

THE PULL FACTORS OF TOURISM DEMAND: A PANEL DATA ANALYSIS FOR LATIN AMERICAN AND CARIBBEAN COUNTRIES

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Abstract

Tourism demand is influenced by a number of elements, commonly divided into the pull and push factors. After the discussion on tourism demand determinants, a literature review of previous studies focusing on variables and indicators used as well as results obtained is provided. Drawing on suggestions of other researchers, a model of pull factors of tourism demand divided into three categories: economic, social and tourism competitiveness factors, is proposed. Due to their high but unexploited tourism potential, Latin American and Caribbean countries (LAC) are chosen for empirical analysis. The sample includes 31 countries representative of the population. The variables included in the model are highly determined by the availability of data collected from the World Bank, UNODC, UNESCO and UNWTO for the period 1995-2012. Panel data approach using dynamic panel models and Blundell-Bond estimator is used for the analysis. It confirmed that tourism is affected by all the observed factors proving the model valid and providing basis for policy implications. Although the research topic itself is not novel in tourism research, the paper provides several novel elements: the inclusion of social and tourism supply determinants as opposed to common focus solely on economic ones; the sample of countries analyzed; the time frame of the analysis and the usage of Blundell-Bond estimator not commonly used in this kind of research.

Keywords: tourism demand, pull factors, dynamic panel data, LAC countries

INTRODUCTION

The analysis of tourism demand has drawn attention of numerous tourism academics and practitioners. Vanhove (2005) argues that the estimation of tourism demand is important to enable tourism development planning and management as well as adequate investments. In the same line Louw and Saayman (2013) emphasise that lack of knowledge about future tourism arrivals can lead to missed opportunities and overestimation of tourism demand, and subsequently to inappropriate investments. Therefore, their view is that the forecast of tourism flows is an integral part of the overall strategic planning process in tourism industry. Similarly, Lim (2006) and Sun et al. (2016) point out that tourism demand forecasting can be crucial in formulating adequate development strategies and making decisions about correct resources allocation to support the tourism industry.

Acknowledging the importance of tourism demand insights, the aim of this paper is to analyze its determinants from inbound countries point of view, specifically in Latin American and Caribbean countries (LAC). More precisely, the paper will address the following research question: do economic, social and tourism competitiveness factors affect international tourism demand in LAC countries? To achieve this, firstly a theoretical review of tourism demand and previous studies on the subject are provided. On these insights, an econometric model is build and its results discussed. Finally, policy implications, conclusions and suggestions for further research are given.

1. A REVIEW OF TOURISM DEMAND DETERMINANTS STUDIES

Several authors have offered theoretical foundations of tourism demand determinants. Fretchling (2001) sums these up classifying tourism demand determinants as: *push factors* (i) determined by the characteristics of outbound market such as the population number, GDP and income rates, income distribution, population age, education structure, leisure time and family structure; *pull or attractive factors* (ii) determined by the characteristics of inbound country/destination which include destination attractiveness, social and cultural ties, climate, fashion, destination promotional programs, commercial ties, complementary destination, events; *resistance factors* (iii) which constrain travelling between the origin and destination, such as prices, distance, travel time, border control, customs and other border formalities, safety and physical barriers. Whilst the first two groups affect the tourism demand positively, the resistance factors act restrictively. Vanhove (2005) argues that the determinants of tourism demand are best described by classification by Middleton, Fyall and Morgan (2009) which lists nine main tourism demand factors: economic factors, competitive prices, demographic factors, geographical factors, socio-cultural tourism experience, mobility, state regulations related to tourism, media contents and information and communication technologies. On the other hand, Goeldner i Ritchie (2009) group the determinants of tourism demand into two groups: persistence and resistance factors. Persistence factors include psychographic, demographic and marketing effectiveness factors while travel resistance factors include economic and cultural distance, cost and quality of tourism services and seasonality. Uysal (1998) yet again groups tourism demand determinants into three groups: economic, socio-psychological and exogenous. Economic include disposable income, costs of life, tourism and travel services prices, exchange rates, marketing effectiveness and physical distance; socio-psychological include demographic factors, motives, travel preferences, image and destination perception, previous experiences, cognitive distance, cultural similarities etc., while exogenous factors comprise of political and social environment, economic growth and stability, technological achievements, infrastructure development degree, wars, terrorism, natural disasters, urbanisation degree, events, state regulation level etc.

This short overview of tourism demand determinants shows the diverse nature of elements which influence it. Such theoretical foundations provide a framework for understanding the research subject and form the basis for its empirical study. Simultaneously, findings of previous empirical studies are the starting point for new studies in the subject area. They are provided in the remainder of this section with emphasis being put on variables and indicators used.

Tourism demand determinants have gained researchers' attention with the increased growth of international tourism. Pioneer works have appeared during the 1960s when tourism demand was studied by Guthrie (1961), Gerakis (1965) and Gray (1966). Till nowadays, numerous papers have been published on the subject and few authors have given a systematic overview of the existing research, most noted ones being Martin and Witt (1987), Crouch (1994), Witt and Witt (1995), Lim (1997, 2006), Li, Song and Witt (2005), Song and Li (2008), Song, Witt and Li (2009), Song et al. (2010), and, more recently, Ahmed (2015). His analysis includes 400 empirical research papers on tourism demand in the period 1960-2014 and findings are provided in Table 1.

These reviews have uncovered that the most common indicator for tourism demand (being regarded as the dependent variable) is the number of tourism arrivals, followed by tourism receipts from the inbound country point of view i.e. tourism expenditure from the outbound country point of view. Other tourism demand indicators are found to much lesser extent and include travel export/import, duration of stay, number of overnights, number of flights, etc. (Lim, 2006).

Table 1: **Categories of dependent and independent variables in previous studies**

Time period	Dependent variables				
	Number of tourist arrivals/ departures	Tourist expenditures	Length of stay	Others	Total studies
1960-1970	17	16	3	20	56
1971-1980	35	31	7	20	93
1981-1990	45	27	5	21	98
1991-2000	30	21	3	21	75
2001-2014	45	8	4	21	78
Total studies	172	103	22	103	400
Percentage	43%	26%	5%	26%	100%

Time period	Independent variables					
	Tourist income	Tourism price	Exchange rate	Travelling costs	Population	Total studies
1960-1970	25	17	8	17	1	68
1971-1980	48	35	13	32	7	135
1981-1990	31	58	35	40	9	173
1991-2000	31	33	17	17	3	101
2001-2014	56	63	33	38	4	195
Total studies	191	206	106	144	24	671
Percentage	28%	31%	16%	21%	4%	100%

Source: adapted according to Ahmed (2015)

The analysis of existing studies has also revealed the most common independent variables explaining the tourism demand. As summed up by Lim (2006.) and Ahmed (2015.), these are income, price, exchange rate and travel/transportation costs. Besides these, there are also other variables used which vary according to research goals and context. Based on a comprehensive overview of 124 papers in 1960-2003 period, Lim (2006) lists these as trends, dynamics, competing destinations/goods, seasonal factors,

marketing expenditures, migration, business travel/trade, economic activity indicators, qualitative factors and others.

It is important to notice that in tourism demand analysis push and pull factors are often intertwined. Therefore, when analyzing each variable, care needs to be taken to determine whether it is viewed from the inbound (pull) or the outbound (push) destination perspective. However, as Papatheodorou (2010, cited in Šimundić, 2015) stresses, simultaneous coverage of push and pull factors is not advisable since it makes rational identification of leading tourism demand determinants more difficult. Adopting this critic, as well as Mehmetoglu's (2011) finding about the even effect of push and pull factors on tourism demand, the analysis in this paper is focused solely on pull factors.

Variable *income* (in the country of tourist) is most commonly used as the independent variable of tourism demand. Due to their availability, most often used indicators are gross national product (GNP), and gross domestic product (GDP). However, some authors pose certain objections to their usage suggesting that disposable income of tourists would be more appropriate (Lim and McAller, 2002, as cited in Šimundić, 2015). Studies consider income to be the most important variable since income level directly influences the individual's decision to engage in tourism activities (Ahmed, 2015). On the other hand, Song, Witt and Li (2009.) warn that some studies have shown that the income level is not always a significant factor of tourism demand.

On the other hand, the inbound country GDP, as an important pull factor, is also found in studies as variable explaining tourism demand, but with much less frequency. Namely, in this line of research GDP (or GNP) is the indicator of economic growth which is the necessary precondition for maintaining the tourism growth (Eugenio-Martín, Morales and Scarpa, 2004). The authors posit that satisfying the increased tourism demand requires moving to a higher production level i.e. higher GDP. Economic development, as a necessary precondition of tourism growth, is especially highlighted in developing countries which mostly view tourism as an option for fostering economic development i.e. fighting the economic underdevelopment (Tefler and Sharpley, 2002). Similarly, Petrić (2012, 2014) stresses that tourism cannot optimally contribute to the overall development unless the whole economy of inbound country is diversified and on adequate development level. If it is not the case, tourism induced imports mostly diminish the positive tourism growth effects. Also, because of other structural mismatchings which decrease tourism effects (such as an inadequate education level, low development of entrepreneurship, etc.), adequate level of economic development is a necessary requirement for tourism development and progress (Adamou and Clerides, 2009; Petrić, 2014).

Positive effect of inbound countries' economic growth on tourism demand is found in numerous studies: Eugenio-Martín, Morales and Scarpa (2004) for LAC countries; (2014) for all world and OECD countries; Eilat i Einav (2004) for all world and specifically less-developed countries; Lee and Chang (2008) for non-OECD countries; Samimi, Sadeghi and Sadeghi (2011) for developing countries; Çağlayan, Şak and Karymshakov (2012) for world, European, American, LAC and Caribbean countries sand Aslan (2014) for Mediterranean countries. In his review of tourism demand

studies in 1960-2014 period, Ahmed (2015) concludes that from the goal of mere impact on tourist numbers/arrivals increase in the 1960-ies, the focus in later studies, especially after 2000, has shifted to establishing the relation between tourism and economic growth since both are the cause and the effect of achieving economic sustainability.

Second most commonly used explanatory variable of tourism demand is price. It relates to costs of goods and services for the tourist in tourism destination (Lim, 2006). Price competitiveness is extremely important for the inbound tourism destination, because, as noted by Durbarry and Sinclair (2003), it is a crucial variable determining destinations' share in the international tourism market. However, as Witt and Witt (1995) point out, tourism price index (TPI) is extremely rarely available so commonly used indicator for this variable is consumer price index (CPI), followed by effective exchange rate. In practice, there are a number of combinations for this variable approximation using these indicators. Analyzing the existing body of research Šimundić (2015) finds that the relationship between the tourism demand and proxy variables for prices is negative.

Besides income and prices, other variables also affect tourism demand. In research literature, travel costs are often used and are found to be in negative relationship with tourism demand. Lim (2006) notes that researchers never question the theoretical foundations/validity of this variable but rarely include it in their empirical research, the reason being the unavailability of data (Habibi and Rahim, 2009.). Most commonly used proxy variables are air ticket prices (for air traffic), oil derivate prices (for road traffic) and geographical distance between the countries (Lim, 2006; Song, Witt and Li, 2009). Song, Witt and Li (2009.) find that the research did not always confirm the significance of travel costs impact on tourism demand (Kulendran and King, 1997) explaining it by lack of precise measurement of travel costs. As an important variable, Ahmed (2015) also names the population of the outbound country with the relationship between the two variables being positive. Population growth is found to be one of the most significant forces of global tourism growth (Amelung and Viner, 2006) while Witt and Witt (1995) argue that it is not only the natural population growth but also the migrations that contribute to it.

From the inbound country perspective, extremely important are tourism competitiveness factors reflected in two domains: destination attractiveness and development of tourism infrastructure. Most often used proxy variable for the former is the number of UNESCO sites (Arezki, Cherif and Piotrowski, 2009, Cuiluc, 2014) and for the latter the accommodation capacity, commonly the number of rooms (Naude and Sayman, 2005, Khadaroo and Seetanah, 2007). The development of tourism infrastructure is an important determinant of tourism demand but the same goes for the overall infrastructure as well. Investigating the importance of inbound country infrastructure on tourism arrivals, Khadaroo and Seetanah (2007) have come to the conclusion that development of traffic infrastructure (measured by the net investment in land, air and sea infrastructure) has an impact on arrivals of tourists from other countries while other types of infrastructure (water supply, sewerage, electricity) are not as important. Furthermore, Eugenio-Martín, Morales and Scarpa (2004) have found that the infrastructure development is especially important determinant of tourism arrivals in less developed countries.

One of the variables used for tourism competitiveness is investment in marketing. Song et al. (2010) note that this variable is often excluded from the empirical studies despite being an important determinant of tourism demand. The reason is, yet again, unavailability of data. Some studies include this variable and use the number of internet users in inbound countries a proxy to capture the effects of networks and information on tourist flows (Naude and Sayman, 2005). However, Witt and Martin (1987) stress that the interpretation of results in studies which use imprecise approximations of marketing activities needs to be taken with caution.

One of the main objections to existing studies on tourism demand determinants is the prevalence of economic determinants and minimal representation of social ones (Ahmed, 2015). Adopting this critic, different social factors in inbound countries need and will be introduced in the analysis here. Most important social determinants of tourism demand are *security* and *political stability* (Neumayer, 2003). As proxies for the former different rates of violence, mortality and criminal are used while for the latter it is specific indexes such as *World Governance Indicators*. Eugenio-Martín, Morales and Scarpa (2004) argue that security and political stability are important determinants of tourism growth but add also *education* (measured by government investments in education, number of enrolled in secondary and tertiary education etc.). This determinant is especially important in less developed countries. The relationship between social factors and tourism demand is positive i.e., the higher level of security, political stability and education in inbound countries, the higher the number of tourism arrivals in tourism countries.

The insights provided by the empirical studies review demonstrate that the tourism demand is affected by a number of attractive (pull) and pull, economic and social factors. These vary depending on the destination characteristics and context so no generally accepted set of variables that can explain the tourism demand exists (Šimundić, 2015). Regardless of the fact that they provide partial views of the matter, these studies produce many valuable insights. However, previous studies also have several inherent deficiencies which can be summarized in few points (Ahmed, 2015): the focus on the international tourism with minimal attention given to domestic tourism; minimal inclusion of social determinants; scarce number of studies using primary data and minimal attention given to negative consequences/costs of tourism demand increase. The analysis in this paper will contribute to diminishing these deficiencies by addressing one of them – the inclusion of social factors.

2. MODEL SPECIFICATION AND ECONOMETRIC METHOD

The literature review demonstrates that push and pull factors are both significant determinants of tourism demand. However, drawing on Mehmetoglu's (2011) finding about an even effect of push and pull factors and Papatheodorou's (2010) suggestion on separating these in the analysis, this paper focuses on pull factors. Furthermore, following the insights of previous studies and adopting Ahmed's (2015) critic about prevalence of economic and low inclusion of social determinants, the research model is conceptualized with pull factors being divided into three groups: economic (i), social (ii) and tourism competitiveness determinants (iii) (Table 2).

Dependent variable of the model is tourism demand and the indicator used is *number of tourists per capita*¹ while in each of three independent variables groups, two indicators are selected.

Economic variables included in the model are economic growth and price level². For inbound countries and especially developing ones such as LAC, *economic growth* is crucial since satisfying the growing tourism demand requires an increase in current level of production (Eugenio-Martín, Morales and Scarpa, 2004). Thus, it is expected that economic growth positively affects the tourism demand. Indicator used is GDP per capita. On the other hand, based on theoretical foundations discussed earlier, the expected relation of *price level* and tourism demand is negative (Lim, 2006). Indicator used is *price level ratio* or *national price level* calculated by dividing the PPP conversion factor by market exchange rate. It shows how many dollars are needed to buy a dollar's worth of goods in a country as compared to the United States (World Bank, 2015).

Social variables included in the model are political stability and criminal. They are chosen considering the LAC countries context i.e. still not finished third wave of democratization process (Hagopian and Mainwaring, 2005) and highest rates of criminal in the world (Tuluy, 2013). *Political stability* is very important for tourism destination since its lack and presence of political violence are detrimental to destination image and, subsequently, for tourist flows (Sönmez, 1998). Indicator used is World Bank's index of political stability and absence of violence/terrorism. Presence of *criminal* in destination makes destination more risky and previous studies have found that country risk is a significant negative determinant of tourism (Sequera and Nunes, 2008). The indicator used is the number of intentional homicides per 100.000 inhabitants.

Finally, as factors of tourism competitiveness, tourism infrastructure and destination attractiveness are included in the model. *Tourism infrastructure* is approximated via the number of hotel rooms (per capita) after Naude and Saayman's (2005) argument that hotel rooms are an indicator of the capacity/competitiveness of the tourism sector. On the other hand, *destination attractiveness* is a concept which is not easily measurable. However, Arzeki, Cherif and Pitrowski (2009) indicate that a powerful boost to the attractiveness of a certain area is its inscription in the UNESCO World Heritage List. Owing to LAC countries richness in natural and cultural sites (de Oliveira Santos, 2015, dully explained later), it can be used as the approximation of destination attractiveness. The indicator used is total number of UNESCO sites per 100.000 inhabitants. Table 2 summarizes all variables, indicators, labels, expected signs and data sources.

¹ It is derived from formula T_t/P_t where T is number international inbound tourists and P population, t respective year.

² Although Fretchling (2001) lists prices under resistance factors, since pull factors are those acting from the inbound country point of view, we consider it prices be a potential pull factor and thus include it in our model.

Table 2: **Model specifications**

Variable	Indicator	Label	Expected sign	Source
Tourism demand	Number of tourists per capita	TOUR		WDI
Economic growth	GDP per capita	GDP	+	WDI
Price level	Price level ratio	PRICE	-	WDI
Political stability	Index of political stability	POLIT	+	WGI
Criminal	Intentional homicides per 100000 inhabitants	CRIM	-	UNODC
Tourism infrastructure	Number of hotel rooms per capita	ROOM	+	UNWTO
Destination attractiveness	UNESCO sites per 100000 inhabitants	UNESCO	+	UNESCO

Source: compiled by the authors

LAC countries are chosen as the object of the study for several reasons. Firstly, these countries are abundant with natural and cultural attractions, (de Oliveira Santos, 2015). According to IUCN list (WEF, 2015), 6 out of top 10 countries in biodiversity come from LAC region. Moreover, according to Travel & Tourism Competitiveness Index (TTCI) (WEF, 2015), Brazil is the world leader in natural attractions and Costa Rica and Mexico also list in the top 5. Furthermore, Costa Rica is often taken as a global benchmark for natural tourism (Simms, 2010) and several more states from the region are a part of the „world elite“ in terms of natural tourism attractions (de Oliveira Santos, 2015). On the other hand, as Santana (2001) points out, this is probably the least efficient world region in terms of tourism resources usage absorbing in 2014 merely 7.2% of global tourism market (UNWTO, 2015). Reasons for this are found in different structural problems that hinder tourism development, most important ones being economic and financial instability, structural unemployment, inflatory pressures, social inequality, uncontrolled urbanization, lack of public security, crime, health problems and political instability (Strizzi and Meis, 2001).

Data for 31 LAC countries (Antigua and Barbuda, Argentina, Bahamas, Barbados, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, Ecuador, El Salvador, Grenada, Guatemala, Guyana, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Puerto Rico, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Trinidad and Tobago, Uruguay, Venezuela) for the period of 18 years (1995-2012) were collected from WDI (2015), WGI (2015), UNODC (2014), UNESCO (2015) and UNWTO (2005, 2009, 2014). In Table 3 descriptive statistics for each variable are presented.

Table 3: Sample descriptive statistics

Variable	Mean	Std. Dev.	Min.	Max.	N
TOUR	0,6993614	1,040397	0,0122331	5,754214	576
GDP	6125,058	5092,255	915,2083	24202,13	616
PRICE	0,5479721	0,1846734	0,2224786	1,131418	613
POLIT	0,0401626	0,7434997	-2,39	1,41	492
CRIM	20,66175	15,9997	1,4	91,8	414
ROOM	956,3353	1148,501	53,65107	5475,103	375
UNESCO	0,1839443	0,4380756	0	2,331655	620

Source: compiled by the authors using Stata 13.0software

The analysis is based on the following dynamic panel data model:

$$TOUR_{it} = \mu + \gamma TOUR_{i,t-1} + \beta_1 GDP_{it} + \beta_2 PRICE_{it} + \beta_3 POLIT_{it} + \beta_4 CRIM_{it} + \beta_5 ROOM_{it} + \beta_6 UNESCO_{it} + \alpha_i + \varepsilon_{it} \quad (1)$$

where $i=1,2,\dots,33$ and $t=1995, 1996,\dots,2012$, μ is an intercept, γ is a parameter of lagged dependent variable and $\beta_1, \beta_2,\dots, \beta_6$ are the parameters of exogenous variables. It is assumed that ε_{it} are IID($0, \sigma_\varepsilon^2$). α_i is unobservable individual-specific effect that is time invariant and it accounts for any individuals.

As Song, Wong and Chon (2003) argue, tourism demand is a dynamic process so the model used for analysis should reflect this feature. This is one of the reasons dynamic panel data model is used. The other reason is the advantage of panel data analysis incorporating much richer information than both time series and cross sectional data (Song and Li, 2008). Same authors also point out that this approach reduces the problem of multicollinearity and provides more degrees of freedom in model estimation. It is thus suitable for demand forecasting in tourism when time series for all variables are shorter, and cross-sectional information for the variables are available. Seetaram and Petit (2012) indicate that one of the most important advantages of panel data modelling is that it allows for the control of heterogeneity in the sample.

Model is estimated using Blundell and Bond (1998) GMM (generalized methods of moments) estimator. It is an improved version of Arellano and Bond (1991) GMM estimator and is the appropriate choice considering our sample characteristics (data sample containing more cross than time observations and relatively moderate number of countries). Blundell and Bond two step estimator was chosen over one step estimator because the latter 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).

3. RESULTS AND DISCUSSION

In the panel data analysis there is no formal test to check for the possible multicollinearity among independent variables. Therefore, Baltagi (2008) suggests the usage of pair wise correlation matrix. It is presented in Table 4 with Pearson's correlation coefficients between independent variables.

Table 4: **Pair wise correlations matrix among independent variables**

Variable	GDP	PRICE	POLIT	CRIM	ROOM	UNESCO
GDP	1,0000					
PRICE	0,7042*	1,0000				
POLIT	0,5013*	0,5732*	1,0000			
CRIM	-0,1045*	-0,1075*	-0,3147*	1,0000		
ROOM	0,5823*	0,6591*	0,5930*	-0,0847	1,0000	
UNESCO	0,1193*	0,1806*	0,3899*	-0,0009	0,3803*	1,0000

*statistical significance at 5%.

Source: compiled by the authors using software Stata 13.0

According to Gujarati and Porter (2008), serious problem of multicollinearity exists when Pearson's correlation coefficients between independent variables in the model exceed the 0,8 threshold. As presented in Table 4, all coefficients range from 0,3147 to 0,7042 so it is possible to continue with the estimation.

Using statistical software Stata 13.0, model of determinants of tourism demand is computed using two step Blundell and Bond GMM estimator and results are presented in Table 5.

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

Explanatory variables	Coefficients
L.TOUR	0,697*** (0,00260)
GDP	0,0000215*** (0,00000125)
PRICE	-0,417*** (0,0315)
POLIT	0,170*** (0,00487)
CRIM	-0,00268*** (0,000254)
ROOM	0,000152*** (0,00000209)
UNESCO	0,0369*** (0,00449)

Explanatory variables	Coefficients
_cons	0,204*** (0,0190)
Number of observations	298
Number of groups	31
Number of instruments	29
Sargan test (p-value)	0,2634
m1 test (p-value)	0,0420
m2 test (p-value)	0,6506
Notes: * $p < 0,1$, ** $p < 0,05$, *** $p < 0,01$ Standard errors in parentheses	

Source: compiled by the authors using software Stata 13.0

Before analyzing the results, the diagnostic tests are conducted to confirm that the results obtained by the model are valid. Most common tests in dynamic panel data analyses are Sargan test and tests for serial correlation. Sargan test is the test of over identifying restrictions and if null hypothesis³ is not rejected it means that all chosen instruments are valid and that dynamic panel model is adequately specified. The first and second order serial correlation in residuals is tested by m1 and m2 statistics. Null hypothesis (of both tests) shows there is no serial correlation. These two key tests for serial correlation in dynamic panel data are derived by Arellano and Bond (1991). There is no misspecification of the model if there is no second-order serial correlation (if null hypothesis of m2 is not rejected). Sargan test doesn't reject the over-identification restrictions while the absence of second-order serial correlation (in m2 test) is also not rejected. These findings confirm the validity of model specification.

Coefficient of lagged dependent variable is positive, less than 1 and statistically significant at level of 1%. This confirms that tourism demand is a dynamic process and that usage of dynamic panel model is appropriate. All variables are statistically significant at 1% level and in accordance with theoretically expected signs.

The data analysis performed showed that the tourism demand is, as presumed by the model, impacted by all three groups of determinants - economic, social and tourism competitiveness ones. Also, the impacts presumed were confirmed with economic growth, political stability, tourism infrastructure and destination attractiveness having a positive and price level and criminal having a negative impact. Thus, the initial model proved valid.

Besides confirming the theoretical assumptions, these findings offer valuable information for policymakers. Namely, as found in the previous research (Sharpley and Tefler, 2002; Eugenio-Martín, Morales and Scarpa, 2004; Petrić 2012, 2014) results confirm it is important to stimulate and maintain economic growth as a precondition for further tourism development. However, this needs to be accompanied by improvements of social factors in the area. While these have an obvious impact on the inhabitants' lives, the analysis shows they also have a statistically significant impact on tourism

³ stating there is no correlation between the instruments and the errors

demand figures. Thus, the enhancement of these factors will make destinations more appealing to international visitors. Research results also highlight the importance of competitive pricing in destinations. Subsequently, taxing policies, tourism and labour legislation as well as credit and financial incentives, among other, can play significant role in boosting these elements and are to be considered by the policy makers. These findings once more shed light on the complex and multifaceted nature of tourism and its relations with other socio-economic areas i.e. government departments.

While previous implications are addressed to general policymakers, last but not least are suggestions for tourism policymakers. The research presented implicates their activities should be aimed at advancement of quantity and availability of tourism infrastructure as well as preservation of attractive natural and cultural resources. However since all the observed economic, social and tourism competitiveness factors affect the tourism demand, it is clear that coordinated activities of policy makers from different areas are required to boost the tourism demand in this region. As such, this study supports the authors' profound belief that inciting tourism demand requires wide range, synergic planning and action taking from diverse and numerous stakeholders.

4. CONCLUSION

The determinants of tourism demand have gained researchers' attention, but not to the extent as the impact of tourism growth on economic development. However, the starting point of this study is that without the insights on the drivers of tourism demand, the knowledge on the consequences of the former is handicapped. Tourism demand is influenced by numerous elements, commonly divided into the pull and push factors. Considering the criticism of some authors about mixing pull and push factors, this paper has focused on pull factors which were divided into three groups: economic, social and determinants of tourism competitiveness. The data analysis was performed on 31 LAC countries for 1995-2012 period. Dynamic panel data model with two step Blundell and Bond estimator was used and diagnostic tests showed the model was well specified. The results showed that the tourism demand is affected by economic (level of economic development and the level of prices in the area), social (political stability and country risk) and tourism competitiveness (tourism infrastructure and destination attractiveness) factors included in the model.

The study adds to the existing body of research by introducing several novel elements in the analysis. These are the pull factors of the tourism demand based not only on economic but also social and tourism competitiveness determinants; the sample of countries observed, the time frame of the analysis and the usage of Blundell-Bond estimator not commonly used in this kind of research. Besides these contributions, the paper provides valuable implications for general and tourism policymakers. However, as any other study, this one is also not without limitations, mostly related to the empirical part of the paper. They refer to the unbalanced panel data used and the inability to include more factors in all three groups of determinants due to data unavailability. These are thus set as suggestions for future research. Other suggestions are to further validate the model and make comparisons by performing the analysis on

other countries (i), and to enhance the model including other external influences/variables (ii).

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