

IMPROVING MACROECONOMIC COMPETITIVENESS

- Thematic collection of papers of international significance-
Niš, 2019

Publisher: Faculty of Economics, University of Niš
Address: 11 Kralj Aleksandar Ujedinitelj Square, Niš, Serbia

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Cover: Srđan Đorđević, MSc

Printed by: Atlantis d.o.o Niš

Circulation: 80

978-86-6139-182-8

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Thematic collection of papers is the result of the project 179066 – IMPROVING THE COMPETITIVENESS OF THE PUBLIC AND PRIVATE SECTOR BY NETWORKING COMPETENCES IN THE PROCESS OF EUROPEAN INTEGRATION OF SERBIA.

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HUMAN RESOURCES - FACTOR OF EUROPEAN UNION COMPETITIVE ADVANTAGE AS A TOURISM DESTINATION

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The purpose of this paper is to analyze the impact of human resources in tourism on the competition of the European Union (EU) and the EU members as tourism destinations. The aim of this paper is quantifying the impact of the number of employees and level of their education on destination competition. The paper comprises the following segments: a) analysis of specific characteristics of human resources in tourism in the EU; b) testing the correlation between the destination competitiveness of the EU and number of employees in tourism; c) analyzing the impact of the education of employees in tourism on destination competitiveness of EU; d) testing the correlation between the destination competitiveness of the EU members and number of employees in tourism; e) analyzing the impact of the employees in tourism by education on destination competitiveness of EU members during the period from 2008 to 2017. The paper relies on comparative analysis, correlation analysis and regression analysis as well as PANEL analysis. The results of the analyses indicate that highest level of education of employees in tourism, in relation to other levels of education, has the most important influence on destination competitiveness in the EU and the EU members. In the paper special attention was paid to use the appropriate methodology to identify and quantify the impact of employees of human resources on the competitiveness of the surveyed countries as tourist destinations. The paper indicates the importance of education of human resources on destination competitiveness. Key words: human resources, education, competitiveness, tourism destination, tourism traffic.

*JEL classification: J21, Z32, O57, C38
UDC: 339.137.2:338.48]:005.96(4-672EU)*

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1. Introduction

Tourism is an important sector for many regions and countries. In the XXI century, tourism has become a key factor of economic and social development throughout the generation income, jobs and export as well as development bonds between societies. Increase of the share of the tertiary sector and tourism in national income and employment is one of the basic characteristics of the modern world economy (Petrović and Milićević, 2017a). Tourism contributes 10,1% to European Union (EU) gross domestic product (GDP) and creates jobs for 27,3 million people including direct, indirect and induced effects in economy. For the EU, 2018 had been an extraordinary year for tourism traffic. The EU recoded about 500 million international tourists, accounting for 40% of the world's total. The tourists spend reaches 522,3 billion dollars, accounting 5,9% of the total exports the EU.

Tourism is an intensive labour industry because it is based on people e.t., employees. When tourists visit a destination, they "buy" not only the attractions, but they buy the services. The specificity of tourist services and tourist needs affects on the specificity of human resources that actively participate in creating a tourist offer and providing tourist services. The quality of human resources in tourism has a special dimension. Because, the employees in tourism communicates with tourists, they should have not only education and expertise, but also communication, kindness, patience, personal charm, emotional stability.

Human resources represent the most important factor in the functioning of the hotels and other companies in tourism. Human resources in the hospitality industry are defined as human capital that has the potential to realize a certain productivity of labor with physical capital and to exchange labor force for income or new value on the market (Blagojević and Redžić, 2009). Consumer satisfaction is directly linked to employees in tourism, regardless of the level of qualifications and the position in which the employees are located. From the chambermaids, through chefs, waiters, receptionists to top management, all employees have one and most important mission - a satisfied tourist who will again visit a hotel and destination or recommend the destination which he is visiting or the hotel where he is staying. For this reason, it is extremely important to the preparation process and maintenance of the hotel and restaurant business service program and the formation of the optimal composition of the collective (Čačić, 2014).

Development, training and education of human resources is important to maintain the destination competitiveness. Tourism itself is an area

characterized by the rapid development and application of innovative solutions. Because of that, it is expected that human resources in the tourism constantly improve their professional skills (Bakić, 2011). Bearing in mind that „the request for better-qualified human resources is a key requirement for improving the destination competitiveness“ (Janković Milić, Jovanović and Krstić, 2011, p. 444), in the paper special attention will be paid to analyze the impact of human resources in tourism and their level of education on the competition of the European Union (EU) and the EU members as tourism destinations. The specific goals of this paper are: a) identify the specific characteristics of human resources in tourism in the EU and in the EU members; b) quantify the correlation between the employees in tourism by education and competitiveness of the EU and the EU members as tourism destinations; c) quantify the impact of the employees in tourism by education on competitiveness of EU and the EU members as tourism destinations during the period from 2008 to 2017.

2. Literature review

The theory of competitiveness is old as well as the science discipline. The fundamental problem of this concept is related to better understanding of the ways in which competitiveness can improve economic well-being of the country and achieve more equitable distribution of wealth (Krstić and Krstić, 2015). The Organization for Economic Cooperation and Development (OECD) define competitiveness as “the degree to which a country can, under free and fair market conditions, produce goods and services which meet the test of international markets, while simultaneously maintaining and expanding the real incomes of its people over the longer term” (OECD 1992, p. 237). This macro-economic definition of competitiveness describes nothing else as the market share dynamic of a country in terms of the GDP at constant prices and exchange rates (Zehrer, Smeral and Hallmann, 2017).

Destination competitiveness is increasingly becoming an important issue since competition from emerging tourism destination and the changing tastes of tourists, who are now increasingly better informed and harder to satisfy, are posing a challenge to developed tourism destinations (Dwyer Kim, Livaic, and Mellor, 2004). Destination competitiveness is said to serve several objectives: to increase the standard of living of the destination’s citizens (Crouch and Ritchie, 1999), to promote the country as a tourism destination (Dwyer and Kim, 2003) and to promote the tourism success as measured by the number of tourists, tourism expenditure, market share, foreign exchange

earnings and economic impacts on income and employment, and by providing satisfying experiences for tourists (Ritchie, Crouch and Hudson, 2001). Therefore, the competitiveness of tourism destination depends on the subjective experience of the attractiveness of tourism destinations (Petrović and Milićević, 2017b).

The main objective of each tourism destination is to achieve long-term competitive advantage on the tourism market (Ritchie and Crouch, 2000; d'Hartserre, 2000; Petrović and Milićević, 2019). Ritchie and Crouch (2003) define destination competitiveness as “the ability to increase tourism expenditure, to increasingly attract visitors while providing them with satisfying, memorable experiences, and to do so in a profitable way, while enhancing the well-being of destination residents and preserving the natural capital of the destination for future generations” (p. 2). In other words, to be competitive, the tourism destination has to offer to the tourism market a greater value than its competitors (Petrović and Milićević, 2015).

Due to the multidimensional nature of competitiveness, it is important to identify the elements that determine the competitiveness of tourism destinations (Gooroochurn and Sugiyarto, 2005). The competitiveness model of Crouch and Ritchie (1999) identifies several broad categories of factor endowments – human resources, physical resources, knowledge resources, capital resources, infrastructure and historical and cultural resources.

Based on the researches of Ritchie and Crouch (2000), Enright and Newton (2004) and Dwyer and Kim (2003), Vangesayi, Mavondo and Reisinger (2013) “reveals three clearly identifiable groups of factors: destination resources, destination support services and human related factors” (p. 85). Melian-Gonzalez and Garcia-Falcon (2003), define destination resources as destination strategic assets which determine the level of activity a destination can achieve. Destination support services include general infrastructure such as roads, airports, train, health care facilities, electricity generation system, water supply, financial services, telecommunication and technology (Prideaux, Cooper, 2002) and specific tourism infrastructure that is developed specifically for the tourists such as hotels, resorts and national parks (Ritchie and Crouch, 2000).

Tourism employs a diverse range of employees from bartenders, receptionists, airline pilots, petrol station attendants to hotel managers, consultants and entrepreneurs. The availability, skills, educations, training, work ethics and standard working conditions of employees and managers in tourism destination are critical in an industry that emphasizes customer service

(Ritchie and Crouch, 2003). The valuable source of competitive advantage of every tourism destination is the availability and quality human resources (Vangesayi, Mavondo and Reisinger, 2013).

In recent decades, in international tourism, the indicative competitive advantage tourism companies, i.e. tourist destinations achieve with the help of education, development and retention of quality human resources (Sekulić, Milovanović and Milićević, 2015). Human resources are often seen as one of the most important assets of tourism and hospitality organizations i.e. tourism destinations. Few people would reject the proposition that the human element is critical for service quality, customer satisfaction and loyalty, and competitive advantage in tourism and hospitality. Many authors have explained how and why employees affect competitive advantage. The HRM strategy encourages employees' work related behavior, thereby driving customer value, product-service quality, and customer satisfaction and loyalty—which are, in turn, the basis of competitive advantage in tourism and hospitality (Kusluvan, Kusluvan, Ilhan and Buyruk, 2010). Therefore, human resources are the important factor of the destination competitiveness because they are one of the most important elements that influence the business success of enterprises in the tourist destination (Milićević and Petrović, 2018).

One of the basic characteristics of the services is that they are intangible. But, tourism services are made tangible in the personality, appearance, attitudes, and behavior of the service provider; thus, employees become part of the product, represent the organization, and help to form the image of the organization (Hartline and Jones, 1996), i.e. tourism destinations. For these reasons, employees are key determinants of competitive advantage and business success (Schneider, 2003).

The human resource indicator measures the quality of the labour force in the destination country in terms of educational and related criteria, as better-quality labour can provide better-quality tourism services. In this context, education or training in travel and tourism sectors would be a good proxy. The success and failure in the tourism service delivery largely depend on the attitudes and behaviors of employees (Tsang and Ap, 2007). Bove and Johnson (2000) suggested that a good tourist's relationship with employees leads to true tourist loyalty to the tourism and hospitality organizations, i.e. destinations, because positive attitudes toward service staff are transferred directly to the tourism destination.

The tourism and hospitality industry has faced many challenges throughout the years in terms of managing, retaining, and motivating its human resources (Enz, 2001). Unfortunately, service industry jobs have been

touted to be high stress and low pay which are factors that work against employee motivation and organizational commitment (Stamper and Van Dyne, 2003).

3. Research Methodology and Hypothesis

This paper relies on the following methods: correlation analysis and regression analysis. Correlation analysis has examined the relationship between the destination competitiveness in the EU and the number of employees in tourism during the period from 2008 to 2017. Regression analysis in software SPSS has examined the impact of the employees in tourism by education on the competitiveness of the EU as a tourism destination in observed period. In software STATA, regression analysis has examined the impact of the employees in tourism by education on the competitiveness of the EU members as tourism destinations in observed period. The destination competitiveness is measured by the number of tourists.

The hypotheses to be tested in this study are the following:

H1: There is a correlation between the competitiveness of the EU as a tourism destination and the number of employees in tourism in the EU.

H2: There is the impact of the employees in tourism by education on the competitiveness of the EU as a tourism destination.

H3: There is a correlation between the competitiveness of the EU members as tourism destinations and the number of employees in tourism in the EU members.

H4: There is the impact of the employees in tourism by education on the competitiveness of the EU members as tourism destinations.

4. Research Results and Discussion

4.1. Analysis of employees in EU tourism

In EU-28 was employed about 228 million employees. EU-28 recorded the decrease in the number of employees in tourism from 2009 to 2013, and then increase from 2015 to 2017. In 2009, all EU members, except Malta, Luxembourg and Cyprus recorded the decrease of number of employees in tourism as a consequence of the economic crisis. During the period from 2008 to 2017, Malta and Luxembourg recorded the increase of the number of employees in tourism. Cyprus recorded the increase of the number of

employees in tourism from 2008 to 2011, but from 2012 to 2017 recorded the decrease of number of employees in tourism (Table 1 and 2).

Table 1. The employees in tourism 2008- 2012 (in million)

Country/year	2008	2009	2010	2011	2012
European Union - 28	222.73	218.79	216.08	216.26	215.86
Belgium	4.45	4.42	4.49	4.51	4.52
Bulgaria	3.36	3.25	3.08	2.97	2.93
Czechia	5.00	4.93	4.89	4.87	4.89
Denmark	2.85	2.77	2.71	2.70	2.69
Germany	38.54	38.47	37.99	38.79	39.13
Estonia	0.66	0.59	0.57	0.60	0.61
Ireland	2.20	2.02	1.93	1.89	1.88
Greece	4.61	4.56	4.39	4.05	3.70
Spain	20.47	19.11	18.72	18.42	17.63
France	25.93	25.67	25.73	25.76	25.80
Croatia	1.77	1.76	1.69	1.62	1.57
Italy	23.09	22.70	22.53	22.60	22.57
Cyprus	0.38	0.38	0.40	0.40	0.39
Latvia	1.05	0.91	0.85	0.86	0.88
Lithuania	1.43	1.32	1.25	1.25	1.28
Luxembourg	0.20	0.22	0.22	0.22	0.24
Hungary	3.85	3.75	3.73	3.76	3.83
Malta	0.16	0.16	0.16	0.17	0.17
Netherlands	8.38	8.38	8.29	8.29	8.35
Austria	3.99	3.98	4.02	4.05	4.08
Poland	15.80	15.87	15.47	15.56	15.59
Portugal	5.12	4.97	4.90	4.74	4.55
Romania	9.37	9.24	8.71	8.53	8.61
Slovenia	1.00	0.98	0.97	0.94	0.92
Slovakia	2.43	2.37	2.32	2.32	2.33
Finland	2.53	2.46	2.45	2.47	2.48
Sweden	4.59	4.50	4.52	4.63	4.66
United Kingdom	29.52	29.06	29.13	29.28	29.60

Source: <https://ec.europa.eu/eurostat/data/database>

Table 2. The employees in tourism 2013- 2017 (in million)

Country/year	2013	2014	2015	2016	2017
European Union - 28	215.48	218.40	220.94	224.30	227.65
Belgium	4.53	4.54	4.55	4.59	4.64
Bulgaria	2.93	2.98	3.03	3.02	3.15
Czechia	4.94	4.97	5.04	5.14	5.22
Denmark	2.69	2.71	2.75	2.84	2.82
Germany	39.53	39.87	40.21	41.27	41.66
Estonia	0.62	0.62	0.64	0.64	0.66
Ireland	1.94	1.99	2.06	2.13	2.19
Greece	3.51	3.54	3.61	3.67	3.75
Spain	17.14	17.34	17.87	18.34	18.82
France	25.79	26.38	26.42	26.58	26.88
Croatia	1.52	1.57	1.59	1.59	1.63
Italy	22.19	22.28	22.46	22.76	23.02
Cyprus	0.37	0.36	0.36	0.36	0.38
Latvia	0.89	0.88	0.90	0.89	0.89
Lithuania	1.29	1.32	1.33	1.36	1.35
Luxembourg	0.24	0.25	0.26	0.26	0.27
Hungary	3.89	4.10	4.21	4.35	4.42
Malta	0.18	0.19	0.20	0.21	0.22
Netherlands	8.29	8.24	8.32	8.43	8.60
Austria	4.10	4.11	4.15	4.22	4.26
Poland	15.57	15.86	16.08	16.20	16.42
Portugal	4.43	4.50	4.55	4.61	4.76
Romania	8.55	8.61	8.54	8.45	8.67
Slovenia	0.91	0.92	0.92	0.92	0.96
Slovakia	2.33	2.36	2.42	2.49	2.53
Finland	2.46	2.45	2.44	2.45	2.47
Sweden	4.70	4.77	4.84	4.91	5.02
United Kingdom	29.95	30.67	31.19	31.63	31.96

Source: <https://ec.europa.eu/eurostat/data/database>

In tourism EU recorded the highest number of employees with upper secondary and post-secondary non-tertiary education, and the lowest number of employees with less than primary, primary and lower secondary education.

Table 3. The employees in tourism by education level in the EU-28
(in thousand)

Year	Less than primary, primary and lower secondary education (level 03)	Upper secondary and post-secondary non-tertiary education (level 34)	Tertiary education (level 58)
2008	53,018.2	109,718.3	59,520.9
2009	49,917.8	107,159.7	61,209.7
2010	47,365.9	105,530.1	62,665.9
2011	45,688.5	105,226.5	64,664.6
2012	43,566.5	104,750.5	66,866.2
2013	41,359.9	104,418.2	68,888.9
2014	40,617.6	105,826.1	71,219.0
2015	40,101.6	106,417.0	73,623.4
2016	40,191.7	107,585.5	76,014.5
2017	40,238.4	108,575.0	78,294.7

Source: <https://ec.europa.eu/eurostat/data/database>

Table 3 indicates that the number of employees in tourism with less than primary, primary and lower secondary education and with upper secondary and post-secondary non-tertiary education recorded the decrease while with tertiary education recorded the increase in the period from 2008 to 2017.

4.2. Analysis of competitiveness of the EU and the EU members as tourism destinations

The EU records the increase of the number of tourists in the period from 2010 to 2017 (Table 4 and 5). But, the 2009 in relation to 2008, the number of tourists in EU records the decrease. All members of EU record the decrease of number of tourists in 2009 except Sweden and United Kingdom. In the observed period, EU records the increase of tourism traffic for 35%.

Table 4. The number of tourists 2008-2012 (in millions)

Country/year	2008	2009	2010	2011	2012
EU (28 countries)	773.49	759.07	776.55	813.81	855.83
Belgium	12.43	12.24	12.99	13.62	13.87
Bulgaria	4.97	4.34	4.34	4.94	5.49
Czechia	12.84	11.99	12.21	12.90	15.10
Denmark	6.04	5.59	5.84	6.16	6.28
Germany	130.77	127.56	134.54	141.74	147.00
Estonia	2.38	2.15	2.40	2.73	2.84
Ireland		8.50	7.93		9.97
Greece	16.01	20.15	19.86	21.08	18.21
Spain	100.15	93.67	98.80	103.08	100.41
France	126.26	124.04	125.86	148.79	148.86
Croatia	8.67	8.33	7.92	8.52	11.54
Italy	95.55	95.50	98.81	103.72	103.73
Cyprus	2.30	2.27	2.43	2.49	2.53
Latvia	1.56	1.11	1.31	1.58	1.64
Lithuania	1.59	1.25	1.36	1.58	2.24
Luxembourg	0.94	0.91	0.85	0.93	1.02
Hungary	7.65	7.15	7.30	7.59	8.81
Malta	1.22	1.12	1.28	1.34	1.35
Netherlands	29.10	28.96	30.01	30.67	31.15
Austria	28.83	28.57	29.70	30.91	32.33
Poland	19.56	19.35	20.46	21.48	22.64
Portugal	14.40	14.09	14.50	14.85	14.65
Romania	7.13	6.14	6.07	7.03	7.65
Slovenia	2.94	2.84	2.85	3.05	3.26
Slovakia	4.03	3.34	3.36	3.54	3.73
Finland	10.24	9.76	10.20	10.73	10.89
Sweden	22.46	22.80	23.43	23.82	23.87
United Kingdom	82.13	86.83	78.22	77.04	104.77

Source: <https://ec.europa.eu/eurostat/data/database>

Table 5. The number of tourists 2013-2017 (in millions)

Country/year	2013	2014	2015	2016	2017
EU (28 countries)	876.84	906.40	965.40	997.60	1048.37
Belgium	14.15	14.64	15.85	15.21	16.32
Bulgaria	5.85	5.95	6.28	7.20	7.46
Czechia	15.41	15.59	17.20	18.39	20.00
Denmark	6.44	6.71	7.16	7.52	7.67
Germany	149.40	154.93	160.89	165.62	172.31
Estonia	2.98	3.09	3.11	3.32	3.54
Ireland		10.36	10.76	10.56	
Greece	20.12	21.83	23.10	23.71	26.14
Spain	101.67	107.55	114.45	123.54	129.39
France	153.69	152.96	157.49	157.26	166.83
Croatia	12.21	12.88	14.16	15.45	17.41
Italy	103.86	106.55	113.35	116.94	123.20
Cyprus	2.39	2.37	2.32	2.73	2.95
Latvia	1.84	2.10	2.14	2.30	2.58
Lithuania	2.46	2.67	2.81	3.06	3.25
Luxembourg	1.04	1.14	1.20	1.16	1.16
Hungary	9.32	10.13	10.91	11.65	12.46
Malta	1.46	1.55	1.59	1.62	1.83
Netherlands	34.05	35.86	37.32	38.88	42.24
Austria	32.94	33.65	35.35	37.09	38.59
Poland	23.40	25.08	26.94	30.11	31.99
Portugal	15.90	17.90	19.78	21.92	24.56
Romania	7.92	8.44	9.90	10.92	12.06
Slovenia	3.34	3.47	3.88	4.26	4.89
Slovakia	4.00	3.69	4.27	4.94	5.29
Finland	10.84	10.66	10.73	11.11	11.79
Sweden	24.61	25.85	28.06	29.07	29.87
United Kingdom			124.41	122.04	

4.3. Correlation and regression analysis of the impact of employees and their education on competitiveness of EU as a tourism destination

The correlation between the employees in tourism and competitiveness in the EU as a tourism destination was tested by calculating the Pearson correlation coefficient between the number of employees in tourism and the number of tourists in the EU. The results of the correlation analysis are shown in Table 6. When Sig. value is less than 0.05, the variable has a significant and unique impact on the predictability of the dependent variable. When this value is higher than 0.05, it must be concluded that this variable does not have a significant and unique impact on the predictability of the dependent variable.

Table 6. Pearson's correlation coefficient - the interdependence between the number of tourists and number of the employees in tourism in EU

Correlations			
		The tourists	The employees in tourism
The tourists	Pearson Correlation	1	.648*
	Sig. (2-tailed)		.043
	N	10	10
The employees in tourism	Pearson Correlation	.648*	1
	Sig. (2-tailed)	.043	
	N	10	10

*. Correlation is significant at the 0.05 level (2-tailed).

Source: Prepared by the authors (SPSS Statistics 19)

Based on the results of correlation analysis, it can be concluded that there is a significant positive correlation between the number of employees in tourism and competitiveness the EU as a tourism destination, since the value of Sig. is smaller than 0.05. Based on the above-mentioned, it can be concluded that the hypothesis H1 is proven.

Table 7. The common impact of the employees in tourism by education levels on destination competitiveness of the EU

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.996 ^a	.992	.988	10961053.68581
2	.996 ^b	.992	.990	10148485.75744

a. Predictors: (Constant), level 03, level 34, level 58

b. Predictors: (Constant), level 34, level 58

c. Dependent Variable: destination competitiveness

Source: Prepared by the authors (SPSS Statistics 19)

In order to avoid the issue of multicollinearity when analyzing the impact of levels of education of employees in tourism on the competitiveness of the EU as a tourism destination, the backward method was applied in regression analysis. Results of regression analysis have pointed out that if we observe the impact of all levels of education on the competitiveness of the EU as a tourism destination, as well as the impact of upper secondary and post-secondary non-tertiary education and tertiary education, it can be concluded that the observed variables have a statistically significant impact on destination competitiveness because the Sig. value is less than 0.05. The determination coefficient is 0.996 (Table 7).

Table 8. The value of regression coefficients – influence of the employees in tourism by education on destination competitiveness of the EU

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-908823176.631	278209478.981		-3.267	.017
	Level03	189.788	7639.247	.009	.025	.981
	Level34	6695.591	8252.293	.114	.811	.448
	Level58	15587.125	5182.348	.991	3.008	.024
2	(Constant)	-912796036.242	210781029.910		-4.331	.003
	Level34	6893.699	1967.005	.118	3.505	.010
	Level58	15459.157	527.609	.983	29.300	.000

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	Level34	6893.699	1967.005	.118	3.505	.010
	Level58	15459.157	527.609	.983	29.300	.000

a. Dependent Variable: destination competitiveness

Source: Prepared by the authors (SPSS Statistics 19)

If we observed the individual impact of the employees in tourism by education, it can be concluded that the strongest impact has the tertiary education, while the less than primary, primary and lower secondary education does not have the impact on destination competitiveness because the Sig. value is higher than 0.05 (Table 8).

4.4. Correlation and regression analysis of the impact of employees and their education on competitiveness of EU as a tourism destination

In order to analyze the correlation between the number employees in tourism and competitiveness of EU members as tourism destinations in the period from 2008 to 2017, the software STATA was used for correlation analysis. The results of correlation analysis indicate that exist a strong significant correlation between the observed variables (Table 9). Based on the results of correlation analysis, it can be concluded that the hypothesis H3 has been confirmed.

Table 9. The correlation coefficient - the interdependence between the number of tourists and number of the employees in tourism in the EU members

	Tourists	Employees in tourism
Tourists	1.0000	
Employees in tourism	0.9337*	1.0000

Source: Prepared by the authors (STATA 13)

In order to select between the random and fixed effects model, it's been used Hausman test. Because, $Prob > \chi^2 = 0.0000$, the fixed effect model is being selected (Table 10).

Table 10 – Hausman test

	(b) fixed	(B) random	(b-B) Difference	$\sqrt{\text{diag}(V_b - V_B)}$ S.E.
level03	-3594.863	-2207.565	-1387.298	276.2444
level34	8062.269	2672.04	5390.229	553.3414
level58	12022.71	12907.65	-884.9424	221.508

b = consistent under H_0 and H_a ; obtained from xtreg
 B = inconsistent under H_a , efficient under H_0 ; obtained from xtreg
 Test: H_0 : difference in coefficients not systematic

$$\chi^2(3) = (b-B)'([V_b - V_B]^{-1})(b-B) = 193.65$$

Prob > $\chi^2 = 0.0000$

($V_b - V_B$ is not positive definite)

Source: Prepared by the authors (STATA 13)

The results of fixed-effects regression model are given in Table 11. The results of regression analysis indicate that all levels of education of employees in tourism have significant impact on the competitiveness of EU members as tourism destinations in the period from 2008 to 2017 because the probability value ($P > [t]$) is less than 0.005. While the less than primary, primary and lower secondary education has the negative impact on the destination competitiveness, the other levels of education have a positive impact on the destination competitiveness. The value of the coefficient indicates that tertiary education has the highest impact on destination competition in relation to other levels of education. Based on the results of regression analysis, it can be concluded that the hypothesis H4 has been confirmed.

while the number of employees in tourism with other levels of education recorded the decrease.

The results of the Pearson correlation coefficient between the number of employees in tourism and the number of tourists in the EU indicated that there is a significant positive correlation between the observed variables during the period from 2008 to 2017. The results of the regression analysis indicated that all levels of education have the impact on competitiveness of the EU as a tourism destination in observed period. Within the PANEL analysis, it can be concluded that there is a significant positive correlation between the number of employees in tourism and the number of tourists in the EU members, as well as the all levels of education have the significant impact on the competitiveness of the EU members as tourism destinations. In the relation to other levels of education, the tertiary education has the strongest influences on the competitiveness of the EU as a tourism destination as well as on the competitiveness of the EU members as tourism destinations.

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CIP - Каталогизација у публикацији
Народна библиотека Србије, Београд

338:339.137.2(497.11)(082)
005:339.137(082)

IMPROVING Macroeconomic Competitiveness / edited by Bojan Krstić.
- Niš : Faculty of Economics, 2019 (Niš : Atlantis). - graf. prikazi, tabele,
236 str. ; 24 cm

"Thematic collection of papers is the result of the project 179066 -
Improving the Competitiveness of the Public and Private Sector by
Networking Competences in the Process of European Integration of Serbia."
--> kolofon. - Tiraž 80. - Napomene i bibliografske reference uz tekst. -
Bibliografija uz svaki rad.

ISBN 978-86-6139-182-8

а) Привреда -- Конкурентност -- Зборници б) Предузећа --
Конкуренција -- Зборници

COBISS.SR-ID 278970124