AN EMPIRICAL ANALYSIS OF RELATIONSHIP BETWEEN TOURISM AND ECONOMIC GROWTH: PANEL EVIDENCE FROM WESTERN BALKAN COUNTRIES

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Abstract: *Tourism is one of the most important sectors in the world and it has multiplier effects due to indirect implications to a wide variety of small, service-oriented businesses. This paper aims to determine the effects of the tourism sector on economic growth in terms of tourism share, international tourism receipts and international tourism arrivals. The subject of the chapter is estimating the effects of the tourism sector on economic growth in selected Western Balkan countries such as Albania, Bosnia and Herzegovina, Montenegro, North Macedonia and Serbia for the period 2007-2018. Results of the fixed effects model show tourism sector has significant and positive impact on economic growth in these countries for the observed period. Empirical findings manifest that governments in Western Balkan countries should focus on a higher share of the tourism sector in their economy in order to provide positive implications to economic development.*

Keywords: *Tourism, Economic growth, Panel data estimation, Western Balkan countries.*

1. INTRODUCTION

Tourism is one of the largest industries in the world and this industry has an enormous effect on the national economy and people's lives (Petrevska, 2017). It implies that the tourism sectors are recognized to positively contribute to economic growth (Brida et al. 2020). In past decades there was a dramatic growth in global tourism in terms of international arrivals and receipts (Lim et al. 2018). Ongan and Gozgor (2018) notice that international tourism has become one of the leading determinants to affect economic development. Visitors to tourism destinations spend money on goods and services, making economic effects on value-added, income, and employment (Tafel and Szolnoki, 2020). Shahzad et al. (2017) highlight that the tourism industry generates employment and tax revenues as well as stimulates investment in human capital, infrastructure and technology where tourism plays a significant role in stimulating consumption, promoting trade and, improving international communication (Qian et al. 2018).

Cerović Smolović et al. (2018) defined the concept of sustainable tourism development that implies a tourism sector enabling high-quality products, satisfying the needs of tourists and keeping tourism resources for future generations. Iatu (2018) emphasizes that sustainable tourism is the concept of visiting a place as a tourist and creating only a positive effect on the environment, society and economy.

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Zhang and Chan (2019) identified governments as the parties responsible for initiating sustainable tourism platforms. Determining the drivers of tourism growth is important for explaining the growth patterns of tourism and creating sustainable tourism development (Zha et al. 2019). Yfantidou and Matarazzo (2016) argue that tourism is one of the most important industries in the world in terms of environmental protection and socio-cultural conservation. Lu et al. (2018) point out that the tourism industry, regional economy and ecological environment form mutually interactive and interdependent relationships. Bianchi and de Man (2020) argue that tourism development creates new forms of value and reshuffles the internal distribution of capital, land use and organization of labour. Seetanah et al. (2018) argued that the implementation of concurrent policy measures based on stimulating air access liberalization and the promotion of marketing efforts have positive implications to tourism demand. Summers et al. (2019) emphasize the government's support to communities, especially in remote communities in order to provide opportunities for collaboration and stimulating business innovation.

Many developing economies, that are successfully exploiting their natural resources for tourism purposes, increased international receipts level due to tourism development (Chingarande, Saayman, 2018). Tourism is an important driver of the use of natural resources, cultural resources, traditions and local customs and it provides connecting people from all over the world, as well as creating profit and contributing to economic growth and employment (Băndoi et al. 2020). Banerjee et al. (2018) highlight that tourism is one of the fastest-growing economic sectors that generate 10% of GDP and 30% of export in the services sectors at the global level. Zhou and Chan (2019) highlighted the education of employees and entrepreneurs about the complex nature of the tourism sector and the importance of sustainable development. Tourism is an essential economic engine and provides socioeconomic development creating employment opportunities (Usmani et al. 2020). Dwyer et al. (2015) highlight tourism destinations in South Easter Europe as the main origin and source market for future tourism flows. Kalaš et al. (2019) point out that the tourism industry in Serbia and countries in the region such as Hungary, Croatia, Slovenia and Romania reflect the great interest in tourism development.

The structure of this chapter is as follows. After the introduction, there is a short preview of the implications of the COVID-19 pandemic on the tourism sector in the world. Further, there is a literature review where previous empirical studies have examined the relationship between tourism and economic growth. The third part is methodology and data which determines variables, develops hypotheses and makes a panel regression model. The fourth part is the descriptive and empirical analysis of gross domestic product per capita, tourism share in GDP, international tourism receipts and international tourism arrivals in Western Balkan countries for the period 2007-2018. This part includes various panel data estimations such as pooled ordinary least squares, fixed-effects model and the random-effects model. The last part summarizes the findings and conclusions by providing informational support to policymakers in these countries from the aspect of the nexus between tourism and economic growth.

2.   THE IMPLICATIONS OF COVID-19 PANDEMIC ON TOURISM SECTOR

In light of the COVID-19 pandemic that has now become a global economic and social problem, there are many issues about its impact on the tourism sector in the short and long term (Romagosa, 2020). As the COVID-19 pandemic is ongoing and has serious implications for global economic flows, the effect of this virus on the tourism sector needs to be considered. As this pandemic swept across the world, travel limitations and lockdowns were introduced in many

economies (Qiu et. al, 2020). COVID-19 pandemic is widely recognized as a challenge for the travel and tourism sector (Higgins-Desbiolles, 2020) and this virus is highly transmittable and affects the world's economy with the travel and tourism industry one of the most ravaged sectors (Yang et al. 2020). Rodríguez-Antón and Alonso-Almeida (2020) argue that the epidemic caused by COVID-19 is the largest pandemic that has affected the world in the last hundred years. Galvani et al. (2020) argue that it is not too surprising the effect of COVID-19 on the tourism and travel industry, because these components were exposed by positive and negative implications of the globalization process. This pandemic caused a lockdown around the world that was reflected in the reduction of travel and tourists number and the COVID-19 outbreak has put on hold the whole tourism and travel industry (Niewiadomski, 2020). Tourism is most affected in countries where the share of this sector is significant in the gross domestic product. Tourism is especially exposed to restricted mobility and social distancing (Gössling et al. 2020) where Uğur and Akbiyik (2020) point out that the tourism industry is easily affected by global crises where Lapointe (2020) notice that 166 countries restrict entry into their national territories and cause empty tourism destinations. Farzanegan et al. (2020) argue that COVID-19 has important policy effects for major tourist destinations such as France, Italy and Spain as well as for China and the United States that have a high level of outbound tourism. Accordingly, Polyzos et al. (2020) determined a significant drop in tourist arrivals from China to the United States and Australia. Prideaux et al. (2020) emphasize that a return to pre-pandemic growth level will take time and it depends on the depth and extend of the recession caused by the COVID-19 pandemic.

3. LITERATURE REVIEW

Tourism is increasingly a significant part of the economy as well as the source of income in today's conditions of globalization and open economy. Therefore, the relationship between tourism and economic growth represents an important issue for policymakers in creating an adequate tourism strategy in order to provide sustainable economic development. Many empirical studies have examined the relationship between tourism and economic growth (Belloumi, 2010; Tang and Tan, 2013; Dogru et al. 2017; Wu and Wu, 2018; Mitra, 2019; Yazdi, 2019; Khan et al. 2020; Usmani et al. 2020). Belloumi (2010) determined cointegration between tourism and economic growth in Tunisia for the period 1970-2007 as well as unidirectional causality from tourism to economic growth measured by gross domestic product in the observed period. Saleh et al. (2013) examined the relationship between tourism and economic growth in Bahrain, Jordan and Saudi Arabia for the period 1981-2008. Their findings indicated the long-run relationship between tourism growth and economic growth measured by gross domestic product. Tang and Tan (2013) identified cointegration between tourism and economic growth in Malaysia to 12 different tourism markets from 1995 to 2009. Tugcu (2014) argue that tourism is an essential source of foreign exchange that is used for financing economic growth where Bezić and Nikšić Radić (2017) confirmed tourism sector significance to foreign direct investments in order to provide sustainable economic growth. Dogru et al. (2017) examined the relationships between tourism development and economic growth in the United States, France, Spain, China, Italy, Turkey and Germany for the period 1995-2012. Their results confirmed that tourism development and economic growth are independent in Germany.

Similarly, tourism development stimulates economic growth in China and Turkey, whereas the reverse relationship is identified in Spain for the observed period. Selimi et al. (2017) analyzed the effects of tourism on economic growth in Western Balkan countries for the period 1998-2014. Their findings showed the significant and positive impact of tourism on economic growth

in analyzed countries where a 1% increase of tourist arrivals enhances economic growth by 0.08%. Similarly, Hysa and Gjergi (2018) examined the relationship between tourism and economic growth in Western Balkan countries from 2000-2014. Although visitor exports and capital investment are significant to economic growth, their results showed that in total there is no long-run nexus between tourism and economic growth in these countries. Wu and Wu (2018) examined the causality between tourism and economic growth in 11 Asian countries. Their results showed unidirectional causality from tourism to gross domestic product in Cambodia, China, and Malaysia, while reverse causality is identified in Hong Kong, Indonesia, Philippines, and South Korea for the observed period.

Aratuo and Etienne (2019) analyzed the relationship between economic growth and tourism-related sub-industries such as accommodation, air transportation, shopping, food and beverage, other transportation, recreation and entertainment in the United States for the period 1998-2017. Their findings confirmed unidirectional causality from economic growth to each of the sub-industries for the observed period. They suggest that tourism investment could be important in the long-run even during economic stagnation. Mitra (2019) analyzed the causal relationship between tourism growth and economic growth in 158 countries for the period 2001-2017. Their empirical findings show that bidirectional causality between these variables is identified in three subsamples for the observed period.

Yazdi (2019) researched the causality between tourism and economic growth in Iran from 1981-2014 and his analysis confirmed unidirectional causality running from tourism to economic growth. Khan et al. (2020) point out that tourism is considered a competent driver of development in emerging economies and Ehigiamusoe (2020) defined the tourism-led growth hypothesis in terms of positive implications of the tourism sector on economic growth. Khan et al. (2020) revealed the significant and positive effect of economic growth on tourism in Pakistan. Empirical results show that a 1% increase in economic growth enhances tourism by 1.9% in the long-run while the same increase in economic growth raises tourism by 1.32% in the short-run. Santamaria and Filis (2019) found a significant impact of tourism on economic growth in Spain and their analysis confirmed the tourism-led growth hypothesis.

Tang et al. (2019) investigated the effect of tourism and financial development on economic growth in Hong Kong, South Korea, Singapore and Taiwan for the period 1984-2016 and their empirical analysis indicated that these variables are important for growth in Asia. Usmani et al. (2020) have examined the effect of tourism arrivals and tourist expenditure on economic growth in Brazil, Russia, India and China for the period 1995-2016. Their findings confirmed that tourist expenditure positively affects economic growth as well as the existence of bidirectional causality between these variables.

4.   METHODOLOGY AND DATA

The chapter includes annual data obtained from World Bank (WB) and International Monetary Fund (IMF) for five Western Balkan countries (Albania, Bosnia and Herzegovina, Montenegro, North Macedonia and Serbia) for the period 2007-2018.

The chapter implies panel data estimation where gross domestic product per capita is the dependent variable, while tourism share in GDP, international tourism receipts and international tourism arrivals are independent variables.

Table 1. Variable definition

Variable	Notation	Calculation	Source	Expected effect
Dependent variable				
Gross domestic product per capita	GDPpc	US	IMF	/
Independent variables				
Gross domestic product	TRS	% of GDP	WB	+
International tourism receipts	ITR		WB	+
International tourism arrivals	ITA		WB	+

Source: Authors illustration

The chapter includes four hypotheses based on defined research's objectives that are developed as follows:

H$_0$: Tourism sector has a significant and positive effect on economic growth in Western Balkan countries.

H$_1$: Greater level of tourism share in GDP significantly increases economic growth in Western Balkan countries.

H$_2$: Greater level of international tourism receipts significantly increases economic growth in Western Balkan countries

H$_3$: Greater number of international tourism arrivals significantly increases economic growth in Western Balkan countries.

The chapter includes various panel models such as pooled least squares, fixed effects model and random-effects model. The random-effects model was identified as an appropriate model in order to estimate the impact of explanatory variables.

The model can be presented as:

$$GDPpc_{it} = \beta_1 + \beta_2 TRS_{it} + \beta_3 ITR_{it} + ... \beta_4 ITA_{it} + \varepsilon_i + \mu_{it} \qquad (1)$$

where GDPpc – gross domestic product per capita, TRS – tourism share in the gross domestic product, ITR – international tourism receipts, ITA – international tourism arrivals, N denotes the number of observations, T number of period, α constant, β$_1$ a random variable with a mean value of parameters and ε$_i$ - random error with mean value 0 and variance σ$^2_\varepsilon$, μ - random error.

5. EMPIRICAL ANALYSIS AND RESULTS

This segment includes descriptive statistics, panel unit root tests, multivariate analysis results and panel regression models such as pooled ordinary least squares, fixed effects model and random effects model in order which explanatory variables are significant for economic growth in Western Balkan countries. Before empirical analysis, there are trends in tourism share in GDP, international tourism receipts and international tourism arrivals for the period 2007-2018.

Figure 1 shows economic growth in Western Balkan countries measured by annual gross domestic product rate for the period 2007-2018. The average GDP growth rate was 2.65% for the observed period while Albania recorded the highest economic growth by 3.33% at an average

level. It can be seen that all countries, except Albania, had a negative growth rate during 2009 and 2010, while the highest negative value is identified in Montenegro (-5.5%). It is important to notice that in last year (2018) selected countries recorded average economic growth of 3.26% where Montenegro and Serbia recorded growth above 4%. Likewise, Albania and Bosnia and Herzegovina had a gross domestic product rate above 3%, while North Macedonia recorded economic growth near 0.3%.
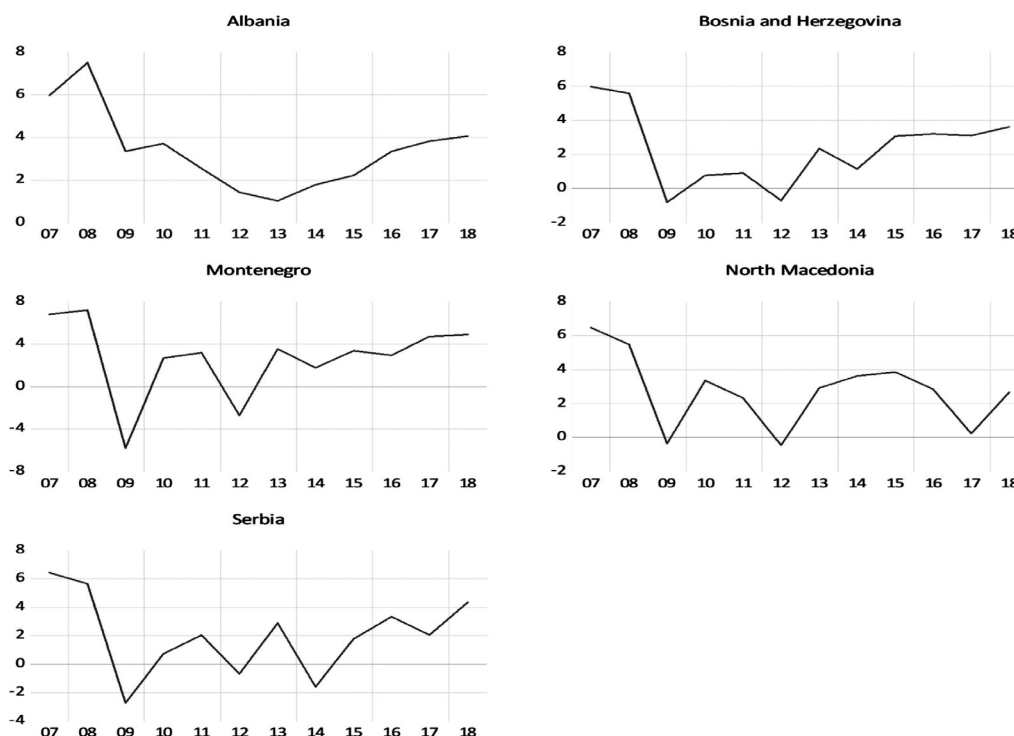

Figure 1.
GDP growth rate in selected Western Balkan countries
Source: Authors calculation

After presenting economic trend in Western Balkan countries there is a tourism share in the gross domestic product in observed countries from 2007 to 2018. Analyzing by countries it can be noticed that tourism share increased for 31. % of the gross domestic product in Montenegro during the observed period. This is the highest growth compared to other countries while Albania and Serbia recorded similar growth of this indicator by 2.8% and 2% in gross domestic product. On the other hand, only Bosnia and Herzegovina had a smaller share of tourism compared to 2007 and 2018 and this fall was 0.8% of gross domestic product. Also, it is necessary to emphasize that the relative trend of tourism share in the gross domestic product was 1.74% for the period 2007-2018 which implies a positive tourism trend in this region.

Analyzing the level of international tourism receipts and the number of international tourism arrivals in selected Western Balkan countries, we can see that the average number of international tourist arrivals increased by 10.17%. Although these countries recorded growth of tourism arrivals, the average level of international tourism receipts was negative. Namely, international tourism receipts declined by 0.78% at the average level for observed countries in the analyzed period. The highest average growth of international tourism receipts is identified in Montenegro (2.11%) while other countries recorded an average negative growth rate of this indicator. Finally, Albania recorded the highest average growth rate of international tourism arrivals (15.05%).
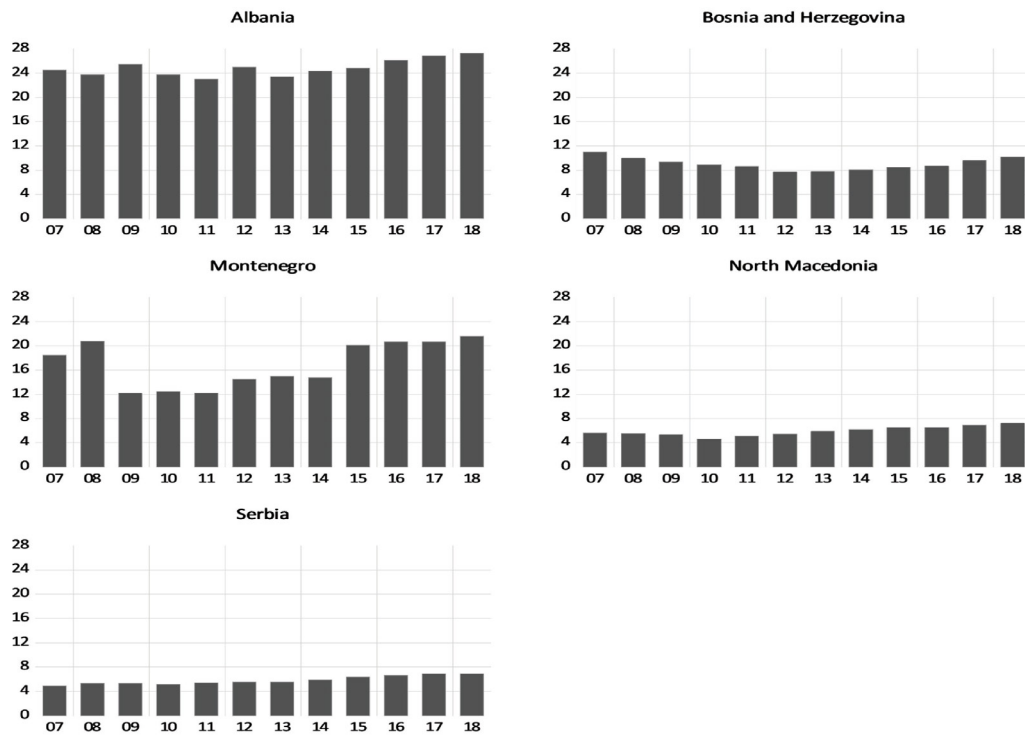
Figure 2.

Tourism share in selected Western Balkan countries (% GDP)
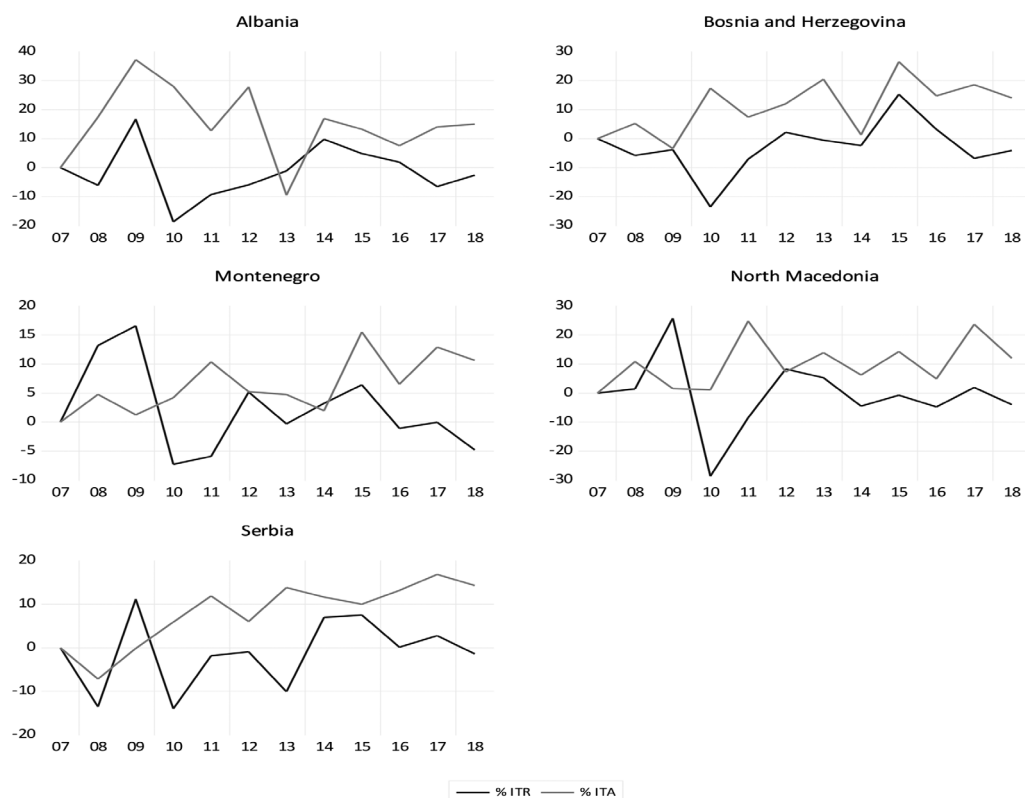
Source: Authors calculation

Figure 3.

Relative changes of international tourism receipts and international tourism arrivals

Source: Authors calculation

Table 2. Descriptive statistics

Variable	GDPpc	TGDP	ITR	ITA
Albania				
Mean	10068.22	24.87	52.26	2588750
Std. Dev.	1053.88	1.36	6.04	1332158
Max	11841.9	27.3	65.76	5340000
Min	8154.2	23	45.13	1062000
Bosnia and Herzegovina				
Mean	10318.8	9.04	14.09	552666.7
Std. Dev.	951.21	1.02	2.37	252480.2
Max	12069.96	11	18.75	1053000
Min	9000.42	7.7	11.97	306000
Montenegro				
Mean	14677.35	16.97	51.09	1371833
Std. Dev.	1109.97	3.77	3.97	352942.4
Max	17035.92	21.6	55.11	2077000
Min	13427.69	12.2	41.74	984000
North Macedonia				
Mean	12434.58	5.89	5.69	403583.3
Std. Dev.	983.32	0.78	0.73	154965.4
Max	13964.12	7.2	7.74	707000
Min	10929.94	4.6	5.05	230000
Serbia				
Mean	13725.7	5.82	7.69	9984666.7
Std. Dev.	905.65	0.7	0.68	355356.5
Max	15596.91	6.9	9.13	1711000
Min	12424.63	4.9	6.59	645000
Total				
Mean	12244.93	12.52	26.16	1260400
Std. Dev.	2076.92	7.68	21.45	1127427
Max	17035.91	27.3	65.76	5340000
Min	8154.2	4.6	5.05	230000

Source: Authors calculation

Based on descriptive statistics by Western Balkan countries, it can be seen that the average GDPpc is 12.244,93 US for the observed period. These countries have a share of the tourism sector of 12.52% in GDP from 2007 to 2018. Further, international tourism receipts are 26.16% at the average level, while average international tourism arrivals are 1.180.300 in these countries. Analyzing by country, the highest average level of GDPpc is identified in Montenegro (14.4677 US), while Albania had the smallest GDPpc (10.068 US). On the other hand, Albania recorded the highest number of international tourism arrivals (5.340.000 in 2017), while the smallest number of international tourism arrivals is determined in Macedonia (240.000 in 2007).

Table 3 shows multivariate analysis results for Western Balkan countries in terms of estimating the different levels of tourism share in GDP, international tourism receipts and international tourism arrivals for the period 2007-2018. Analyzing obtained values of Pillai's Trace = 0.000 for explanatory variables TRS, ITR and ITA, we can conclude that there is a significant difference in tourism share in GDP, international tourism receipts and international tourism arrivals in selected Western Balkan countries for the observed period.

Table 3. Estimating difference level of tourism indicators

TRS	W = Wilks' lambda		L = Lawley-Hotelling trace		
	P = Pillai's trace		R = Roy's largest root		
Source	Statistic	F(df1)	F(df2)	F	Prob>F
W	0.0576	4.0	55.0	225.11	0.0000
P	0.9424	4.0	555.0	225.11	0.0000
L	16.3716	4.0	55.0	225.11	0.0000
R	16.3716	4.0	55.0	225.11	0.0000
Residual	55				
Total	59				
ITR	W = Wilks' lambda		L = Lawley-Hotelling trace		
	P = Pillai's trace		R = Roy's largest root		
Source	Statistic	F(df1)	F(df2)	F	Prob>F
W	0.0238	4.0	55.0	562.90	0.0000
P	0.9762	4.0	555.0	562.90	0.0000
L	40.9380	4.0	55.0	562.90	0.0000
R	40.9380	4.0	55.0	562.90	0.0000
Residual	55				
Total	59				
ITA	W = Wilks' lambda		L = Lawley-Hotelling trace		
	P = Pillai's trace		R = Roy's largest root		
Source	Statistic	F(df1)	F(df2)	F	Prob>F
W	0.3731	4.0	55.0	23.10	0.0000
P	0.6269	4.0	555.0	23.10	0.0000
L	1.6804	4.0	55.0	23.10	0.0000
R	1.6804	4.0	55.0	23.10	0.0000
Residual	55				
Total	59				

Source: Authors calculation

Results from Table 4 show that panel series are stationary at level of 5% and provide making various panel regression models such as pooled ordinary least squares, fixed effects model and random effects model.

Table 4. Panel unit root test

H0: Panels contain unit roots				
H1: Panels are stationary				
Variables	Number of panels	LLC test	IPS test	Hadri test
GDPpc	27	-8.53 (0.000)	-7.17 (0.002)	5.08 (0.000)
TRS	27	-2.22 (0.000)	-1.93 (0.000)	1.52 (0.000)
ITR	27	-2.37 (0.000)	-1.06 (0.023)	2.62 (0.004)
ITA	27	-8.96 (0.000)	-7.24 (0.001)	5.24 (0.000)

Source: Authors calculation

Table 5 shows the effect of tourism variables on economic growth measured by gross domestic product per capita in Western Balkan countries through POLS, FE and RE models. Results of Hausman test determined that the fixed effects model is appropriate for the analysis of explanatory variables on economic growth in the analyzed period. Fixed effects model explains 92. %

variations of independent variables and indicated a significant effect of selected tourism determinants on gross domestic product per capita in observed countries. The selected model shows that TRS, ITR and ITA have a positive impact on GDPpc where a 1% increase of these variables enhances economic growth for 0.22%, 0.21% and 0.09%. These empirical findings manifest that these countries should focus on a higher share of the tourism sector in GDP as well as a greater level of international tourism receipts and number of arrivals in order to provide a higher level of economic growth.

Table 5. Panel Data Estimation

Models						
Variable	POLS		FE		RE	
GDPpc	Coeff	Prob.	Coeff.	Prob.	Coeff.	Prob.
TRS	0.35	0.001	0.22	0.000	0.21	0.000
ITR	0.10	0.008	0.21	0.004	0.19	0.000
ITA	0.14	0.000	0.09	0.000	0.09	0.000
C	3.46	0.000	3.55	0.000	3.56	0.000
R-squared	0.28		0.92		0.59	
Model specification	Chi-Sq. Stat		Chi-Sq. d.f.		Prob.	
Hausman test	36.58		3		0.000	

Source: Authors calculation

6. CONCLUSION AND DISCUSSION

Tourism is an increasingly important sector in the world economy and positive implications of this sector should be used to provide faster economic growth and development. This also applies to Western Balkan countries that must be better positioned on the world tourist map by using natural resources and all available capacities. The relationship between the tourism sector and economic growth is an essential issue for policymakers in making an adequate tourism strategy. The chapter has estimated the effect of the tourism sector on economic growth in selected Western Balkan countries such as Albania, Bosnia and Herzegovina, Montenegro, North Macedonia and Serbia from 2007 to 2018. Empirical analysis includes three-panel estimation data such as pooled least squares model, fixed effects model and random effects model in order to determine the significance of the tourism sector in these countries. We have examined the effect of tourism share in the gross domestic product, international tourism receipts and international tourism arrivals on economic growth measured by gross domestic product per capita. Within selected models, Hausman test has presented that the fixed effects model is appropriate and it reflects that a 1% increase of TRS, ITR and ITA raise economic growth by 0.22%, 0.21%, and 0.09% respectively. It means that H_0 can be accepted because all tourism indicators have positive effects on economic growth. Likewise, H_1, H_2, and H_3 can be accepted, where TRS, ITR and ITA have significantly enhanced the economic growth. These findings show that policymakers should focus on these tourism indicators in order to provide a positive impact on economic growth in Western Balkan countries. Future research will be focused on the knowledge-based platform in the tourism system in these economies (Popesku & Pavlović, 2013; Paunović et al. 2020) in order to provide a scientific contribution from the aspect of this indicator.

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