# IMPACT OF TOURISM ON BASIC MACROECONOMIC INDICATORS IN THE EUROPEAN UNION AND SERBIA

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#### **Abstract**

The main objective of the paper is to assess the importance and role of tourism in the European Union countries and Serbia, measured by its share in the basic macroeconomic categories. The relationship between the tourist traffic and the size of selected macroeconomic indicators is examined in this paper by using the appropriate methodology. Consideration of the position of Serbia in relation to the European Union countries, according to the most important indicators of tourism development and selected macroeconomic indicators is defined as the specific objective of the research. The methods applied in this paper are: comparative, correlation and cluster analysis. The research results indicate the great importance of tourism for economic development in modern conditions, as well as the need to improve Serbia's position when it comes to the tourism development and its role in the economic development of the country.

**Keywords:** tourism, macroeconomic indicators, European Union, Serbia

### Introduction

The role of tourism is gaining importance when it comes to economic growth and prosperity of the modern states. Tourism as an industry has equal importance both locally and globally. The fact that tourism is the primary economic activity in many countries has been adopted by all countries in the world. For this reason, governments of many countries are trying to develop tourism as a major economic activity, in order to

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obtain benefits for their economies (Dritsakis, 2004). Navickas and Malakauskaite (2009) argue that the competitiveness of tourism destination is particularly important for countries that want to increase their share on the tourism market that is rapidly evolving. Cooper, Fletcher, Fyall, Gilbert and Wanhill (2008) talk about the importance to simultaneously develop and support the activities of the destination and to preserve and protect the existing resources of importance for tourism destinations. Tourist supply in the EU countries covers a wide range of and anthropogenic resources. attractions. events accommodation facilities of all categories (Vodeb, 2012). comparative advantage of the EU destinations was achieved thanks to the tourism product differentiation, efficiency of price policy, which is based on economies of scale and by focusing on segments of the tourism demand, which needs can be fully met (Podovac et al., 2013, 172). When it comes to Serbia, the effects of tourism development in Serbia multiple and largely affect the overall economic and social development. The role of tourism as a generator of economic development, as well as its multiplier effects, contribute to an increase of the basic and supplementary employment, especially in underdeveloped areas. By developing tourism and including numerous activities that have an interest in the overall tourism development or its individual parts, Serbia ensures the long-term economic stability. However, there are barriers to more intensive tourism development, which are conditioned by major changes in the internal environment in Serbia, but also its surroundings. Considering that Serbia has a lot of quality resources for tourism development, it should become a driving force behind economic development and a factor of stabilization and growth of economic activity in Serbia (Dimitrovski & Milutinović, 2014, 58). The paper analyses the relationship between the tourism development in the EU countries (measured by International Tourist Arrivals and International Tourism Receipts) and the level of contribution of tourism to basic macroeconomic indicators. Another purpose of the paper relates to the consideration of the position of Serbia according to the results achieved in tourism compared to the EU countries. The first and the second part of the research are related to the analysis of the tourism development level and analysis of tourism's contribution to the main macroeconomic indicators in the EU countries and Serbia. The relationship between the level of tourism development and tourism's contribution to the basic macroeconomic indicators is examined in the third part of the paper. heterogeneity/homogeneity of the EU countries and Serbia, according to the observed indicators, is examined in the fourth part of the paper. This,

once again, points to the position of Serbia, reviewing its membership in one of three defined clusters.

### Literature review

Tourism, as the fastest growing industry in the world, is a significant driver of economic development of modern economies. The development of the tourism sector can greatly affect the economic development of any country (Krstić, Stanišić & Petrović, 2015, 508). The development of tourism in the country can lead to a revenue increase of population that is employed in tourism enterprises, as well as, the proportion of the population who are not directly employed in tourism enterprises, or is employed in companies whose economic survival depends on tourism, to a greater or lesser extent. Many studies emphasize the link between tourism development, economic growth and development and the impact of tourism on the basic macroeconomic indicators (Ivanov & Webster, 2007; Massidda & Mattana, 2012; Kasimati, 2011; Brida, Pereyra, & Devesa, 2008; Castro-Nuño, Molina-Toucedo, & Pablo-Romero, 2013; Lee & Chang, 2008). Krstić & Stanišić (2015) analysed the contribution of tourism to the gross domestic product in the EU countries and Serbia. Among the analysed EU countries there are those where tourism participates in the GDP of over ten percent. When it comes to Serbia, tourism still has not such important role. The percentage of the direct contribution of tourism to the GDP in Serbia is also lower compared to the EU average, and to the world average (Krstić & Stanišić, 2015, 14). Gnjatović & Leković (2015) analysed the position of international tourism in Serbia's balance of payments and the impact of foreign currency revenue from tourism on the export and overall performance of the domestic economy. Analysis showed that international tourism has no positive effect on the overall Serbia's balance of payments, as well as that its contribution to export and growth performance of the country is still a relatively modest. Namely, in the reporting period (2007-2013) the outflow of foreign currency from tourism is constantly higher than the foreign currency inflow from tourism. They also analysed the participation of foreign currency revenue from tourism in overall revenues from exports of goods and services and came to the following results: during the reporting period, the share of international tourism in total revenues from exports of goods and services was at a modest level from 5.5% to 7.3%. The contribution of international tourism to growth performance in the country is also relatively modest: the participation of foreign currency revenue from tourism in Serbia's GDP in the observed period is ranged from 3.4% to 4.1%. A comparative analysis of relevant macroeconomic indicators for the countries of South-Eastern Europe has shown that Serbia, when it comes to participation of foreign currency revenue from tourism in GDP, is on the bottom of the list.

### Research methodology, data and hypothesis

In accordance with the defined objective of the paper, the authors of the study assume the existence of positive interdependence between the degree of tourism development in the analyzed countries and its contribution to basic macroeconomic indicators.

The methods of comparative analysis, correlation analysis and cluster analysis are applied in this paper. The position of Serbia according the tourism development level and the contribution of tourism to the basic macroeconomic indicators in relation to the European Union countries is analysed by using the comparative analysis. The relationship between the tourism development level and its contribution to the basic macroeconomic indicators is examined by using the correlation analysis. Cluster analysis grouped the European Union countries and Serbia in three relatively homogeneous groups on the basis of all the observed indicators (International Tourist Arrivals, International Tourism Receipts, Total contribution of tourism to GDP, Direct contribution of tourism to GDP, Total contribution to Employment and Investment).

Information base of research are the data of the World Tourism Organization (UNWTO) about International Tourist Arrivals and International Tourism Receipts and the data of the World Travel & Tourism Council (WTTC) about contribution of tourism to the main macroeconomic indicators in 2014.

### Research results and discussion

The research results and the accompanying analysis of the results are grouped into four segments:

- 1. Analysis of development level of tourism in the EU countries and Serbia,
- 2. Analysis of tourism contribution to the main macroeconomic indicators in the EU countries and Serbia,
- 3. Correlation analysis,
- 4. Cluster analysis.

# Analysis of development level of tourism in the EU countries and Serbia

The data about international tourist arrivals and international tourism receipts in the European Union countries in 2014 are given in Table 1.

**Table 1:** International Tourist Arrivals and International Tourism Receipts in the European Union countries in 2014

Country	International Tourist	International Tourism		
Country	Arrivals (1000)	Receipts (US\$ million)		
Austria	25291	20559		
Belgium	7976	14268		
Bulgaria	7311	4134		
Croatia	11623	9866		
Cyprus	2441	2819		
Czech Republic	10617	6691		
Denmark	8557	7260		
Estonia	2918	1434		
Finland	2731	4050		
France	83700	55402		
Germany	33005	43326		
Greece	22033	17793		
Hungary	12139	5884		
Ireland	8260	4866		
Italy	48576	45545		
Latvia	1843	955		
Lithuania	2061	1440		
Luxembourg	1038	5361		
Malta	1690	1517		
Netherlands	13926	14716		
Poland	16000	10925		
Portugal	9323	13808		
Romania	1912	1813		
Slovak Republic	6235	2578		
Slovenia	2411	2719		
Spain	64995	65187		
Sweden	10750	12695		
United Kingdom	32613	45262		

Legend: Countries with the highest value of analyzed indicator

Countries with the lowest value of analyzed indicator

 $\textbf{Source:} \ UNWTO, \ http://www2.unwto.org/en$ 

Countries with the largest number of International Tourist Arrivals, as well as, with the largest amount of International Tourism Receipts are France, Italy and Spain, traditionally the most important tourist destinations in Europe. The minimum number of International Tourist Arrivals is recorded in Latvia, Luxembourg and Malta, while the smallest amount of International Tourism Receipts is recorded in Estonia, Latvia and Lithuania.

The results of descriptive statistics based on the data shown in Table 1 are presented in Table 2.

**Table 2:** The results of descriptive statistics (International Tourist Arrivals and International Tourism Receipts in the EU countries)

	N	Minimum	Maximum	Mean	Std. Deviation	Variation Coefficient (%)
International Tourist Arrivals (000)	28	1038.00	83700.00	16141.96	20147.49	124.81
International Tourism Receipts (US\$ million)	28	955.00	65187.00	15102.60	18166.84	120.28

**Source:** *Prepared by the authors (SPSS Statistics 19)* 

The lowest recorded value of the International Tourist Arrivals amounts 1.038 million, while the largest recorded value of the International Tourist Arrivals is 83.7 million. The smallest recorded amount of the International Tourism Receipts in the EU countries is 955 million US\$, while the largest recorded amount is 65,187 billion US\$. Since the coefficient of variation in both cases is greater than 100%, it can be conclude that this is a very heterogeneous set of data, or that the EU countries are very heterogeneous according to the International Tourist Arrivals and International Tourism Receipts.

Figure 1 shows the relative position of Serbia according to the International Tourist Arrivals and International Tourism Receipts in relation to the minimum, maximum and mean value of these indicators in the EU member states.

■ International Tourist Arrivals (1000) ■ International Tourism Receipts (US\$ million) 100000 83700 80000 187 60000 40000 16141 15102 20000 1038 1139 1029 0 EU average EU min EU max Serbia

**Figure 1:** Comparison of development level of tourism in the EU and Serbia in 2014

**Source:** *UNWTO*, *http://www2.unwto.org/en* 

On the basis of Figure 1, it can be concluded that Serbia lags significantly to the average values of International Tourist and Arrivals International Tourism Receipts recorded in the EU. Serbia recorded even lower value of International Tourist Arrivals in relation to the lowest recorded value in the EU, as well as a slightly higher value of International Tourism Receipts in relation to the lowest recorded value in the EU.

# Analysis of tourism contribution to the main macroeconomic indicators in the EU countries and Serbia

Table 3 presents data on the contribution of tourism to the selected macroeconomic indicators in the EU countries in 2014. The direct contribution of tourism to GDP means GDP generated by industries that deal directly with tourist, including hotels, travel agents, airlines and other passenger transport services, as well as the activities of restaurant and leisure industries that deal directly with tourists. The total contribution of tourism to GDP means GDP generated directly by the Travel and Tourism sector plus its indirect and induced impact. The total contribution to employment includes number of jobs generated directly in the Travel and Tourism sector (employment by hotels, travel agents, airlines and other passenger transportation services) plus the indirect and induced contributions. Investment (Capital investment) includes capital

investment spending by all industries directly involved in Travel and Tourism (WTTC, 2015).

**Table 3:** Contribution of tourism to the main macroeconomic indicators in the EU countries in 2014

Country	Total contribution of tourism to GDP (US\$ in billion)	Direct contribution of tourism to GDP (US\$ in billion)	Total contribution to Employment (thousands of jobs)	Investment (Capital investment) (US\$ in bn)
Austria	59.26	21.23	622.64	4.10
Belgium	31.81	12.56	292.78	2.79
Bulgaria	7.28	2.07	361.94	0.73
Croatia	14.13	6.26	310.33	1.08
Cyprus	4.53	1.48	82.40	0.33
Czech Republic	16.45	5.37	498.27	2.10
Denmark	23.11	6.59	205.48	3.49
Estonia	3.59	0.66	86.96	0.46
Finland	17.68	5.81	170.06	1.65
France	254.84	102.60	2714.11	41.23
Germany	343.47	145.20	4981.98	32.38
Greece	39.06	15.76	699.86	3.67
Hungary	14.00	5.39	415.50	1.10
Ireland	21.95	5.06	171.38	6.50
Italy	216.69	87.94	2553.04	12.19
Latvia	2.81	1.00	76.30	0.34
Lithuania	2.28	0.90	60.89	0.27
Luxembourg	2.80	1.11	14.33	0.79
Malta	2.88	1.50	51.06	0.22
Netherlands	48.62	16.67	709.05	4.60
Poland	23.88	9.31	669.57	3.90
Portugal	36.39	13.87	831.58	3.30
Romania	9.88	3.18	467.38	3.58
Slovak Republic	5.83	2.28	135.99	0.71
Slovenia	6.27	1.73	103.40	0.94
Spain	214.44	78.26	2652.61	17.94
Sweden	53.77	13.69	527.09	3.65
United Kingdom	309.76	102.2	4227.97	21.42

Legend: Countries with the highest value of observed indicator Countries with the lowest value of observed indicator

Source: WTTC, https://www.wttc.org/datagateway/

Three countries with the lowest Total contribution of tourism to GDP are Latvia, Lithuania and Luxembourg. The smallest Direct contribution of tourism to GDP among the EU countries is recorded in Estonia, Latvia and Lithuania. When it comes to Total contribution to Employment, Lithuania, Luxembourg and Malta are the country with the lowest contribution of tourism to employment. The minimum amount of Capital investment in tourism is recorded in Cyprus, Lithuania and Malta. France, Germany and United Kingdom are the countries with the highest value of all four indicators observed.

The results of descriptive statistics based on the data shown in Table 3 are presented in Table 4.

**Table 4:** Descriptive Statistics (analyzed indicators of tourism contribution)

	N	Min	Max	Mean	Std. Deviation	Variation Coefficient (%)
Direct contribution of tourism to GDP (US\$ in billion)	28	0.89	145.20	23.92	39.30	164.29
Total contribution of tourism to GDP (US\$ in billion)	28	2.28	343.47	63.83	100.58	157.57
Total contribution to Employment (Thousands of jobs)	28	14.33	4981.98	881.92	1301.63	147.59
Investment (Capital investment) (US\$ in bn)	28	0.22	41.23	6.26	10.10	161.34

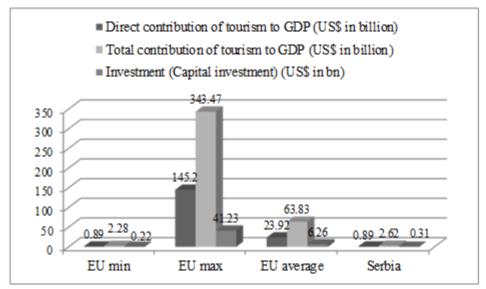
**Source:** *Prepared by the authors (SPSS Statistics 19)* 

Similar to the situation presented in Table 2, the value of variation coefficients for all observed indicators in Table 4 is greater than 100. This fact points out the great heterogeneity of the EU countries according to the recorded contribution of tourism to the basic macroeconomic indicators. The largest variation is recorded when it comes to Direct contribution of tourism to GDP.

Figure 2 shows the relatively position of Serbia according to direct and total contributions of tourism to GDP and capital investment compared

with the minimum, maximum and average values of these indicators recorded in the EU.

**Figure 2:** Comparison of contribution of tourism to the selected macroeconomic indicators in the EU and Serbia in 2014



**Source:** *WTTC*, *https://www.wttc.org/datagateway/* 

The recorded value of these three indicators in Serbia is significantly lower not only than the maximum, but also than the average values of the EU. Direct contribution of tourism to GDP in Serbia is equal to the minimum value recorded in the EU. Total contribution of tourism to GDP and Investment in Serbia are negligibly higher than the minimum values recorded in the EU.

Figure 3 gives a comparative overview of the total contribution of tourism to employment in Serbia and the minimum, maximum, and average values of this indicator in the EU.

In contrast to the all previously observed indicators, Total contribution of tourism to employment is significantly higher than the minimum recorded value in the EU, but still significantly below the EU average. It can be conclude that tourism is a relatively important generator of employment in Serbia, providing around 87,000 jobs in 2014.

Total contribution to Employment (Thousands of jobs) 4981.98 5000 4500 4000 3500 3000 2500 2000 1500 881.92 1000 500 0 EU min EU average EU max Serbia

**Figure 3:** Comparison of total contribution of tourism to employment in the EU and Serbia in 2014

**Source:** *WTTC*, *https://www.wttc.org/datagateway/* 

## The results of correlation analysis

Relationship between the level of tourism development, measured by International Tourist Arrivals and International Tourism Receipts, and the contribution of tourism to the basic macroeconomic indicators (Direct contribution of tourism to GDP, Total contribution of tourism to GDP, contribution to Total Employment and Investment), is analyzed in the Table 5 by calculating of the Pearson correlation coefficient between the observed indicators on a sample of the EU countries.

The results of correlation analysis indicate that there is a high positive correlation between the International Tourist Arrivals and International Tourism Receipts and all observed indicators. When it comes to International Tourist Arrivals, the highest positive correlation is recorded between this indicator and Investment (Pearson' correlation coefficient of 0.856). When it comes to International Tourism Receipts, the highest positive correlation is recorded between this indicators and Total contribution of tourism to GDP (Pearson' correlation coefficient of 0.916). Given results of the correlation analysis are statistically significant.

**Table 5:** The examination of interdependence between the tourism development and tourism's contribution to the basic macroeconomic indicators

		International Tourist Arrivals	International Tourism Receipts
International Tourist Arrivals	Pearson Correlation	1	0.940(**)
Allivais	Sig. (2-tailed)		0.000
International Tourism	Pearson Correlation	0.940(**)	1
Receipts	Sig. (2-tailed)	0.000	
Direct contribution of tourism to GDP	Pearson Correlation	0.807(**)	0.906(**)
	Sig. (2-tailed)	0.001	0.002
Total contribution of	Pearson Correlation	0.805(**)	0.916(**)
tourism to GDP	Sig. (2-tailed)	0.000	0.000
Total contribution to	Pearson Correlation	0.731(**)	0.869(**)
Employment	Sig. (2-tailed)	0.000	0.000
Investment	Pearson Correlation	0.856(**)	0.855(**)
	Sig. (2-tailed)	0.000	0.000

<sup>\*\*</sup> Correlation is significant at the 0.01 level (2-tailed)

**Source:** *Prepared by the authors (SPSS Statistics 19)* 

## The results of cluster analysis

Cluster analysis examined the homogeneity/heterogeneity of the analysed countries (Petrović, Krstić, & Stanišić, 2015), the EU member states and Serbia, according to recorded tourist arrivals and tourism receipts and tourism contribution to the basic macroeconomic indicators. All countries are grouped into three clusters.

According to the Final Cluster Centers given in Table 6, it can be seen that countries in cluster 2 have the highest value of the analysed indicators, that lower value of the analysed indicators can be observed for the countries in cluster 1, and that cluster 3 is composed of the countries with the lowest values of the analysed indicators.

**Table 6:** Final Cluster Centers

	Cluster			
	1	2	3	
International Tourist Arrivals	34871.25	74347.50	7166.26	
International Tourism Receipts	38673.00	60294.50	6466.57	
Direct contribution of tourism to GDP	35.05	111.73	13.35	
Total contribution of tourism to GDP	232.29	234.64	17.03	
Total contribution to Employment	3096.41	2683.36	305.60	
Investment	17.52	29.59	2.02	

**Source:** *Prepared by the authors (SPSS Statistics 19)* 

The following structure of clusters is derived as a result of cluster analysis:

- Cluster 1: Austria, Germany, Italy and United Kingdom;
- Cluster 2: Spain and France;
- Cluster 3: Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Greece, Hungary, Ireland, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovak Republic, Slovenia, Sweden and Serbia.

In a cluster with the highest values of observed indicators, cluster 2, there are only two countries, France and Spain, which are, based on results achieved in the field of tourism, the leading countries of Europe, and also one of the world's most significant tourist destinations. Cluster 3, cluster with the lowest values of observed indicators, contains as many as 22 countries of the European Union. Serbia is located in this cluster. The results of the cluster analysis indicate the great heterogeneity of the EU countries when it comes to tourism development and contribution of tourism to the basic macroeconomic indicators. Six countries (Spain, France, Austria, Germany, Italy and United Kingdom) stand out as leaders. In addition to being located in a cluster with the lowest values of observed indicators, it can be said that, by the ranking of countries in the third cluster, Serbia would be on the bottom of the list according to the results achieved in tourism.

#### Conclusion

Modern tourism in the XXI century is affecting almost all countries of the world. The positive effects of tourism on the overall economic activity can be used as factor of faster economic development. Many countries pay a lot of attention on this economic sector because it employs a

number of staff and affects the increase in consumption of local and national products and services, which are not burdened with customs, transport costs and other levies of classic international trade. The scope and significance of international tourism trends in the world is best confirmed by numerous national, inter-regional, continental and global organizations which are dealing with the improvement of tourism and other activities that contribute to the development of tourism. It should be noted that tourism is one of the activities that will generate dynamic growth in the upcoming period in terms of the world economy. Experts of the World Tourism Organization predict that tourism will become one of the leading activities of the world economy, with a very dynamic growth in the future.

The aim of the paper was to analyse the interdependence between the tourism development and the level of contribution of tourism to certain macroeconomic indicators, as well as consideration of the position of Serbia according to the results achieved in tourism in comparison with the EU countries. The analysis of the tourism development level and the contribution of tourism to the selected macroeconomic indicators already points to the existence of certain positive links between them. Countries with the largest International Tourist Arrivals and International Tourism Receipts (such as France, Italy, Spain, Germany and United Kingdom) are the countries that recorded the highest level of direct contribution of tourism to GDP, Total contribution of tourism to Employment and Investment in tourism sector. Lithuania is, for example, a country that is located at the bottom on the list of the EU countries according to all observed indicators.

When it comes to Serbia's position in comparison with the EU countries, the data point out to its relatively unfavourable position. Serbia recorded a lower value of almost all observed indicators in relation to the minimum recorded value in the EU. A slight exception is the indicator of Total contribution of tourism to employment, where Serbia has a slightly higher contribution compared to the minimum contribution recorded in the EU.

A high positive correlation between the tourism development (measured by International Tourist Arrivals and International Tourism Receipts) and the contribution of tourism to the basic macroeconomic indicators (measured by direct contribution of tourism to GDP, Total contribution of tourism to GDP, Total contribution of tourism to Employment and Investment) is confirmed by the results of the correlation analysis. These

results suggest a high positive, statistically significant interdependence between these indicators. Cluster analysis confirmed the high heterogeneity of the EU countries when it comes to the tourism development level. Two leading clusters, with the highest values of observed indicators contains only six the EU countries. The remaining 22 EU countries, as well as Serbia, are in clusters 3, cluster with the lowest performance in the field of tourism development and tourism's contribution to the basic macroeconomic indicators.

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