# TOURISM AND ECONOMIC GROWTH: AN EVIDENCE FOR LATIN AMERICAN AND CARIBBEAN COUNTRIES

**Blanka Šimundić**
**Zvonimir Kuliš**
**Neven Šerić**

**Abstract**

Purpose – The paper aims to estimate the impact of international tourism growth on economic growth in Latin American and Caribbean countries (LAC) from 2000 until 2014. These countries are illustrative ones for developing countries since they are emerging economies that have experienced an important economic development and international tourism growth over past decade.

Methodology – The empirical analysis is based on panel data. The dynamic panel data model has been estimated using Blundell-Bond estimator. The dependent variable is economic growth per capita. Together with tourism growth per capita as independent variable other economic variables that represent traditional factors of economic growth were included in the model.

Findings – The results provide evidence that tourism growth is valuable (positive) factor of economic growth in LAC. International tourism is recognized as equal determinant of economic growth as other traditional economic determinants of economic growth. To clarify, the results reveal that variables such as gross investment, government consumption, trade openness, human capital and political stability have significant and mainly positive effects on economic growth in LAC. The results also suggest that governments of LAC countries should focus on economic policies to promote tourism as a potential source of economic growth.

Contribution – The results contribute to the existing, well-documented, economic literature which supports the positive effects of international tourism on economic growth. In addition, results reveal that for developing countries, such as LAC, it is important not to disregard other determinants of economic growth besides tourism.

**Keywords:** economic growth, tourism growth, panel data, Blundell-Bond estimator

## INTRODUCTION

Tourism industry has been one of the leading service industries that emerged in the global economy in recent decades. International tourism has progressively grown above expectations over years by more than 4% a year in contrast to the moderate and uneven expansion of the global economy (UNWTO, 2015). Today, international tourism accounts for 30% of the world's exports of services and 6% of total exports. This contribution is similar for both developed and emerging economies. Consequently, tourism has gained much attention in recent academic literature. The research interest is primarily on the relationship between tourism and economic growth and it has two different components.

The first type of research is known as economic impact analysis derived from Keynesian theory of multipliers. According to Keynesian approach, international tourism can be accepted as an exogenous component of aggregate demand that yields indirect and induced income and employment multiplier effects in addition to direct income and employment effects (Kumar et al. 2014, Spurr 2009, Dwyer et al. 2004). A major objective of such estimates has been to inform policy makers as to the appropriate allocation of resources both within the tourism sector itself and between tourism and other industry sectors (Hara, 2008). However, this approach is static and doesn't allow an inference of the long-term impact of tourism development (Aslan, 2013).

The second type of research focuses on investigation of the tourism as a determinant of economic growth (Adamou and Clerides, 2010). This alternative approach elucidates the potential of endogenous growth theory and the new trade theory adapted to the tourism sector. Thus like the hypothesis of export-led growth, four hypotheses can be identified based on economic growth relationship theory (Oh, 2005). They are: Economic Driven Tourism Growth Hypothesis (EDTGH), Tourism-Led Growth Hypothesis (TLGH), Neutrality Hypothesis (NoCausal-NCH) and Bidirectional Hypothesis (BiCausal-BCH).

This paper tends to examine whether tourism can be one of the leading determinants of economic growth in Latin American and Caribbean countries (LAC) hence following TLGH. These countries are developing countries which have experienced a strong economic development and international tourism growth over past 15-teen years. Additionally, World Tourism Organization has classified LAC within the group of fast growing tourism markets for next 15-teen years (until 2030). Therefore, the main object of interest is the effect of tourism growth on economic growth in LAC whilst the negative aspects of tourism growth, such as externalities on the environment and generally on local residence's quality of life are not an issue we address in this paper.

The remainder of the paper is organized as follows: Section 1 provides a literature review and a base of an existing theory on tourism and economic growth. In Section 2 the empirical framework is explained through specified model and econometric methodology as well as the variables explanations and the data sources. The elaboration of empirical results is given in Section 3. The last section, Section 4 presents a summary and brief conclusion onto the results obtained in this study.

## 1. REVIEW OF EMPIRICAL LITERATURE AND EXSISTING THEORY

Economic flows generated by international tourism have become vital factors in economic growth, trade and international economic relations in many countries, especially developing ones (Neto, 2003). These economic impacts of tourism are relatively easy to measure. In general, net economic impact tends to be positive, despite the fact that the advantages go along with a number of environmental and socio-cultural costs. The positive benefits produced by tourism are well-documented in the economic literature (Balaguer and Cantavella-Jordà 2002, Durbarry 2004, Nowak et al

2007, Brida et al. 2008, Katircioglu 2009, Brida and Pulina 2010, Kadir and Jusoff, 2010, Pablo-Romero and Molina 2013).

The beginning of scientific research in the tourism literature has been connected to the analysis of positive and important impacts that tourism receipts have on the national economies based on TLGH (Pablo-Romero and Molina 2013). The TLGH postulates that tourism is a main determinant of overall economic growth in two ways. Firstly, the demanded group of tourism products can be seen as export oriented goods or services, thus tourism demand ensures the rise in exports which otherwise would be hardly reachable. These exported tourism goods and services lead to economic growth in the destination. Secondly, tourism receipts can be used to import capital goods which otherwise couldn't be imported (so called TCIG as sub-hypothesis of TLGH meaning Tourism Capital Imports for Growth). In turn, produced goods and services lead to economic growth in the destination. In conclusion, according to TLGH postulate international tourism as a non-traditional export generates economic growth (Lanza and Pigliaru, 2000) on the one side, and on the other side, the economic growth is induced via increase in the volume of inputs achievable by tourism receipts (Nowak et al. 2007). Thus, TLGH recognizes a unidirectional causal relationship from tourism to the whole economy.

Besides TLGH the relationship between tourism and economic growth in the empirical literature is also investigated under unidirectional relation from economic growth to tourism growth (economic driven tourism growth hypothesis, EDTGH) and this reversed causality suggests that an expansion in tourism will happen when every effort is made to increase overall economic growth (Lee and Chang 2008). Furthermore, according to the hypothesis of bidirectional causality (BC), tourism activity affects economic growth performance and economic growth in turn affects the tourism sector (Antonakakis et al. 2013). Neutrality hypothesis shows there is no causality between tourism and economic growth (Oh 2005 in Kum et al. 2015).

Brida and Pulina (2010) explored the relationship between tourism activity and economic growth throughout a comprehensive literature review of the 38 econometric empirical studies covering the period 2002-2010. These studies rely on econometric techniques such as cointegration and error correction models and typically obtain evidence of a strong relationship between economic growth and tourism receipts for country concerned (Balaguer and Cantavella-Jordá's, 2002; Cortéz-Jiménez et al., 2009; Dritsakis, 2004; Durbarry, 2004; Lanza and Pigliaru, 2000; Sinclair and Bote Gómez, 1996). The case study approach was dominant for many years because cross-country data were hard to obtain.

More recently, Pablo Romero and Molina (2013) have also given a literature review on the empirical research of economic growth and tourism relationship till 2013 and they have analyzed more than 70 papers. They have shown that the relation between tourism and growth depends on various factors, the main one being the country's degree of specialisation in tourism. Furthermore, they have concluded that empirical results are very sensitive to the selection of model specifications and to econometric techniques used.

The first large-scale cross-sectional study was performed by Brau, Lanza, and Pigliaru (2007) which has been set out to empirically investigate the observations made earlier by Lanza and Pigliaru (2000). They employ a panel dataset of 143 countries. Their results indicate that tourism countries grow significantly faster than all the other sub-groups considered in their analysis. Eugenio-Martin, Morales and Scarpa (2004) focus on Latin American countries. Their empirical results reveal that tourism growth is associated with higher economic growth in low and medium income countries, but not in high income countries. On the other hand, Sequeira and Campos (2007) do not find evidence which could link tourism specialization with higher growth rates. Furthermore, Sequeira and Nunes (2008) use panel data methods to study the relationship between tourism and economic growth on a set of countries and covering the period 1980-2002. Their study showed that tourism is a positive determinant of economic growth both in a broad sample of countries and in a sample of poor countries. However, contrary to previous contributions, their study has not shown that tourism is more relevant in small countries than in a general sample. Cortes Jimenez (2008) focuses on Spain and Italy and studies tourism expansion at both the regional and international level. Domestic tourism is found to be a relevant factor for Spanish growth, whereas international tourism seems to be more important for Italian economic growth. Furthermore, Figini and Vici (2010) try to explain growth in the longer run by looking at the entire 1980-2005 period and also the 1980-1990 and 1991-2005 sub-periods. They find evidence for link between tourism specialization and growth only in period 1980-1990 but they point out that the data for that this period are not reliable and therefore conclude that there is no robust evidence linking tourism specialization and growth. Adamou and Clerides (2010) investigated relationship between tourism specialization and economic growth on a sample of 162 countries. They found that tourism specialization is associated with higher rates of economic growth, but once a threshold level of specialization is exceeded, tourism no longer contributes to economic growth. According to them, the countries should follow TCIG hypothesis and develop other economic activities as well. According to Wall and Mathienson (2006) tourism can be a dominant source of accumulation of foreign currency in developed countries and not only in developing ones thus showing that TLG and TCIG hypothesis are closely related (Nowak and Sahli, 2008).

However, tourism, has not escaped criticism. Amongst authors that criticize positive effects of tourism on economic growth, there are authors that do not negate the positive effects of tourism in developing countries. They indicate that the effects are not strong enough to influence economic growth and presume that the positive effects of tourism are overstated for the interest of international organizations (Pulido-Fernández, Cárdenas-García and Sánchez-Rivero, 2014). However, there are authors that confirm positive effects but indicate miscellaneous results. The empirical literature that argues against the positive impact of tourism links negative effects of tourism to Dutch disease effect (Song et al., 2012) alias Beach disease effect in tourism. Holzner (2011) showed, on the basis of the results obtained on a sample of 134 world countries (for a period of 38 years), that the threat of Beach disease effect is impossible in the long run. Nonetheless he highlights that Beach desease effect can be present in short or medium run. Furthermore, his study pointed that tourism has positive effects on economic growth.

According to Pablo Romero and Molina (2013) and Brida nad Pulina (2010) empirical results seem rather mixed and non conclusive, yet many studies founded evidence that tourism growth effects positively economic growth. Although these findings are useful, according to Adamou and Clerides (2010,) they cannot be considered definitive as the models do not include controls for factors that are considered important in the endogenous growth literature, such as investment and human capital (though they do include controls for some other factors, such as openness to trade and initial income levels). At last, the picture of effects of tourism growth on economic growth is somewhat unclear merely due to different methodologies and specifications (time series, cross-sectional and panel data) rather than data differences in the existing empirical literature (Adamou and Clerides, 2010). Therefore this paper clarifies this issue by adding a different dimension to the problem at hand.

## 2. VARIABLES, DATA SOURCES AND ECONOMETRIC MODEL

Inducement for studying LAC countries lies in their classification within the group of fast growing tourism markets for next 15-teen years (until 2030, UNWTO, 2015). LAC countries have plenty of similarities in socio-economic context. These countries performed fast economic and tourism growth in the 21st century, their export sectors rely mostly on primary goods, they bear high rates of poverty, criminal and political instability. Besides, these countries have many similarities in terms of language, culture, history, weather and tourism resources to offer (Eugenio-Martín, Morales and Scarpa 2004). According to World Bank's Country and Lending Groups classifications a total of 41 LAC countries are in the common group. This classification was the initiate for panel data set in this paper.

Table 1: **List of countries included in the sample**

|   | Country | | Country | | Country |
|---|---|---|---|---|---|
| 1 | Antigua and Barbuda | 12 | Dominica | 23 | Panama |
| 2 | Argentina | 13 | Dominican Republic | 24 | Paraguay |
| 3 | Bahamas, The | 14 | Ecuador | 25 | Peru |
| 4 | Barbados | 15 | El Salvador | 26 | Puerto Rico |
| 5 | Belize | 16 | Grenada | 27 | St. Kitts and Nevis |
| 6 | Bolivia | 17 | Guatemala | 28 | St. Lucia |
| 7 | Brazil | 18 | Guyana | 29 | St. Vincent and the Grenadines |
| 8 | Chile | 19 | Honduras | 30 | Suriname |
| 9 | Colombia | 20 | Jamaica | 31 | Trinidad and Tobago |
| 10 | Costa Rica | 21 | Mexico | 32 | Uruguay |
| 11 | Cuba | 22 | Nicaragua | 33 | Venezuela |

Source: compiled by the authors

The panel data set in this paper includes 33 Latin American and Caribbean countries and covers the period from 2000 to 2014 (presented in Table 1). Due to lack of some data, the model is unbalanced.

## 2.1. Variables and model specification

Given the theoretical background in previous chapters it is obvious that tourism can be one of the factors that affect economic growth but not the only one.

The model is derived, in conventional manner, from a function in which economic growth per capita is a function of tourism growth in addition to other commonly used determinants of economic growth (to overcome aforementioned existing studies' limitations and in notion that determinants of economic growth are complex).

The multivariate framework consists of indicators whose description follows (see Table 2). The indicator for dependent variable, *economic growth per capita* (GDPgpc), is GDP per capita growth which represents annual percentage growth rate of GDP per capita based on constant local currency. Main independent variable is *tourism growth per capita* (TOURpcg). Indicator for this variable is calculated using formula introduced by Eugenio-Martín, Morales and Scarpa (2004):

$$\frac{\frac{T_t}{P_t} - \frac{T_{t-1}}{P_{t-1}}}{\frac{T_{t-1}}{P_{t-1}}}$$

$$t = 2000, 2001, \ldots 2012, 2014.$$

(1)

where T denotes number of international inbound tourists and P is total population. It is expected that tourism growth has positive effects on economic growth.

Other (control) variables include: government consumption, investment, openness, human capital and political stability. The indicator for *government consumption* (GOVER) is total government consumption as percentage share of GDP. According to economic theory, government consumption might have positive and/or negative effect on economic growth (see Mitchell 2005 for more details). *Investment* (INVEST) is indicated by gross fixed capital formation as percentage share of GDP. Because it has positive impact on production, it is expected that INVEST affects economic growth positively. *Openness to trade* (OPEN) is indicated through the percentage share of the sum of exports and imports in GDP. Likewise the case of government consumption, the discussion whether it effects positively or negatively economic growth lasts for a number of years and there is yet no compliance on this issue (see Rodrìguez and Rodrik (2001) or Yanikkaya (2003) for deeper insight). Therefore the expected sign of the OPEN in the specified model is not addressed at this point. *Human capital* (HC) has positive impact on economic growth (see Arabi and Abdalla, 2013). The indicator used in this model is gross secondary school male enrolment in percentages (see Sequeira and Campos, 2005 according to Barro and Sala-i-Martin, 1995). The last variable that is included into the model is *political stability* (POLIT). The indicator is World Bank's index of political stability and absence of violence/terrorism that measures perceptions of the likelihood of political instability and/or politically-motivated violence, including terrorism (see Aisen and Vega 2013 for detailed insights).

Annual data for all variables were obtained from the World Bank's *World Development Indicators* database (WDI, 2015). Additional data on political stability was obtained from *World Governance Indicators* (WGI, 2015). The data are compiled within a panel data framework.

Finally, the following dynamic panel data model is formed:

$$GDPgpc_{it} = \mu + \gamma GDPgpc_{i,t-1} + \beta_1 TOURgpc_{it} + \beta_2 GOVER_{it} + \beta_3 INVEST_{it} + \beta_4 OPEN_{it} + \beta_5 HC_{it} + \beta_6 POLIT_{it} + \alpha_i + \varepsilon_{it}$$

$$i = 1, 2, 3 \ldots 32, 33; \quad t = 2000, 2001, \ldots 2012, 2014.$$

(2)

where i=1,2, ...,N counts for each country in the panel and t=1, ..., T refers to the time period. Panel data set includes 33 countries (the LAC countries included in the sample represent 99,85% of the total LAC population and 98,24% of all LAC countries) and covers period of 15-years from 2000 to 2014. μ denotes an intercept, γ is a parameter of lagged dependent variable and $\beta_1$, $\beta_2$, $\beta_3$, $\beta_4$, $\beta_5$, $\beta_6$ are the parameters of exogenous variables. It is assumed that $\varepsilon_{it}$ are IID(0,$\sigma_\varepsilon^2$). $\alpha_i$ represents unobservable individual-specific effect that is time invariant and it accounts for any individuals. The specification of variables and expected signs of parameters are presented in Table 2.

Table 2: **Model specification**

| Variable | Indicator | Label | Expect-ed sign | Source |
|---|---|---|---|---|
| Economic growth | GDP per capita growth (annual %) | GDPgpc | | WDI |
| Tourist growth | Tourist growth per capita (annual %) | TOUR gpc | + | WDI |
| Government consumption | General government final consumption expenditure (% of GDP) | GOVER | +/- | WDI |
| Investment | Gross fixed capital formation (% of GDP) | INVEST | + | WDI |
| Openness to trade | Sum of exports and imports of goods (% GDP) | OPEN | +/- | WDI |
| Human capital | Gross enrolment ratio, secondary, male (%) | HC | + | WDI* |
| Political stability | Index of political stability and absence of violence/terrorism | POLIT | + | WGI |
| * Data for Brazil were augmented from Trading Economics, viewed 27 November, http://www.tradingeconomics.com/brazil/school-enrollment-secondary-male-percent-gross-wb-data.html | | | | |

Source: compiled by the authors

The model estimation was performed using GMM (generalized methods of moments) estimator, precisely Blundell and Bond (1998) estimator for dynamic panels considering dynamic nature of the economic growth as depended variable. Pablo-Romero and Molina (2013) indicate that in researches of tourism effects on the economic growth, the use of panel data methodology have several strengths. They are seen in allowing larger number of explanatory variables, larger sample of countries,

longer time periods under analysis and greater depth in the relationships between variables. Furthermore, Seetaram and Petit (2012) point out that one of the most important advantages is that panel data modelling allows for the control of heterogeneity in the sample. Considering dynamic nature of the economic growth as depended variable Blundell-Bond estimator is used.

Before model estimation it is necessary to confirm there is no problem of multicollinearity among independent variables. As there is no formal test for multicollinearity in panels, the use of pair wise correlation matrix in this step is needed for detection of possible problem of correlation among independent variables (Baltagi, 2008).

Table 3: **Descriptive statistics**

| Variable | Mean | Std. Dev. | Min | Max | i | N |
|---|---|---|---|---|---|---|
| GDPgpc | 2,02072 | 3,763018 | -15,53932 | 16,23265 | 33 | 484 |
| TOURgpc | 3,069267 | 13,64797 | -100 | 116,4348 | 33 | 455 |
| GOVER | 14,45961 | 5,160759 | 6,207438 | 39,88074 | 33 | 470 |
| INVEST | 21,19346 | 6,703517 | 8,202722 | 55,73004 | 33 | 459 |
| OPEN | 80,212 | 33,31458 | 22,1383 | 203,8294 | 33 | 464 |
| HC | 81,40708 | 14,95546 | 47,36331 | 115,3725 | 33 | 365 |
| POLIT | 0,0417391 | 0,7311787 | -2,39 | 1,41 | 33 | 460 |

Source: compiled by the authors using software Stata 13.0

Pair wise correlations matrix showing Pearson's correlation coefficients between independent variables is presented in Table 4. It reveals that there is no problem of multicollinearity because every coefficient shows weak correlation as they range from 0,1125 to 0,4463. Gujarati and Porter (2008) point out that serious problem of multicollinearity exists only if some of Pearson's correlation coefficients between the two independent variables in the model exceed the value of 0,8. In this model there is no coefficient that exceeds 0,5 and precondition about non multicollinearity in the model is accomplished.

Table 4: **Pair wise correlation matrix**

| Variable | GDPCgpc | TOURgpc | GOV | INV | OPEN | HC | POL |
|---|---|---|---|---|---|---|---|
| GDPgpc | 1,000 | | | | | | |
| TOURgpc | 0,3059* | 1,000 | | | | | |
| GOVER | -0,0302 | 0,0093 | 1,000 | | | | |
| INVEST | 0,0583 | -0,0460 | -0,0590 | 1,000 | | | |
| OPEN | -0,0469 | 0,0077 | -0,0412 | 0,2029* | 1,000 | | |
| HC | -0,0594 | -0,1082* | 0,3799* | 0,2180* | -0,0779 | 1,000 | |
| POL | -0,0989* | -0,1161* | 0,2207* | 0,2022* | 0,2905* | 0,4278* | 1,000 |
| *statistical significance at 5%. | | | | | | | |

Source: compiled by the authors using software Stata 13.0

The Blundell and Bond two step estimator is used to estimate the model. Blundell and Bond one step estimator assumes the error terms to be independent and homoscedastic across countries and over time while two step estimator relaxes the assumption of independence and homoscedasticity (Višić and Škrabić, 2011).

After the model estimation the model validity needs to be tested. In dynamic panel data there is the special interest in Sargan test and tests for serial correlation (Stata, 2014).

Sargan test is a test of overidentifying restrictions and its null hypothesis says that there is no correlation between the instruments and the errors. If null hypothesis is confirmed that means that dynamic panel model is well specified. However, optimal number of instruments must be chosen to increase the efficiency but without introducing bias of estimation as both, estimator and Sargan test can be biased if there are too much instruments (Višić and Škrabić, 2011). Because of this, Rodman (2009) suggests that number of instruments should not exceed number of groups. In this paper, the sample's number of instruments is lesser than number of groups (30 to 33) and p-value of Sargan test is 0,5063 (>0,05) which means that the chosen instruments are valid.

Arellano and Bond (1991) worked out two key tests for serial correlation: test for the first-order serial correlation (commonly labeled m1) and test for the second-order serial correlation (generally labeled m2) in differenced residuals. Null hypothesis (of both tests) says that there is no serial correlation. If there is the first-order autocorrelation in the differenced residuals that doesn't imply that the model is misspecified. Contrary, the existence of the second-order autocorrelation would imply that the estimates are inconsistent and that model is not well specified. Results in Table 5 show existence of the first-order autocorrelation (m1 test) at 5% level of statistical significance. Nevertheless the condition of absence of the second-order serial correlation is accomplished as null hypothesis of m2 test is not rejected. Thus all three elements of diagnostic statistics are satisfied and the results of performed model in this paper are valid.

## 3. RESULTS

The results reveal that the coefficient of lagged dependent variable is positive, less than 1 and statistically significant at level of 1% and this approved the use of dynamic panel data analysis. Moreover, the model showed that impact of tourism growth on dependant variable is positive and statistically significant at the level of 1%. Coefficient of tourism growth per capita is 0,06 and it shows that if tourism growth increases for 1 percentage point, economic growth will increase for 0,06 percentage points. In the long run (according to formula $\beta/(1-\gamma)$) effect would be stronger and economic growth would increase for 0,09 percentage points.

Table 5: **Estimation Results (Blundel and Bond GMM System Estimator) for model of economic growth**

| Explanatory variables | Coefficients |
|---|---|
| L.GDPgpc | 0,295979 *** (0,0348308) |
| TOURgpc | 0,0654589*** (0,0143394) |
| GOVER | -0,7807961*** (0,0868302) |
| INVEST | 0,1720974*** (0,0523267) |
| OPEN | 0,1070487*** (0,0176848) |
| HC | 0,0509582*** (0,0179243) |
| POLIT | 1,742825*** (0,5829634) |
| _cons | -3,794925 (2,413422) |
| Number of observations | 285 |
| Number of groups | 33 |
| Number of instruments | 30 |
| Sargan test (p-value) | 0,5063 |
| m1 test (p-value) | 0,0056 |
| m2 test (p-value) | 0,9993 |
| Notes: * p< 0,1, ** p< 0,05, *** p< 0,01 Standard errors in parentheses | |

Source: compiled by the authors using software Stata 13.0

Influence of all other determinants of economic growth (tested in the model) is also statistically significant and in accordance with theoretically expected signs. Investments, trade openness, human capital and political stability have positive and statistically significant impact on economic growth. Only government consumption negatively affects dependant variable which could be the consequence of low efficiency of this sector in LAC.

## 4. CONCLUSIONS

This paper aimed to provide empirical evidence in favour of the positive impact of tourism growth on economic growth in the LAC countries under the postulate of TLGH. Results of dynamic panel analysis provided evidence that tourism growth positively and significantly contributes to the economic growth in LAC (see also Eugenio-Martin, Morales and Scarpa 2004). Furthermore, the results disclose that variables such as gross investment, government consumption, trade openness, human capital and political stability have significant and mainly positive effects on economic growth in LAC (Khan et al. 2005, Nowak et al. 2007). Finally, the results are in

accordance with economic theory: all independent variables of the model show expected signs and statistical significance, while the diagnostic tests confirm the valid specification of the model (Balassa 1978, Croes 2006, Ekanayake and Long 2012).

The results suggest two main points for the policy makers regarding the effects of tourism on economic growth. Firstly, tourism is undoubtedly significant tool that impacts positively on economic growth and policy makers should take it into account and make strategies to strengthen tourism growth thus maximizing its benefits. This should be considered especially in a long run since the results showed that effect in long run is even stronger than in short run. Secondly, tourism cannot be taken separately from other determinants of economic growth since it is not the only one crucial factor of economic growth. This is in accordance with the findings of Adamou and Clerides (2010) which reveal that developing countries should follow TCIG hypothesis and develop other economic activities as well.

The limitations of the research are indicated in the unbalanced data and the time framework which could be extended, while the insights for further research are in search of other socio-economic variables that effect economic and tourism growth simultaneously as well as causal relationships between tourism and economic growth. Notwithstanding the positive benefits deriving from tourism activity further questions also require much more research such as negative externalities that tourism activity can produce on social equilibrium and natural resources undermining the long run sustainability (Brida and Pulina, 2010).

## REFERENCES

Adamou, A. and Clerides, S. (2010), "Prospects and limits of tourism-led growth: The international evidence", *Review of Economic Analysis,* Vol. 3*,* pp. 287-303.

Aisen, A. and Veiga, F.J. (2013), "How does political instability affect economic growth?", *European Journal of Political Economy*, Vol. 29, pp. 151-167.

Antonakakis, N., Dragouni, M. and Filis, G. (2013), "Time-Varying Interdependencies of Tourism and Economic Growth: Evidence from European Countries", *MPRA Munich Personal Repec Archive*, No. 4875. pp. 1-34

Arabi, K.A.M., Abdalla, S.Z.S. (2013), "The impact of human capital on economic growth: Empirical evidence from Sudan", *Research in World Economy*, Vol. 4, No. 2, pp. 43-53.

Arellano, M. and Bond, S. (1991), "Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations", *The Review of Economic Studies*, Vol. 58, No. 2*,* pp. 277-297.

Aslan, A. (2013), "Tourism development and economic growth in the amaediterranean countries: Evidence from panel Grainger causality tests", *Current Issues in Tourism*, Vol. 17, No. 4, pp. 363-372.

Balaguer, J. and Cantavella-Jordà, M. (2002), "Tourism as a long-run economic factor: the Spanish case", *Applied Economics*, Vol. 34, pp.877-884.

Balassa, B. (1978), "Exports and economic growth: further evidence", *Journal of development Economics*, Vol. 5, No. 2, pp. 181-189.

Baltagi, B. (2008), *Econometric analysis of panel data*, 4th ed., John Wiley & Sons, New York, NY.

Barro, R., Sala-i-Martin, X. (1995), *Economic Growth*, MIT Press, Cambridge.

Blundell, R., Bond, S. (1998) "Initial conditions and moment restrictions in dynamic panel data models", *Journal of econometrics*,Vol. 87, No. 1, pp. 115-143.

Copeland, B.R. (1991), Tourism, welfare and de-industrialization in a small open economy. *Economica*, Vol. 58, No. 232, pp. 515-529.

Cortés-Jiménez, I. and Pulina, M. (2010), "Inbound tourism and long-run economic growth", *Current Issues in Tourism*, Vol. 13, No.1, pp. 61-74.

Cortés-Jiménez, I. et al. (2009), "Tourism and exports as a means of growth", *Research Institute of Applied Economics*, WP 2009/10.

Croes, R. (2006), "A paradigm shift to a new strategy for small island economies: Embracing demand side economics for value enchancement and long term economic stability", *Tourism Management*, Vol. 27, pp. 453-465.

Diamond, J. (1977), "Tourism's role in economic development: the case re-examined", *Economic development and cultural change*, Vol. 25, No. 3, pp.539-553.

Durbarry, R. (2002), "The economic contribution of tourism in Mauritius", *Annals of Tourism Research*, Vol. 29, No. 3, pp. 862-865.

Durbarry, R. (2004), "Toruism and economic growth: The case of Mauritius", *Tourism Economic*, Vol. 10, No. 4, pp. 389-401.

Dwyer, L., Forsyth, P. and Spurr, R. (2004), "Evaluating tourism's economic effects: New and old approaches", *Annals of Tourism Research*, Vol. 25, pp. 307-317.

Ekanayake, E.M. and Long, A.E. (2012), "Tourism development and economic growth in developing countries", *International Journal of Business and Finance Research*, Vol. 6, No. 1, pp. 51-63.

Eugenio-Martin, J.L., Martín Morales, N. and Scarpa, R. (2004), "Tourism and economic growth in Latin American countries: A panel data approach", Nota di Lavoro, *Fondazione Eni Enrico Mattei*, No. 26.

Gujarati, D. N. and Porter, D.C. (2008), *Basic Econometric*, 5th ed., McGraw-Hill/Irwin, New York, NY.

Holzner, M. (2011), "Tourism and economic development: The beach disease?", Tourism Management, Vol. 32, No. 4, pp. 922-933.

Kim, H.J., Chen, M.H. and Jang, S.S. (2006), "Tourism expansion and economic development: The case of Taiwan", *Tourism Management*, Vol. 27, No. 5, pp. 925-933.

Kum, et al. (2015): "Tourism and Economic Growth: The Case of Next-11 Countries", *International Journal of Economics and Financial Issues*, Vol 5., No. 4, pp. 1075-1081.

Lanza, A., Pigliaru, F. (2000a), "Why are tourism countries small and fast growing?" in A. Fossati and G.Panella (eds), *Tourism and Sustainable Economic Development*, Kluwer Academic Publishers, Dorderecht, pp.57-69.

Lanza, A., Pigliaru, F. (2000b), "Tourism and economic growth: Does country's size matter?", *Rivista Internazionale di Scienze Economiche e Commerciali*, Vol. 47, No. 1, pp. 77–85.

Lee, C.C. and Chang, C.P. (2008), "Tourism development and economic growth: A closer look at panels", *Tourism Management*, Vol. 29, pp. 180-192.

Mitchell, D.J. (2005), "The impact of government spending on economic growth", *The Heritage Foundation*, Vol. 1813, pp. 1-18.

Neto, F. (2003), "A new approach to sustainable tourism development: Moving beyond environmental protection", *Natural resources forum*, Vol. 27, No. 3, pp. 212-222, Blackwell Publishing Ltd.

Nowak, J.J., Sahli, M. (2008), "Tourism, capital good imports and long-run growth", *Economic Research Forum Working Papers,* No. 382.

Nowak, J.J., Sahli, M. and Cortés-Jiménez, I. (2007), "Tourism, capital good imports and economic growth: theory and evidence for Spain", *Tourism Economics*, Vol.13, pp. 515-536.

Oh, C.O. (2005), "The Contribution of tourism development to economic growth in the Korean economy", *Tourism Management*, Vol. 26, No. 1, pp. 39-44.

Pablo-Romero, M.P and Molina, J.A. (2013), "Tourism and economic growth: A review of empirical literature", *Tourism Management Perspectives*, Vol. 8, pp. 28-41.

Pulido-Fernández, J.I., Cárdenas-García, P.J. and Sánchez-Rivero, M. (2014), Tourism as a tool for economic development in poor countries, *Turizam: znanstveno-stručni časopis*, Vol. 62, No. 3, pp. 309-322.

Rodriguez, F., Rodrik, D. (2001), "Trade policy and economic growth: a skeptic's guide to the cross-national evidence", *NBER Macroeconomics Annual 2000*, Vol. 15, pp. 261-338.

Roodman, D. (2009), "A note on the theme of too many instruments", *Oxford Bulletin of Economics and statistics*, Vol. 71, No. 1, pp. 135-158.

Seetaram, N. and Petit, S. (2012), "Panel data analysis", in Dwyer, L. et al. (eds.), *Handbook of Research Methods in Tourism: Quantitative and Qualitative Approaches*, pp. 127-145.

Seetaram, N., Petit S. (2012), "Panel Data Analysis", in Dwyer, L., Gill, A. i Seetaram, N. (eds.), *Handbook of Research Methods in Tourism: Quantitative and Qualitative Approach.* Edward Elgar, Cheltenham.

Sequeira, T.N. and Campos, C. (2005), "International tourism and economic growth: A panel data approach", *Nota di Lavoro, Fondazione Eni EnricoMattei*, No. 141.

Šimundić, B., (2015), *Makroekonomske determinante emitivnog turizma i njihov utjecaj na gospodarstva receptivnih zemalja*, Doktorska disertacija, Sveučilište u Splitu, Ekonomski fakultet, Split.

Song, H., Dwyer, L., Li, G., Cao, Z. (2012), "Tourism Economics Research: A Review and Assessment", *Annals of Tourism Research*, Vol. 39, No. 3, pp. 1653-1682.

Vietze, C. (2010), *Determinants of Tourism and its Potential for Sustainable Economic Development: Empirical Evidence*, Doctoral dissertation, University of Jena.

Višić, J. and Perić, Š.B. (2011), "The determinants of the value of incoming cross-border mergers & acquisitions in European transition countries", *Communist and Post-Communist Studies*, Vol. 44, No. 3, pp. 173-182.

Wall, G., Mathieson, A. (2006), *Tourism: change, impacts and opportunities,* Pearson Education, Harllow.

World Bank (2015), *World Development Indicators*, viewed 27 November 2015, http://data.worldbank.org/data-catalog/world-development-indicators

World Bank (2015), *World Governance Indicators*, viewed 27 November 2015 http://info.worldbank.org/governance/wgi/index.aspx#home

World Tourism Organization (2015), *UNWTO Annual Report 2014*, UNWTO, Madrid.

World Tourism Organization (2015), *Tourism Highlights, 2015 edition,* UNWTO, Madrid.

World Travel & Tourism Council (2015), *Economic Impact 2015: World,* WTTC, London.

Yanikkaya, H. (2003), "Trade openness and economic growth: a cross-country empirical investigation", *Journal of Development Economics*, Vol. 72, No. 1, pp. 57-89.

**Blanka Šimundić,** PhD, Senior Assistant
University of Split, Faculty of Economics
Department for National Economy
Cvite Fiskovića 5, 21000 Split, Croatia
Phone: +385-21-430728
E-mail: blanka.simundic@efst.hr

**Zvonimir Kuliš,** MA, Head of Operations
Lukas Sport
Ruđera Boškovića 11, 21000 Split, Croatia
Phone: +385(0)989952292
E-mail: zvone.kulis@gmail.com

**Neven Šerić**, PhD, Professor
University of Split, Faculty of Economics
Department for Marketing
Cvite Fiskovića 5, 21000 Split, Croatia
Phone: +385-21-430659
E-mail: nevseric@inet.hr