Tourism and Economic Growth: The Case of Next-11 Countries

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ABSTRACT

The aim of this paper is to analyse the relationship between tourism activity and economic growth for Next-11 (N-11) countries. It is concluded that there is a long run relationship between tourist arrivals and gross domestic product (GDP) and tourism arrivals has positive effect on GDP growth in N-11 countries. We find that a unidirectional causality from economic growth to tourism is valid confirming economic driven tourism growth hypothesis.

Keywords: Tourism Development, Economic Growth, Causality, Next-11
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1. INTRODUCTION

A country's development and economic growth as well as its ability to narrow the development gap with other countries depends on finding solutions to economic problems such as unemployment, balance of payments deficit, fiscal and monetary macroeconomic instability. In this sense, tourism sector is considered a key factor.

According to the World Travel and Tourism Council's latest annual research (WTTC, 2013), travel and tourism's contribution to world gross domestic product (GDP) grew for the fourth consecutive year in 2013, rising to a total of 9.5% of world GDP (US$7 trillion). It created more than 4.7 million new jobs. The sector has the potential to contribute the employment of around 266 million people. The year 2014 looks equally positive. Travel and tourism GDP is expected to grow by 4.3%. It is also expected that the tourism sector will generate 6.5 million new jobs.

International tourism is one of the largest and fastest growing services industry in the world (Suresh and Senthilnathan, 2014). Since tourism is a major source of foreign currency, it provides positive externalities and creates added value for the real sector. It encourages capital accumulation and the creation of new investment activities (Kumar et al., 2014). Therefore tourism activities are one of the crucial factors in economic growth.

Generally tourists demand main goods and services such as accommodation, transportation facilities, retail trade and cultural, sports and recreational services in host country. Fulfillment of the tourists' necesities affect many sectors in the economy.

1.1. Income Sector
Tourists contribute to sales, profits, tax revenues and thus lead to general income growth in host countries (Fawaz and Rahnama, 2014). A part of this income is allocated for repaying the production factors by local businesses as wages, rents and interest payments and a part use for dividend distribution (Brida et al., 2014). In addition, government's increased investment in tourism yields income multipliers besides the direct income effect (Suresh and Senthilnathan, 2014). Once aggregate income level goes up and sufficient economic growth is realised, economic inequality will decrease and income distribution will be balanced.

1.2. Employment Sector
With the increase in production, new business opportunities are created both in this sector and in related sectors (Pavlic et al., 2015). This is particularly very important for developing countries that have capital scarce capital and labor extensive indusrties. In accordance with World Tourism and Travel Council, tourism is the world's largest industry that contributes to employment in terms of capital investment and added value (Aslan, 2008).

1.3. Cultural Sector

The living standards of populations improve (Dritsakis and Athanasiadis, 2000. p. 3). The labor force employed leads to an increase in the country's human capital investment in areas such as communications, catering, health care, transportation etc., (Lee and Chang, 2008). Also due to skilled labor requirements in the labor-extensive tourism sector, tourism provides an increase in household education (Fawaz and Rahnama, 2014).

1.4. Fiscal Sector

Tourism sector provides beneficial results in public economics, especially at a local level (Dritsakis and Athanasiadis, 2000). As long as it is augmenting a country's tax revenues, governments have increased investment in new infrastructure like road construction, water and sewage systems, communication networks, rural schools, sanitation or health improvements (Richardson, 2010; Tang and Abosedra, 2014). When public investments rise again, positive externalities related to technology and information will be generated with increasing tourist arrivals in the long term. However, additional infrastructure expenditure arising from increasing tourist accommodation will require additional financing requirements for water, road, transportation, health and energy (Lee and Chang, 2008).

1.5. Political Sector

Some problems like the increase in air pollution, environmental pollution, traffic pollution, uncontrolled growth, natural resource degradation, theft, criminal tendencies in the host country impose additional economic costs and bring social, cultural and ecological disadvantages (Yildirim and Ocal, 2004). This may be under the influence of government's policy-making. For sustainable democracy, government should take measures to prevent political instability when income level increases (Tang and Abosedra, 2014).

1.6. Business Sector

Tourism has widespread positive impact on economic income. Increased competition results in economies of scale in production (Schubert et al., 2011; Suresh and Senthilnathan, 2014. p. 2). In addition, tourism brings technology, knowledge, research and development and human capital to the country (Schubert et al., 2011). As well as increased efficiency, the unit cost of goods and services benefit from economies of scale. Thus, positive economies of scale decreases production costs for local businesses (Antonakakis et al., 2013; Brida et al., 2014; Samimi et al., 2011).

1.7. Household Sector

Tourist arrivals inflate the cost of housing and retail prices in the area, especially on a seasonal basis (Fawaz and Rahnama, 2014). Expenditure of foreign tourists "which is also called demonstration effect" may also change local consumption patterns and this effect may be similarly inflationary (Lee and Chang, 2008). Currency inflow arising from the tourist arrivals may affect goods and services' quality and quantity at the same time (Fawaz and Rahnama, 2014).

Among the social, physical and economic impacts of tourism, the economic ones are relatively easy to measure. In general, net economic impact tends to be positive, despite the fact that the advantages that were mentioned so far, go along with a number of environmental and social cultural costs (Fawaz and Rahnama, 2014).

In this sense, policy makers who are responsible for the tourism strategy can be dragged into a dilemma. Assessment of measurable economic benefits and costs of tourism will enlighten the policy makers be able to demonstrate for economic policy (Lee and Chang, 2008).

In this paper for the first time, tourism arrival and economic growth relationship for Next-11 (N-11) countries, Bangladesh, Egypt, Indonesia, Iran, Mexico, Nigeria, Pakistan, the Philippines, Turkey, South Korea and Vietnam, identified by Goldman Sachs investment bank and economist Jim O'Neill in a research paper as having a high potential of becoming, along with the BRICs, among the world's largest economies in the 21st century (Wikipedia, N-11).

The remainder of the paper is organised as follows: In Section 2 we discuss the literature review for tourism devalopment and economic growth linkage. In Section 3 we discuss the methodology, the data and the results. Section 4 presents the concluding section.

2. LITERATURE REVIEW

The relationship between tourism and economic growth has generally been addressed by two different components in the economic literature. The first was derived from the Keynesian theory of multiplier. According to Keynesian approach, international tourism can be accepted as an exogenous component of aggregate demand that has a positive effect on income, employment and so on, thus leading to economic growth through the multiplier (Suresh and Senthilnathan, 2014). Multiplier effects mean that any government expenditure about cycles of spending that increases employment and income regardless of the form of the expenditure. Tourism yields income and employment multiplier effects in addition to direct income and employment effects (Albaladejo et al., 2014; Kumar et al., 2014; Suresh and Senthilnathan, 2014). Besides, tourism has a crucial role indirectly by completing other factors of production in the process of economic growth (Tugcu, 2014). Once tourism receipts increase, a country's competitiveness will improve. Earnings from tourism have systematically compensated a country's trade imbalance (Balaguer and Cantavella-Jorda, 2002). However, this approach is static and doesn't allow an inference of the long-term impact of tourism development (Aslan, 2013).

An alternative approach, which is the most commonly admitted claim in the literature, elucidate the potential of endogenous growth theory and the new trade theory adopted to the tourism sector. Thus like the hypothesis of export-led growth, four hypotheses can be identified based on economic growth relationship theory (Bouzahzah and El-Menyari, 2013, Oh, 2005).

2.1. Tourism-Led Growth (TLG) Hypothesis

The TLG postulate that tourism is a main determinant of overall long-term economic growth. Tourism receipts can be used to

import capital goods, which in turn produce goods and services leading to economic growth in the host country. The foreign exchange earnings from tourism receipts can be used to finance more imports (Brida et al., 2014).

If the TLG hypothesis is valid for economic growth, effective public policies and institutions provide sufficient contribution to physical and human capital investment and help reach economic stability by supporting the infrastructure for international tourism (Kumar et al., 2014). Tourism investment can encourage local firms whose volume of output increase because of greater efficiency due to the increased competition (Pavlic et al., 2014). Increased competition leads to positive scale economies and enhanced efficiency in the host country and other international tourist destinations (Samimi et al., 2011). As a result, the tourism-led economic growth hypothesis recognizes a unidirectional causal relationship from tourism to the whole economy. Thus, government resources should be allocated to the primary sector to improve the overall economy (Kim et al., 2006).

2.2. Economic Driven Tourism Growth Hypothesis (EDTG)

Realization of the development and economic growth strategy of a country begins by the application of well designed economic policies and international trade policy, governance structures, and investments in physical and human capital. The socio-economic power that is obtained this way encourages tourism activity through better use of the available resources and political stability (Antonakakis et al., 2013). This results in a unidirectional causality from economic growth to tourism. This reversed causality suggested that an expansion in tourism will happen when every effort is made to increase overall economic growth (Lee and Chang, 2008).

2.3. Neutrality Hypothesis (NoCausal-NC)

There is no causality between economic growth and tourism. Thereby, implementation of development policies and gains obtained from tourism are independent (Antonakakis et al., 2013, Tugcu, 2014). Hence tourism improvement strategies by tourism managers and decision-makers may not be effective (Oh, 2005).

2.4. Bidirectional Hypothesis (BiCausal-BC)

According to the hypothesis, tourism policy affects economic growth performance and economic growth in turn affects the tourism sector (Antonakakis et al., 2013). Since there is a bidirectional causality between economic growth and tourism, an improvement in both areas will benefit both (Chen and Chiou-Wei, 2009, Lee and Chang, 2008). Resources should be allocated to tourism and all other related sectors equally (Kim et al., 2006).

In the mentioned literature above, the relationship between tourism and economic growth is analysed by causality (Pablo-Romero and Molina, 2013). The direction of causality between tourism and economic growth may vary according to the political decisions and tourism marketing (Oh, 2005). Causality test results give information about the government's national economic growth policy on where and how limited resources should be first allocated. Tourism-related regulations and changes can be made

based on the causality results (Kim et al., 2006). For the causality analysis, static and dynamic regression models are used in international tourism literature. But in practice dynamic regression analysis must be preferred widely because of the disadvantages of general static regression such as structural imbalances and spurious regression (Aslan, 2008).

The current theoretical and empirical work along with its diversified results suggests that there cannot be a priori accepted generally applicable hypothesis (Antonakakis et al., 2013). The empirical studies reach contradictory conclusions. This stems from a number of factors such as the preferred econometric methods or models, consideration of different time periods, distinct economic structures (relative weight of tourism receipts in GDP, travel restrictions, exports and trade balance deficit), initial conditions (lower national income or population etc.), sectoral internations, historical background for a country, political, sociological, environmental, ecological differences or neglect of exchange rate factors (Aslan, 2008; Gunduz and Hatemi, 2005; Kim et al., 2006; Pablo-Romero and Molina, 2013; Tugcu, 2014).

Albaladejo et al. (2014), analyse the tourism and economic growth relationship over the period 1970-2010 using annual data in Spain. They have tested Johansen cointegration, error correction model (ECM) and Granger causality for a dynamic model. Authors infer that changes in economic growth appear to cause growth in tourist arrivals in the short term. In the long run tourist arrivals, quality of tourism accommodations and foreign GDP have a positive effect on Spanish real GDP. Thus their findings support a two-way causal relationship between real GDP growth and tourism growth and they confirm the BC hypothesis for the short and long run in Spain.

Antonakakis et al. (2013) investigate the relationship between tourism and economic growth using the vector autoregressive model (VAR) model for ten selected European countries over the periods of 1995:Q1-2013:Q12 for Germany, Italy, Spain, 1995:Q3-2011:Q12 for Greece, 1996:Q1-2012:Q12 for Austria, 1998:Q1-2010:Q12 for UK, 2000:Q1-2012:Q12 for Cyprus, Netherlands, Portugal and Sweden. Results show the TLG hypothesis is evident for Italy-Netherlands; the EDTG hypothesis observed in Cyprus, Germany, Greece; the BC hypothesis in the cases of Austria, Portugal, Spain and the NC hypothesis can be identified for Sweden and UK.

Aslan (2008), investigate the causal relationship between tourism and economic growth for the period of 1992:Q1- 2007:Q2 implementing Johansen co-integration and error correction-augmented Granger causality tests for Turkey. Results support that the TLG hypothesis is valid in case of Turkey.

Aslan (2013), examine the causal relationship between tourism development and economic growth using the newly developed panel Granger causality tests for the 1995-2010 period in the Mediterranean countries. His empirical evidence indicates the EDTG hypothesis is supported for Spain, Italy, Tunisia, Cyprus, Croatia, Bulgaria and Greece. The TLG hypothesis valid for Turkey and Israel, the BC hypothesis gain accepted for Portugal, the NC hypothesis held in Malta and Egypt.

Aslanturk et al. (2011), analyse the causal link between tourism receipts and GDP relationship using annual data and applying Granger based vector ECM (VECM) over the period 1963-2010 in Turkey. Authors find tourism receipts have positive effects on GDP early 1980's. When they have applied VECM, the results indicate there is no Granger causality between the series of variables. Thus the NC hypothesis is valid for Turkey.

Balaguer and Cantavella-Jorda (2002) have used a standard Granger causality test over the period 1975-1997 in Spain. Results show that international tourism earnings affect positively the Spanish economic growth. Thus they have found empirical support for the TLG hypothesis.

Belloumi (2010), interrogate the causal relationship between tourism and economic growth over the term of 1970-2007 in Tunisia. He has applied cointegration and causality test technics. Results show that no Granger causality in the short run, real tourism Granger cause real GDP in the long run. Accordingly while the NC hypothesis valid for the short run, the TLG hypothesis accepts for the long run.

Chen and Chiou-Wei (2009), analyse the causal relationship between tourism expansion and economic growth over the period 1975:Q1-2007:Q1 for Taiwan and South Korea. Authors have used an exponential bivariate GARCH in mean model. This cointegration methods show that the TLG hypothesis valid for Taiwan and the BC hypothesis acceptable for South Korea. The significant impacts of uncertainty on growth are also identified.

Dritsakis and Athanasiadis (2000) applicate that VAR model based causality tests over the period 1960:Q1-2000:Q4 for Greece. Results show that the TLG is supported and there is a cointegration relationship between tourism and economic growth in the long term. p. 3

Fawaz and Rahnama (2014), examines the causal relationship between international tourism and economic growth by using panel analythic estimation methods based on fixed effects and system generalized method of moments (GMM) over the period 1975-2010 in six regional classifications and four different income level classification of 144 countries. Their findings reveal that per capita receipts from the tourism industry significantly contribute both to current level of GDP and economic growth, accordingly they have supported the TLG hypothesis.

Fayissa et al., (2008), analyse the causal relationship between tourism receipts and economic growth using a panel data of 42 African countries over the 1995-2004 period. They have tested GMM and fixed-random models. Empirical evidence shows evidence of tourism receipts having a positive contribution to the current level of output and economic growth of the selected Sub-Saharan African countries. Thus the relationship is in favor of the TLG hypothesis.

Gunduz and Hatemi (2005), have applied leveraged bootstrap causality tests over the period 1963-2002 for Turkey. Authors have found unidirectional causality from international tourism to economic growth. Thus the TLG hypothesis is supported empirically in Turkey. Kim et al. (2006), analyse this causal relationship between tourism expansion and economic development over the double period 1971-2003 for quarterly data and 1956-2002 for annual data. They have used cointegration and Granger causality method for Taiwan. According to the results indicate a long run equilibrium relationship and the BC hypothesis held in Taiwan.

Kizilgol and Erbaykal (2008), investigated the causal relationship between tourism revenues and economic growth over the period 1992:Q1-2006:Q2 for Turkey. They have used Toda-Yamamoto causality approach. Their findings indicate that unidirectional causality running from economic growth to tourism revenues. Thus the EDTG hypothesis is confirmed for Turkey.

Kumar et al. (2014), explore the causal relationship between tourism and output per worker using the sample period 1975-2012 in Malaysia. They analyse the cointegration, elasticity coefficients and causation by using the autoregressive distributed lag (ARDL) bounds and Toda Yamamoto causality analysis. Their causality results indicate that a bidirectional relationship tourism and capital per worker and a unidirectional causality from output per worker to capital per worker. Thus the BC hypothesis is confirmed for Malaysia.

Lee and Chang, (2008) analyse the causal relationship between tourism development and economic growth by employing fully modified ordinary least squares (FMOLS) and ECM heterogeneous panel cointegration techniques for OECD (Organization for Economic Cooperation and Development-32 countries) and non-OECD (Asia, United States and Sub-Saharan Africa included 23 countries). Authors find that tourism has a larger impact on GDP in non-OECD countries than in the OECD countries for the 1990-2002 period. They conclude the relationship is unidirectional supported for the TLG especially evidence from OECD countries.

Oh (2005) investigates the causal relationship between tourism and economic expansion by using Engle and Granger two stage approach and bivariate VAR model over the period of 1975:Q1-2001:Q1 for the Korean economy. According to cointegration test results show that there is no long run equilibrium relation between two series. In addition Granger causality test reports supported EDTG hypothesis for Korean economy.

Ozdemir and Oksuzler (2006) examine the causal relationship between tourism earnings and economic growth using the sample period 1963-2003 in Turkey. They have employed Johansen technique and VECM. The empirical results suggested that there is both the short and the long run unidirectional causality from tourism to GDP. Evidents show that TLG held in the Turkish economy.

Pavlic et al. (2014) investigate the causal relationship between tourism and economic growth by applying Johansen Maximum Likelihood cointegration technique and VECM, covering the period 1996:Q1-2013:Q1 in Croatia. The results demonstration that causal relationship between openness of the economy and GDP for the short run, as well as between reel effective exchange rate and GDP but test also shows that there are no

short-run causality between tourist arrivals and GDP. Thus the NC hypothesis empirically supported in the case of Croatia.

Samimi et al. (2011), have applied PVAR (panel vector autoregressive) approach over the period 1995-2009 in developing countries. The findings reveal that there is a bilateral causality and positive long-run relationship between economic growth and tourism development. In the other words, BC hypothesis is confirmed.

Schubert et al. (2011), investigate the causal relationship between economic growth and tourism development relationship over the time period 1970- 2008 for Antigua and Barbuda. They have applied VECM cointegration analysis and Granger causality tests. The results show that unidirectional causality from tourism to economic growth. Authors have accepted TLG hypothesis for two countries.

Srinivasan et al. (2012) analyses the causal relationship between tourism and economic growth by employing the ARDL bounds testing approach over the period 1969-2009 in Sri Lanka. Their analysis reveals that tourism has a positive impact on economic growth in the short-run and the long run. Evidence shows that TLG held in Sri Lanka.

Suresh and Senthilnathan (2014), have examined the causal relationship between tourism earnings and economic growth by employing Granger causality tests and ECM during the 1977-2012 time period in Sri Lanka. The results reveal that there is uni-directional causality from economic growth to tourism earnings. Thus the EDTG hypothesis is empirically supported.

Tang and Abosedra (2014), have tested the causal relationship for 24 countries in the Middle East, North African Region (MENA) from 2001 to 2009. They apply both static panel estimation and GMM dynamic panel estimation techniques. Results show that energy consumption and tourism significantly contribute to the economic growth of countries in the MENA region. And using the ECM, they have observed GMM estimator to examine the impacts of variables. Hence their study lends some support to existence of the TLG and EDTG hypothesis in the region.

Tang and Tan (2013) investigate the causal relationship between tourism and economic growth by employing the monthly data from January 1995 to February 2009 with respect to 12 different tourism markets. They have used the newly developed combined cointegration test and Granger causality test reveals that Malaysia's economic growth is cointegrated with visitor arrivals from these tourism markets. Results show that only 8 out of the 12 tourism markets could provide a generally stable support for the TLG hypothesis in Malaysia.

Ozturk and Acaravci (2009) investigate the long-run relationship between the real GDP and international tourism in Turkey during the time period 1987-2007. For this purpose, tourism-led growth hypothesis (TLG) is tested by using two different methods: a vector error correction model (VEC) and an autoregressive distributed lag model (ARDL). The results of the Johansen cointegration test as well as of the ARDL bound test show that there is no unique long-term or equilibrium relationship between the real GDP and international tourism. Therefore, the TLG hypothesis cannot be inferred for the Turkish economy because no cointegration exists between international tourism and the real GDP.

Ozturk (2015) explores the different factors that affect tourism development in the panel of 34 developed and developing countries, over the period of 2005–2013. Energy consumption, air pollution, health expenditures, and economic growth played a vital role to change tourism development indicators in the region. The results confirmed the long-run association between the energy, environment, growth, and tourism indicators in the panel of selected 34 countries. The results of fully modified ordinary least squares (FMOLS) indicate that health expenditures have a positive relationship with the tourism indicators, while energy consumption exerts a negative association with the tourism indicators in the region. However, carbon dioxide emissions exert a positive relationship with the tourism indicators in the region.

Tang and Tan (2015) investigate the causal relationship between tourism and economic growth employing annual data from 1975 to 2011 for Malaysia. Authors have used a multivariate model derived from the Solow growth theory. They find that economic growth, tourism and other determinants are cointegrated. Especially tourism has a positive impact on Malaysia's economic growth both in the short-run and in the long-run. The Granger causality test results show that tourism Granger-causes economic growth. All this provides the empirical support for the TLG hypothesis in Malaysia.

Table 1: Unit root tests

Variable	Level		1st difference	
	Without trend	**With trend**	**Without trend**	**With trend**
ARRV				
LLC t*	0.62268 (0.7333)	−0.47329 (0.3180)	−10.0109 (0.0000)	−8.09335 (0.0000)
IPS W-stat	3.00274 (0.9987)	−0.28973 (0.3860)	−10.0021 (0.0000)	−8.04505 (0.0000)
CAP				
LLC t*	−1.48336 (0.0690)	−3.74449 (0.0001)	−8.90677 (0.0000)	−6.81793 (0.0000)
IPS W-stat	1.36547 (0.9139)	−176318 (0.0389)	−7.95872 (0.0000)	−6.64842 (0.0000)
GDP				
LLC t*	−0.25990 (0.3975)	−31.805 (0.0000)	−18.0897 (0.0000)	−8.69514 (0.0000)
IPS W-stat	3.65721 (0.9999)	−10.1118 (0.0000)	−9.59880 (0.0000)	−5.47961 (0.0000)
LAB				
LLC t*	−4.84978 (0.0000)	−0.26812 (0.3943)	−4.94659 (0.0000)	-6.78533 (0.0000)
IPS W-stat	1.37710 (0.9158)	1.31331 (0.9055)	−4.89351 (0.0000)	−5.43679 (0.0000)

*(t-statistics in parentheses). GDP: Gross domestic product, LLC: Levin, Lin and Chu, IPS: Im, Pesaran and Shin

Yavuz (2006) have used standart Granger causality and Toda-Yamamoto approach over the period 1992Q:1-2004Q:4 in Turkey. Results accept that there is no causal relation tourism and economic growth and the NC hypothesis is valid for Turkey.

Yildirim and Ocal (2004) investigate the relationship between tourism revenues and economic growth by applying VAR methods for Turkey from 1962 to 2002 period. Results show that the tourism revenues appear to enhance economic growth in the long term, but there is not any relationship between the variables in the short term. Therefore the NC hypothesis accepted in the short run, while the TLG valid in the long run for the case of Turkey.

3. METHODOLOGY, DATA AND THE RESULTS

The N-11 countries data are taken from the World Bank in the World Development Indicators, for the period of 1995-2013 (International Tourist Arrivals, Labour force, Capital formation [2005 US dollars], GDP [2005 US dollars]). Here, the LLC

Table 2: Panel cointegration tests

Within dimension test statistics	
Panel v-statistic	0.876505 (0.8096)
Panel rho-statistic	2.546168 (0.9946)
Panel PP-statistic	0.379323 (0.6478)
Panel ADF-statistic	−0.038165 (0.4848)
Between dimension test statistics	
Group rho-statistic	2.718845 (0.9967)
Group PP-statistic	−2.125982 (0.0168)
Group ADF-statistic	−2.681745 (0.0037)

(t-statistics in parentheses). ADF: Augmented Dickey–Fuller

Table 3: FMOLS and DOLS results

Variable	Coefficient	Standard error	t-statistic	P
FMOLS				
CAP	0.407041	0.037174	10.94952	0.0000
ARRV	0.062050	0.027460	2.259687	0.0250
LAB	0.628282	0.106345	5.907970	0.0000
DOLS				
CAP	0.347436	0.034014	10.21442	0.0000
ARRV	0.082701	0.035509	2.329020	0.0219
LAB	0.732451	0.098811	7.412632	0.0000

OLS: Ordinary least squares, FMOLS: Fully modified ordinary least squares, DOLS: Dynamic ordinary least squares

(Levin, Lin and Chu, 2002) and the IPS (Im, Pesaran and Shin, 2003) tests are employed. The null of a unit root is examined against the alternative of a stationary process for all (LLC) or at least for one cross section (IPS). We can see from Table 1 that all the variable are I(1).

After unit root test, cointegration tests are employed (Table 2). For panel cointegration, the tests proposed by Pedroni (1999) are used which is extended the Engle and Granger (1987) two step strategy to panels by using Augmented Dickey–Fuller and PP principles. We can conclude that there is a long run relation ship between tourism arrivals and GDP growth.

The asymptotic distribution of the OLS estimator depends on nuisance parameters. In a panel environment, this problem seems to be more serious, as the bias can accumulate with the size of the cross section. To overcome these deficits, efficient methods like FMOLS and dynamic OLS (DOLS) are required (Dreger and Reimers, 2005). In Table 3, DOLS and FMOLS results are presented. We can see that tourism arrivals have positive effect on GDP growth in N-11 countries.

To see causality direction (Table 4), we employ pairwise dumitrescu hurlin panel causality tests. We conclude that a unidirectional causality from economic growth to tourism is valid. This finding confirms the EDTG.

4. CONCLUSION

Tourism is a relatively new area in international economic trades. Nowadays, it contributes to the foreign income sources of many nations. It also plays a major role in the economic, cultural and social development of many countries. This paper investigates the link between tourism arrivals and GDP for a sample of N-11 countries (1995-2013) for the first time by using recent developed panel cointegration techniques. The estimation of the main model using DOLS and FMOLS methods suggests that there is a positive relationship between tourism arrivals and GDP; so that, one percent increase in tourism arrivals stimulates that GDP raise to 0.06 percent as the line with FMOLS that GDP raise to 0.08 as a result of DOLS. Furthermore, the results show that there is a unidirectional causality from economic growth to tourism for N-11 countries.

Table 4: Panel causality tests

Null hypothesis	W-statistic	Zbar-statistic	P
LAB does not homogeneously cause GDP	8.30830	6.66656	3.E-11
GDP does not homogeneously cause LAB	18.6466	18.3317	0.0000
CAP does not homogeneously cause GDP	4.40137	2.25822	0.0239
GDP does not homogeneously cause CAP	7.97282	6.28803	3.E-10
ARRV does not homogeneously cause GDP	1.91244	−0.55013	0.5822
GDP does not homogeneously cause ARRV	4.99722	2.93054	0.0034
CAP does not homogeneously cause LAB	8.29541	6.65202	3.E-11
LAB does not homogeneously cause CAP	10.0702	8.65456	0.0000
ARRV does not homogeneously cause LAB	3.61885	1.37528	0.1690
LAB does not homogeneously cause ARRV	6.60584	4.74561	2.E-06
ARRV does not homogeneously cause CAP	4.34284	2.19218	0.0284
CAP does not homogeneously cause ARRV	3.30567	1.02190	0.3068

GDP: Gross domestic product

This findings illustarate that output level which relates to economic well being and level of development is vital in attracting tourist. The major impact of tourism expanding on N-11 countries economy justifies the requirement of governments intervention expected at encouraging and rising tourism demand by providing the tourism services fot N-11 countries.

REFERENCES

Albaladejo, I.P., Gonzalez-Martinez, M.I., Martinez-Garcia, M.P. (2014), Quality and endogenous tourism: An empirical approach. Tourism Management, 41, 141-147.

Antonakakis, N., Dragouni, M., Filis, G. (2013), Time-Varying Interdependencies of Tourism and Economic Growth: Evidence from European Countries. MPRA Munich Personal Repec Archive, 4875. p1-34.

Aslan, A. (2008), An Econometric Analysis on Economic Growth and Tourism in Turkey. MPRA Munich Personal Repec Archive. p1-11.

Aslan, A. (2013), Tourism development and economic growth in the amaediterranean countries: Evidence from panel Grainger causality tests. Current Issues in Tourism, 17(4), 363-372.

Aslanturk, Y., Balcilar, M., Ozdemir, Z.A. (2011), Time-varying between tourism receipts and economic growth in a small open economy. Economic Modelling, 28(1), 664-671.

Balaguer, J., Cantavella-Jorda, M. (2002), Tourism as a long-run economic growth factor: The Spanish case. Applied Economics, 34(7), 877-884.

Belloumi, M. (2010), The relationship between tourism receipts, real effective exchange rate and economic growth in Tunisia. International Journal of Tourism Research, 12(5), 550-560.

Bouzahzah, M., El-Menyari, Y. (2013), The Relationship Between International Tourism and Economic Growth: The Case of Morocco and Tunisia. MPRA Munich Personal Repec Archive. p1-14.

Brida, J.G., Cortes-Jimenez, I., Pulina, M. (2014), Has the tourism-led growth hypothesis been validated? A literature review. Current Issues in Tourism. Available from: http://www.dx.doi.org/10.1080/13683 500.2013.868414.

Chen, C., Chiou-Wei, S.Z. (2009), Tourism expansion, tourism uncertainty and economic growth: New evidence from Taiwan and Korea. Tourism Management, 30(6), 812-818.

Dritsakis, N., Athanasiadis, S. (2000), An econometric model of tourist demand: The case of greece. Journal of Hospitality & Leisure Marketing, 7(2), 39-49.

Dreger, C., Reimers, H.E. (2005), Health Care Expenditures in OECD Countries: A Panel Unit Root and Cointegration Analysis, IZA Discussion Paper No. 1469.

Engle, R.F., (1987), Multivariate GARCH with factor structures-cointegration in variance, unpublished paper, Department of Economics, University of California, San Diego.

Fawaz, F., Rahnama, M. (2014), An empirical refinement of the relationship between tourism and economic growth. Anatolia: An International Journal of Tourism and Hospitality Research, 25(3), 1-14.

Fayissa, B., Nsiah, C., Tadasse, B. (2008), The Impact of Tourism on Economic Growth and Development in Africa. Working Papers, 200716. p1-22.

Gunduz, L., Hatemi, J.A. (2005), Is the tourism-led growth hypothesis valid for Turkey? Applied Economics Letters, 12(8), 499-504.

Kim, H.J., Chen, M.H., Jang, S.S. (2006), Tourism expansion and economic development: The case of Taiwan. Tourism Management, 27(5), 925-933.

Kizilgol, O., Erbaykal, E. (2008), The relationship between tourism revenues and economic growth in Turkey: A causality analysis.

Suleyman Demirel University The Journal of Economics and Administrative Sciences, 13(2), 351-360.

Kumar, R.R., Loganathan, N., Patel, A., Kumar, R.D. (2014), Nexus between tourism earnings and economic growth: A study of Malaysia.1-20. Quality and Quantity. DOI 10.1007/s11135-014-0037-4.

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

Oh, C.O. (2005), The Contribution of tourism development to economic growth in the Korean economy. Tourism Management, 26(1), 39-44.

Ozdemir, A.R., Oksuzler, O. (2006), Can tourism be an economic growth policy tool in Turkey? A Granger causality analysis. Balikesir University Journal of Social Sciences, 9(16), 107-126.

Ozturk, I. (2015), The relationships among tourism development, energy demand and growth factors in developed and developing countries. International Journal of Sustainable Development & World Ecology, DOI:10.1080/13504509.2015.1092000.

Ozturk, I., Acaravcı, A. (2009), On the causality between tourism growth and economic growth: Empirical evidence from Turkey. The Transylvanian Review of Administrative Sciences, 25E, 73-81.

Pedroni, P. (1999) "Critical Values For Cointegration Tests in Heterogeneous Panels With Multiple Regressors", Oxford Bulletin of Economics and Statistics 61, 653-670.

Pablo-Romero, M., Molina, J.A.M. (2013), Tourism and economic gowth: A review of empirical literature. Tourism Management Perspectives, 8, 28-41.

Pavlic, I., Svilokos, T., Tolic, M.S. (2015), Tourism, real effective exchange rate and economic growth: Empirical evidence for Croatia. International Journal of Tourism Research, 17(3), 282-291.

Richardson, R.B. (2010), The Contribution of Tourism to Economic Growth and Food Security. USAID Mali. p1-8.

Samimi, A.J., Sadeghi, S., Sadeghi, S. (2011), Tourism and economic growth in developing countries: P-VAR approach. Middle-East Journal of Scientific Research, 10(1), 28-32.

Schubert, S.F., Brida, J.G., Risso, A. (2011), The impacts of international tourism demand on economic growth of small economies dependent on tourism. Tourism Management, 32, 377-385.

Srinivasan, P., Santhosh, K.P.K., Ganesh, L. (2012), Tourism and economic growth in Sri Lanka: An ARDL bounds testing approach. Environment and Urbanization ASIA, 3(2), 397-405.

Suresh, J., Senthilnathan, S. (2014), Relationship Between Tourism and Economic Growth in Sri Lanka. Published as the 7th Chapter of a Book Entitled "Economic Issues in Sri Lanka". p1-19. Available from: http//www.dx.doi.org/10.2139/ssrn.2373931.

Tang, C.F., Abosedra, S. (2014), The impacts of tourism, energy consumption and political instability on economic growth in the MENA countries. Energy Policy, 68, 458-464.

Tang, C.F., Tan, E.C. (2013), How stable is the tourism-led growth hypothesis in Malaysia? Evidence from disaggregated tourism markets. Tourism Management, 37, 52-57.

Tang, C.F., Tan, E.C. (2015), Does tourism effectively stimulate Malaysia's economic growth? Tourism Management, 46, 158-163.

Tugcu, C.T. (2014), Tourism and economic growth nexus revisited: A panel causality analysis for the case of the mediterranean region. Tourism Management, 42, 207-212.

World Travel and Tourism Council (WTTC), (2013). Available from: http://www.wttc.org/focus/research-for-action/economic-impact-analysis/.

Yavuz, N. (2006), Test for the effect of tourism receipts on economic growth in Turkey: Structural break and causality analysis. Journal of Dogus University, 7(2), 162-171.

Yildirim, J., Ocal, N. (2004), Tourism and economic growth in Turkey. Journal Ekonomik Yaklasim, 15(52-53), 131-141.