄ – variable	0,036027331	0,005588606	6,446568360	0,000659671
x ₅ – variable	-0,009501153	0,004197466	-2,263545199	0,064234578

Based on the above final results, the model of the number of employed people in the field of tourism services depends on the factors as follows:

$$y(x) = -55.500 + 0.028 x_1 - 0.114 x_2 + 0.070 x_3 + 0.036 x_4 - 0.009 x_5$$

When the significance of the regression equation was tested using Fisher's F-test, the calculated value was $F = 15.256$. The value of the F-criterion in the table is 4.39 at a confidence probability of 0.95 and the number of degrees of freedom $g_1 = k = 5$ and $g_2 = n - k - 1 = 12 - 5 - 1 = 6$.

Since $F_{count} > F_{table}$, the regression equation can be recognized as true.

The coefficient of correlation coefficient R is 0.962, indicating that there is a close relationship between the factors (Table 6).

The coefficient of determination R_2 , equal to 0.927, showed that about 92 percent of the variation of the involuntary variable (the number of people employed in tourism services) was accounted for in the model, and the influence of the factors included in the model, and 8 percent was conditioned by other factors not included in the model.

Also, during the study, we found it appropriate to evaluate the significance of the regression coefficients using the Student's t test.

According to table 8, the calculated values of the student criterion are as follows: $|ta_1| = 1.64$, $|ta_2| = 2.80$, $|ta_3| = 2.70$, $|ta_4| = 6.44$, $|ta_5| = 2.26$. At the level of significance $\alpha = 0.05$ and the number of degrees of freedom $df = n - k - 1 = 12 - 5 - 1 = 6$, the value of the criterion in the table is equal to 2.44. So, the following inequality is fulfilled $|ta_2| > t_{adjval}$; $|ta_3| > schedule$, $|ta_4| > schedule$. Thus, the regression coefficients α_1 and α_5 are not significant, and this factor was removed from the model, and it became the following:

$$y(x) = -55.500 - 0.114 x_2 + 0.070 x_3 + 0.036 x_4$$

The regression parameter $a_2 = -0.114$ shows that the increase in total income per capita by 1.0 thousand soums at a fixed (constant) value of GDP per capita and labor productivity in tourism will lead to a decrease in the number of people employed in the field of tourism services by 114.

Also, at a fixed (constant) value of $a_3 = 0.070$ per capita total income and labor productivity in tourism, an increase in GDP per capita by 1.0 thousand soums will lead to an increase in the number of people employed in tourism services by 70 people.

Similarly, at a fixed (constant) value of $a_4 = 0.036$ total income per capita and GDP per capita, an increase in labor productivity in tourism by 1.0 soums causes an increase in the number of people employed in the field of tourism services by 36.

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Using this equation, the elasticity coefficient was calculated in order to determine the economic essence of the regression coefficient[12]. The average values of the following variables were calculated: $\bar{y} = 330.81$ thousand people, $\bar{x}_2 = 6951.10$ thousand soums, $\bar{x}_3 = 9490.73$ thousand soums, $\bar{x}_4 = 973.42$ thousand soums. At these values, the coefficients of elasticity E_1 and E_2 are equal to:

$$\begin{aligned} \mathcal{E}_1 &= \alpha_2 \frac{\bar{x}_2}{\bar{y}} = -0,114 \frac{6951,10}{330,81} = -2,4; \\ \mathcal{E}_2 &= \alpha_3 \frac{\bar{x}_3}{\bar{y}} = 0,070 \frac{9490,73}{330,81} = 2,0. \\ \mathcal{E}_3 &= \alpha_4 \frac{\bar{x}_4}{\bar{y}} = -0,036 \frac{973,42}{330,81} = -0,1 \end{aligned}$$

V. CONCLUSION

The analysis of elasticity coefficients showed that employment in the field of tourism services in terms of absolute growth is greatly influenced by the x_2 factor: a 1% decrease in the volume of total income per capita leads to a 2.4% increase in the number of people employed in the field of tourism services, a 1% increase in the volume of GDP per capita in tourism a 2.0% increase in the number of people employed in the service sector and a 1% decrease in tourism labor productivity leads to a 0.1% increase in the number of people employed in the tourism services sector.

Based on the above, it can be concluded that increasing the level of employment in the field of tourism services in Uzbekistan depends on the share of this field in the volume of the country's gross domestic product and labor productivity in the field. It is important to increase the number of people employed in the tourism services sector, first of all, to increase the GDP in the sector and to determine the equilibrium value of labor productivity.

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