FDI and Tourism as a Means to Growth: Reality or Wishful Thinking?

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ABSTRACT

It is believed that Foreign Direct Investment (FDI) and Tourism industry lead overall development in many countries. However, mixed empirical results have been obtained in a long-standing debate. The first chapter of this thesis studies the tourism-economic growth nexus in emerging economies and the second and third chapters investigate the direct and indirect effects of FDI on the economic growth of seven European countries with significant GDP shares of international tourism receipts and FDI in their economies. By employing non-linear ARDL analysis and impulse response functions as a complement to the Block Exogeneity Wald test, this study provides statistical evidence that suggests that increasing the rate of economic growth by increasing the current share of international tourism and FDI in some economies is highly unlikely if the quality of investment and the rate of return they generate continue to be as low as they have been in the past.

Keywords: International Tourism; Tourism Receipts; Foreign Direct Investment; Economic Growth, European Countries.

ÖZ

Doğrudan Yabancı Yatırımların (DYY) ve Turizm endüstrisinin birçok ülkede genel kalkınma sürecinde önemli bir etken olduğu düşünülmektedir. Ancak bu görüşe ilişkin olarak uzun süredir devam eden ampirik çalışmaların sonuçları birbiriyle çelişir niteliktedir. Bu tezin ilk bölümünde gelişmekte olan ekonomiler bağlamında turizm sektöründeki büyüme ile-ekonomik büyüme arasındaki ilişki incelenmektedir. İkinci ve üçüncü bölümlerde ise uluslar arası turizm gelirleri ve uluslar arası doğrudan yabancı yatırımların GSYİH içinde göreceli olarak önemli paya sahip olduğu yedi Avrupa ülkesinde bu iki değişkenin ekonomik büyüme üzerindeki doğrudan ve dolaylı etkileri ampirik olarak analiz edilmektedir. Block Exogeneity Wald testine ek ve onu tamamlayıcı olarak doğrusal olmayan ARDL ve dürtü yanıtı analizleri kullanılarak elde edilen sonuçlar bağlamında bu çalışma yatırım kalitesi ve getiri oranlarının geçmişteki gibi düşük kalması durumunda, uluslar arası turizmin ve DYY'nin mevcut payını artırarak ekonomik büyüme oranını artırma olasılığının düşük olduğunu göstermektedir.

Anahtar Kelimeler: Uluslar Arası Turizm; Turizm Gelirleri; Doğrudan Yabancı Yatırım; Ekonomik Büyüme, Avrupa Ülkeleri.

To My Lovely Parents

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EDTG	Economy-Driven Tourism Growth
FDI	Foreign Direct Investment
FIT	Feed-In Tariff
GDP	Gross Domestic Product
ISDS	Investor-State Dispute Settlement
NARDL	Nonlinear Autoregressive Distributed Lag
OLS	Ordinary Least Squares
PPP	Public Private Partnership
RCR	Real Cost Reduction
RES	Renewable Energy Sector
SME	Small and Medium-Sized Enterprises
TFP	Total Factor Productivity
TLEG	Tourism-Led Economic Growth
WTTC	World Travel and Tourism Council

Chapter 1

INTRODUCTION

The engines of growth in different economies have been extensively studied over the past decades, because many countries attempt to find the most effective and efficient channels to improve their status towards developed economies and FDI and tourism are the factors which are hotly debated in the economic growth literature. Tourism development may have a positive impact on economic growth through different channels like supplying foreign exchange. On the other hand, the patterns of domestic consumption might be altered by tourism expansion which could change the domestic savings rate (Balaguer & Cantavella-Jorda, 2002; Hazari & Sgro, 2004). As the natural environment is a critical factor in attracting tourists in many countries, environmental despoliation and increased pollution are examples of other costs imposed by tourism (Gursoy & Rutherford, 2004). The ability of the national economy to supply tourism services (like transportation and accommodation) in addition to investment availability are the most important determinants of that economy's capacity to benefit from tourism.

Weil (2005) developed a theoretical framework that shows if different sectors have different productivity growth rates (due to different technological progress or efficiency growth), changing the sectoral composition of output and employment naturally can change the overall Total Factor Productivity (TFP) growth of the economy which in turn changes the growth rate of the economy. In the other words,

moving the factors of production (labor and capital) from a sector to another can change the rate of economic growth depending on whether the second sector has a higher productivity growth or not. Steger (2000) is one of the studies that investigated the sectoral composition of economic growth. According to this study, the average productivity growth and consequently GDP growth and saving rate in an economy are increased, if the GDP share of a sector with a relatively higher TFP growth is increased. This can allow for a lower unemployment rate and a higher investment rate. Apparently, the main sectors of an economy (e.g. agriculture, manufacturing, and service) have different TFP growth rates, and increasing the GDP share of tourism sector (which leads to the reduction of GDP share of other sectors) doesn't necessarily increase the economic growth rate. This theoretical ambiguity in the impact of tourism development on the economic growth rate indicates that sectoral resource allocation in an economy should be based on the policy insights obtained from the empirical examination of tourism-economic growth nexus for the country in question.

The theoretical framework about the conditions under which additional specialization in tourism is welfare improving is presented by Chao et al. (2006). They studied the impact of tourism expansion on sectoral output, capital accumulation, and resident welfare. They asserted that an expansion in tourism sector can yield a gain in revenue by increasing the relative price of the nontraded goods. In the follow-up study, Chao et al. (2009) used a dynamic open-economy model to show how an increase in the demand can increase the relative price of non-traded goods and expand the non-traded sector. If the output effect is dominant, the output shift caused by tourism expansion can improve both employment and welfare in the short-run. However, higher relative

prices and higher wages can have a negative impact on labor employment in the long-run.

According to Oh (2005) and Tugcu (2014) the causal relationship between tourism and economic growth is defined in terms of four related hypotheses: the first one, the so-called 'growth hypothesis' suggests that tourism expansion is the dynamic that strengthens the economic growth. In this situation, the government can boost economic growth by incentivizing tourism. The second one, the 'reverse hypothesis' refers to a situation in which economic growth plays an important role in tourism development. In this case, the government can transfer investments and resources to other sectors without any negative impact on economic growth. Third, the neutrality hypothesis denotes that tourism development and economic growth are not affected by each other. This hypothesis is supported if there is no causality between tourism and economic growth. Fourth, the feedback hypothesis indicates a reciprocal relationship between growth and tourism. When this hypothesis is supported, tourism expansion policies may raise economic growth, and also higher economic growth can have a positive effect on tourism development.

In this context, the main motivation of this thesis is to investigate the nature of the relationship between 'share of FDI in GDP', 'the degree of tourism specialization' (as proxied by GDP share of tourism receipts), and 'economic growth' (as proxied by annual GDP growth). To this end we employ different empirical methodologies that we believe to be complementary to each other; Granger causality testing, impulse responses function, and non-linear ARDL analysis of each country separately.

Many studies have been conducted to investigate the causal relationship between economic growth and tourism development and verify the validity of the above-mentioned hypotheses. However, the results are inconclusive. Their efforts failed to find the actual causal relationship, because many of them didn't select the suitable proxies to represent tourism development and economic growth, or they employed Granger causality or cointegration tests that don't show the sign of the effects. In other words, they usually interpreted causality from a variable to another variable as a positive impact of the first variable on the second one. But, it is critical to realize that the presence of a causal effect of one variable on another doesn't automatically imply that the qualitative nature of the effect is positive and this insight forms one of the main motivations of this study. The main reason that we consider these methodologies as complementary to each other is related to the fact that the presence of 'causal flow' from one variable to another cannot answer two questions: According to Brooks (2014) "It cannot reveal whether changes in the value of a given variable have a positive or negative effect on other variables in the system, or how long it would take for the effect of that variable to work through the system". The present study can yield interesting insights regarding whether or not further share of FDI in GDP or specialization in tourism is likely to have 'growth-enhancing' effects in different countries in general or rather the potential growth benefits of tourism and FDI are likely to be country-specific. This aspect of our study not only sheds light on the potential of FDI and tourism to stimulate the economic growth but also may raise new questions about the validity of the policy recommendations based on the results of earlier studies that utilized exclusively Granger causality testing.

The second chapter of this thesis studies the tourism-economic growth nexus in emerging economies and the third and fourth chapters study FDI-tourism-economic nexus in European economies in the short-run and long-run.

Chapter 2

ANOTHER LOOK AT TOURISM-ECONOMIC GROWTH NEXUS

2.1 Introduction

The relationship between economic growth and tourism receipts has been extensively studied in the past decades for both developed and developing countries. As tourism industry is growing in many countries, the causal relationship between economic growth and tourism receipts is becoming important for policymakers. According to The World Travel and Tourism Council (WTTC) (2017), this industry has had an impressive impact on the world economy. It created 292 million jobs and increased the global GDP by 10.2% in 2016. It is forecasted that the contribution of tourism industry on global GDP will increase and it will create 380 million jobs by 2027. It means 11% of the jobs in the world.

Governments in the current economic environment try to overcome macroeconomic problems such as macroeconomic instability, low growth, and unemployment by subsidizing productive sectors. They consider international tourism as one of the significant potential growth sectors (Brohman, 1996). The growth of tourism may lead to an increase in government revenues and household income through different channels like improvements in the balance of payments and additional employment. Tourism can support policymakers to foster economic growth through creating regional employment opportunities, supplying foreign exchange, and promoting

transportation, construction, food/beverage, and accommodation sectors. In addition, policymakers can use tourism as an instrument to decrease inequalities in regional welfare, because tourism leads to income transfer from developed countries to developing countries (Tugcu, 2014). Hence, the development of tourism may have a positive contribution to economic growth (e.g. Lim, 1997; Khan et al., 1995; Oh, 2005; Lee and Kwon, 1995).

Chao et al. (2009) studied the effect of tourism on employment and welfare by developing a dynamic open-economy model with wage indexation. Their findings indicate that under the domination of the output effect, tourism expansion increases employment and welfare. However, higher wages caused by the higher relative prices decreases both labor employment and welfare in the long-run.

Researchers employ different econometric models to verify the relationship between macroeconomic variables. In order to get more reliable results, instead of an assessment of individual coefficient estimates, it is necessary to evaluate the significance of variables in an equation, based on joint tests on all of the lags of a particular variable in a model (Brooks, 2014). In fact, the tests described above are referred to as causality tests and described by Granger (1969). Therefore, this study examines the causal relationship between tourism and economic growth in emerging market countries using the Granger causality test. Of course, this test cannot explain how long these effects require to take place or the qualitative nature of the relationship. Hence, impulse responses function is employed to solve this problem and trace out the nature of responsiveness of each variable to shocks to another variable.

When the main motivation is to investigate the role of tourism industry in the economy of a country, the important indicator is the contribution of tourism in the gross domestic product of that country. Sometimes, a country's tourism receipts (current US$) increases, but at the same time, its share in the economy decreases, because other economic sectors grow faster and play a more important role in economic growth. Therefore, tourism receipts (current US$) cannot be a suitable proxy for studying tourism sector variations and their effect on economic growth. Previous studies usually used "dollar-value of tourism receipts" or "tourism receipts as a percentage of imports" to evaluate tourism development, which are not appropriate proxies for tourism development. They found many spurious causalities between tourism development and economic growth.

Motivated by the aforementioned shortcomings, the aim of this study is to analyze the likely effect of international tourism on the economic growth of countries while they are in the process of economic development. To this end, the sample of the present study has been deliberately chosen as emerging economies that are in the process of relatively high rates of industrialization and economic growth. These countries play a growing role both in terms of the global economy and politics. Furthermore, this paper uses tourism receipts as a percentage of GDP to measure tourism development and study its causal relationship with economic growth proxied by the annual growth rate of real GDP in emerging market economies.

This study contributes to the literature in two ways: First, investigating tourism-economic growth relationship in emerging economies based upon two complementary methods. Second, comparing misleading results based on selecting inappropriate

proxies with reliable results obtained from selecting appropriate proxies to measure tourism and economic growth.

According to Oh (2005) and Tugcu (2014) the causal relationship between tourism and economic growth is defined in terms of four related hypotheses: First one, the so-called 'growth hypothesis' suggests that tourism expansion is the dynamic that strengthens the economic growth. In this situation, the government can boost economic growth by expanding tourism sector. Second one, the 'reverse hypothesis' refers to a situation in which economic growth plays an important role in tourism development. In this case, the government can transfer investments and resources to other sectors without any negative impact on economic growth. Third, the neutrality hypothesis denotes that tourism development and economic growth are not affected by each other. This hypothesis is supported if there is no causality between tourism and economic growth. Fourth, the feedback hypothesis indicates a reciprocal relationship between growth and tourism. When this hypothesis is supported, tourism expansion policies may raise economic growth, and also higher economic growth can have a positive effect on tourism development.

The rest of this chapter is organized as follows: The next section reviews the Literature. Sections 2.3 and 2.4 describe the data and methodology. Section 2.5 presents the results of our analysis. Section 2.6 concludes the paper and provides policy implications and further comments.

2.2 Literature Review

Over the past several decades, the tourism industry has experienced a rapid growth and has emerged an important sector proving to be beneficial to the economy in terms of

employment creation, foreign exchange earnings, government revenue, and reduction in poverty (Clancy, M. J.1999; Yap & Saha, 2013). Besides these direct effects, tourism industry has also made incredible indirect positive impacts on the economy through its contribution to the balance of payments, improvement of human living standards, rising government revenues through profits and taxes and the expansion of production of goods and services (Paramati et al., 2016). Fayissa et al., (2011) provided empirical evidence of tourism industry's contribution to the GDP growth and investment in infrastructure and human capital development of Latin American countries. Therefore, tourism development has been the engine of economic growth across the world (Tang & Tan, 2013; Brida & Risso, 2009).

Alongside the rising importance of the tourism industry for a country's economy, the subject of investigating the relationship between tourism and economic growth has gained lots of attention during the last decades (Tang & tan, 2015; Tugcu, 2014; Lee & Brahmasrene, 2013; Holzner, 2011; Lee & Chang, 2008; Oh, 2005; Durbarry, 2004; Narayan, 2004; Balaguer & Cantavella- Jorda, 2002); however, the results appear to be mixed.

Upon examination of relevant literature, it is noted that the relationship between tourism development and economic growth is categorized into four different strands (Paramati et al., 2016; Chen & Chiou-Wei, 2009; Oh, 2005): 1. Tourism-led economic growth (TLEG), 2. Economy-driven tourism growth (EDTG), 3. Reciprocal relationship between economic growth and tourism development, and 4. No causal relationship.

2.2.1 Tourism Led Economic Growth (TLEG)

Tourism-led economic growth (or growth hypothesis) proposes a positive effect of the growth of tourism activities on economic growth. A growing body of literature has examined the aforementioned hypothesis.

Balaguer and Cantavell-Jorda (2002), Proenca and Soukiazis (2008), Ivanove and Webster (2007), Lee and Brahmasrene (2013), Cortés- Jiménez and Pulina (2010) and Nowak et al., (2007) studied the validity of TLEG hypothesis in different samples of European Union (EU) countries, and all of them except Ivanove and Webster (2007) proved this hypothesis in their sample of countries. Among these studies, Balaguer and Cantavell-Jorda (2002), Proenca and Soukiazis (2008), Cortés- Jiménez and Pulina (2010) and Nowak et al., (2007) proved the validity of TLEG hypothesis in Spain and Ivanove and Webster (2007) rejected it. Proenca and Soukiazis (2008) justified this hypothesis in Greece and Ivanove and Webster (2007) falsified it. Furthermore, the pieces of evidence presented by Proenca and Soukiazis (2008) and Cortés- Jiménez and Pulina (2010) confirm this hypothesis for Italy. In the following, the above-mentioned studies about EU countries are explained in detail. The relationship between tourism receipts per capita (in current US$), economic growth, foreign direct investments and CO_2 emissions per capita (in metric tons) in EU countries during 1988-2009 has been analyzed by Lee and Brahmasrene (2013). The results from the panel cointegration and fixed-effects models showed that a long-run relationship exists between the variables. Moreover, there is a positive relationship between economic growth and the other three variables (FDI, tourism receipts, and CO_2 emissions). Another study that investigated the importance of international tourism revenues (at PPP constant prices) as a conditioning growth factor for improving the host

population's standard of living for four southern European countries (Italy, Greece, Portugal, and Spain) between 1990-2004 is that of Proenca and Soukiazis (2008). By using a conditional convergence approach, the results confirmed tourism revenues as the conditioning factor for economic growth for these countries. Thus, the results provided evidence that supports the TLEG hypothesis. Ivanove and Webster (2007) proposed a methodology in order to measure the contribution of tourism to economic growth (proxied by real GDP per capita growth) and applied it to the case of three European countries (Greece, Cyprus, and Spain). They disaggregated economic growth into two factors: growth generated by tourism industry and growth generated by other industries. Their results detected a weak relationship between tourism and economic growth in all three countries. The above-mentioned hypothesis was examined by Cortés- Jiménez and Pulina (2010) for the case of Spain and Italy. Using a more advanced economic model, in which physical and human capital were included as additional variables, the authors identified a unidirectional relationship from international tourism receipts per capita to economic growth in the case of Italy. In Spain, the relationship was rather bidirectional. Spain has been an important tourist destination in the last four decades. Foreign exchange income has a significant weight in this economy, and tourism receipts play an important role in current account and trade balance. Balaguer and Cantavell-Jorda (2002) investigated the effect of tourism on long-run economic growth in Spain. They applied the causality and cointegration approach and confirmed TLEG hypothesis in the Spanish economy.

Nowak et al., (2007) examined the link between tourism exports, imports of capital goods and economic growth. This study proposed an alternative mechanism through which tourism receipts would affect economic growth positively. The authors' new hypothesis was called TKIG (tourism → capital goods imports → growth) and was

tested by using real GDP, tourism receipts and manufactured product imports data series for the Spanish economy between 1960 and 2003. Using cointegration and Granger's causality tests; the authors concluded that the results supported the TKIG hypothesis, and tourism receipts provide the foreign exchange needed to import capital goods that in turn positively affect economic growth.

Tourism- economic growth nexus has been analyzed and compared in different continents in some studies. For example, Tugcu (2014) employed a panel data of the African, Asian and European countries that border the Mediterranean Sea covering the period 1998-2011 to test the TLEG hypothesis. Their results of the panel Granger causality test indicate that in some countries, tourism causes economic growth, while causality goes from economic growth to tourism in some others. Moreover, he concluded that European countries are the countries that benefit from tourism as an effective input for economic growth in the Mediterranean region. This is a doubtful conclusion because his research method doesn't show the qualitative nature (positive or negative) of the effect of tourism on economic growth.

TLEG hypothesis has been proven for African economies and the Mediterranean region, and disproven for Latin American countries, by Fayissa et al. (2008), Dritsakis (2012) and Brida et al., (2008) respectively. Fayissa et al. (2008) examined the above-mentioned model using a panel data of 42 African countries from 1995 to 2004. The outcomes indicated that receipts from tourism industry contribute significantly to the current level of GDP and to the economic growth of Sub-Saharan African countries. The long-run relationship between economic growth and tourism development in seven Mediterranean countries during the period 1980-2007 was investigated by Dritsakis (2012). By applying the panel cointegration and fully modified ordinary least

squares (FMOLS), the outcomes supported the above-mentioned hypothesis i.e. earnings in the tourism industry have a significant impact on the GDP in the case of the seven Mediterranean countries. Brida et al., (2008) applied the method presented by Ivanove and Webster (2007) to study tourism-oriented Latin American economies: Uruguay, Brazil, Argentina, and Mexico. This study provided a chance for authors to compare their results with those of Ivanove and Webster (2007). Similar to the findings of Ivanove and Webster (2007), the direct contribution of tourism to economic growth in Latin American countries was not significant. Though it was clear that the contribution must be measured in local scale rather than in the whole economy.

Some studies have investigated the TLEG hypothesis for individual countries rather than a group of countries. For example, the results of Rakotondramaro and Andriamasy (2016), Tang and Tan (2015), Trang et al., (2014) and Brida et al., (2009) show the existence of a relationship between tourism and economic growth in Madagascar, Malaysia, Vietnam, and Colombia respectively. These four studies are explained in detail below.

Using the co-integration-based error correction model, Rakotondramaro and Andriamasy (2016) investigated the causal relationship between tourism development, economic growth, and poverty in the case of Madagascar during the period 1988-2013. The results indicated that Granger causality runs from tourism development and poverty to growth and from poverty and growth to tourism development in the short-run as well as in the long-run. It was also revealed that tourism development and economic growth don't lead to a reduction in poverty in Madagascar's case. Furthermore, Tang and Tan (2015) tried to further prove the validity of the TLEG hypothesis in Malaysia by applying a multivariate model derived from the Slow

growth theory. By employing annual data from 1975 to 2011, they found that tourism has a positive impact on Malaysia's economic growth both in the short-run and in the long-run. Also, the results showed that tourism Granger-causes economic growth. The authors interpreted it as empirical support for TLEG hypothesis in Malaysia. The same hypothesis was investigated by Trang et al., (2014) in the case of Vietnam during the period 1992–2011. In order to test the hypothesis, the authors applied two-step procedures. First, the Granger causality test was employed to identify the link between tourism earnings and GDP. Second, growth decomposition methodology was used to measure the contribution of tourism to economic growth. The outcomes suggested that short-run and long-run relationships exist between tourism and economic growth in Vietnam. The authors asserted finding support for TLEG hypothesis in Vietnam. Similarly, Brida et al., (2009) investigated the contribution of tourism to economic growth in Colombia from two perspectives. First, they examined the impact over the past two decades from nearly 1994 to 2007 and then studied the importance of tourism with respect to long-term growth i.e. the TLEG hypothesis. The results indicated the existence of cointegration between real exchange rate, tourism expenditures and real GDP per capita.

Similarly, the TLGH was confirmed in the literature by researchers such as Gunduz and Hatemi (2005), Zortuk (2009), and Isik (2012) for Turkey; Akinboade and Braimoh (2010) and Brida et al (2010) for South Africa and Uruguay; Brida and Risso (2010) for the case of Italy; Tang and Abosedra (2012) for the case of Lebanon; Kreishan (2011) for the case of Jordan; Belloumi (2010) for Tunisia; Jackman (2012) for the case of Barbados; Bandula and Jayathilake (2013) and Srinivasan et al., (2012) for Sri Lanka; Li et al., (2013) for the case of Malaysia; Surugiu and Surugiu (2013) for the case of Romania; Ghartey (2013) for the case of Jamaica.

2.2.2 The Economy-Driven Tourism Growth (EDTG)

The economy-driven tourism growth (or reverse) assumption suggests that economic growth positively affects tourism growth. The logic behind this argument is that economic growth leads to the development of tourism infrastructure, education and safety progresses in that economy, which may positively affect tourist arrivals. In the literature, there are a few studies that have reported the EDTG hypothesis. Payne and Mervar (2010) examined the long-run relationship between tourism development and economic growth for Croatia by using quarterly data from 2000-2008. The results of Toda-Yamamoto long-run causality tests reveal a unidirectional causality from real GDP to international tourism revenues and the real effective exchange rate.

Oh (2005), examined the above-mentioned link for the case of South Korea during the period 1975-2001. The results indicated that a one-way causal relationship of economy-driven tourism growth exists. Similarly, other researchers found evidence that supports this causal relationship, such as Ahiawodzi (2013) for the case of Ghana during 1985-2010; Odhiambo (2011) for the case of Tanzania during 1980-2008; Narayan (2004) for the case of Fiji during 1970-2000, but none of them analyzed the qualitative nature of this relationship.

2.2.3 Reciprocal Relationship

The hypothesis of reciprocal (or feedback) relationship between tourism and economic growth proposes that the two variables lead to each other. This relationship has been studied for different samples of countries in different regions and has been particularly found to be valid for the Mediterranean region and non-OECD countries. By using a recently developed panel Granger causality test, Bilen et al., (2017) tested the causal relationship between economic growth and tourism development for twelve Mediterranean countries from 1995 to 2012. The findings of the study indicated the

existence of bidirectional long-run and short-run causality between tourism and economic growth. The results showed that economic growth and tourism development mutually influence each other.

Lee and Chang (2008) re-investigated the long-run causal relationship between tourism and economic growth for OECD and non-OECD countries including those in Asia, Latin America, and Sub-Sahara Africa using heterogeneous panel cointegration technique for 1990-2002. The outcomes imply a unidirectional causal relationship between tourism development and economic growth in OECD countries; a bidirectional link in non-OECD countries and a weak relationship in Asia.

Some studies applied causality and cointegration analysis or other methods to investigate the feedback hypothesis in the short-run and long-run respectively. For example, Odhiambo (2011) proved this hypothesis in short-run for Tanzania, Dritsakis (2004) and Ridderstaat et al., (2013) confirmed it in long-run, for Greece and Aruba respectively, and Katircioglu, (2009) has produced evidence for it in both short-run and long-run in the case of Malta. These studies are explained in detail in the following.

The relationship between tourism development and economic growth in Tanzania was examined by Odhiambo (2011) who applied ARDL Bounds testing procedure. The results confirmed that there is a short-run bidirectional causality between economic growth and tourism development, while on the other hand, economic growth drives tourism development in the long run. Furthermore, Dritsakis (2004) examined the impact of tourism on long-run economic growth for the case of Greece between 1960 and 2000. By applying cointegration and Granger's causality test, together with an error-correction model, the author found evidence of a bidirectional causal relationship

between international tourism and economic growth. However, both tourism receipts and the real exchange rate had a strong causal relationship with economic growth, while economic growth and the real exchange rate affect tourism receipts only through a unidirectional causal relationship. Similarly, Ridderstaat et al., (2013) used annual data between 1970- 2005 to investigate the long-run relationship between tourism development and economic growth in Aruba. Their results confirmed a bidirectional relationship. The link between international tourism and economic growth in the case of Malta was investigated by Katircioglu, (2009), by employing the bound test for co-integration and Granger causality test. His findings revealed that a long-run equilibrium relationship exists between international tourism and economic growth in this country. On the other hand, the author argued that his Granger causality test results suggested that both the TLEG and EDTG hypotheses could be inferred for Malta since there is bidirectional causation between international tourism and economic growth. Likewise, Kim et al., (2006), by employing the same method examined the link between international tourism arrivals and GDP, by using both the quarterly (1971-2003) and annual (1956-200) data for the case of Taiwan. The results provided evidence that supports the bidirectional relationship between tourism arrivals and economic growth.

Researchers such as Chen and Chiou-Wei (2009) tested the causal relationship between tourism expansion and economic growth in Taiwan and South Korea. They asserted that their results support the TLEG hypothesis for Taiwan and a feedback hypothesis for South Korea.

The reciprocal hypothesis was also confirmed in the literature by Khalil et al., (2007) for the case of Pakistan; Lee and Chein (2008) for the case of Taiwan;

Amaghionyeodiwe (2012) for Jamaica; Lorde et al., (2011) for the case of Barbados; Corrie et al., (2013) for the case of Australia; Trang et al., (2014) for the case of Vietnam; Tang (2013) for the case of Malaysia; Demiroz and Ongan (2005) for the case of Turkey; Kareem (2013) for the case of Africa; Nissan et al., (2011) for the case of 11 developed countries. The heterogeneous nature of the countries making up the samples of these countries suggest that the presence of a reciprocal relationship between tourism and economic growth cannot be attributed to the level of development or the geographical location of the group of countries investigated.

2.2.4 Neutral Relationship

A non-causal (or neutral) relationship denotes tourism has no considerable impact on economic growth, and vice versa. Relatively few studies supported this assumption.

Some studies like Sak and Karymshakov (2012) discovered the neutral relationship for samples of countries in different continents. The other studies like Katircioglu (2009) investigated this relationship for single countries. These two studies are explained in detail in the following.

Sak and Karymshakov (2012) investigated the causal relationship between tourism revenue and gross domestic product considering a panel of 135 countries divided into eleven groups for the period 1995-2008. Using Panel Granger causality, the results showed bidirectional causality in Europe, which seem to be consistent with the results of Nissan et al., (2011) briefly reported above; unidirectional causality between economic growth and tourism in America and Latin America & Caribbean countries; a reverse direction of causality in East Asia, South Asia, and Oceania; and no causality in Asia, Middle East and North Africa, Central Asia and Sub-Sahara Africa. The neutral relationship was also confirmed by researchers such as Jackman and Lorde

(2010) for the case of Barbados; Georgantopoulos (2013) for the case of India; Jin (2011) for the case of Hong Kong; Ekanayake and Long (2012) for the case of 140 developing countries.

Kasimati (2011) investigated the role of tourism industry in the Greek economic growth using Granger Causality Test. The results revealed that there is no relationship between tourism and economic growth.

2.3 Data and Variables

This empirical analysis uses annual time series data on International tourism receipts (current US$), GDP (current US$) and GDP growth (annual %) for sixteen emerging market countries, for the period 1995-2014. The data has been obtained from the World Bank datasets. International tourism receipts are all payments made by international inbound visitors to national carriers for international transport and also for services and goods in the destination country. International tourism receipts (% of GDP) are calculated using equation (2.1).

$$\text{Tourism Receipts (\% GDP)} = \frac{\text{International tourism receipts (current US\$)}}{\text{GDP (current US\$)}} \times 100 \qquad (2.1)$$

Different institutions classify different lists of countries as emerging markets. Sixteen countries that all are classified as emerging markets by IMF, MSCI, S&P, Russell and Dow Jones are selected: Russia, South Africa, Philippines, Poland, Mexico, Peru, India, Malaysia, Hungary, Indonesia, China, Colombia, Brazil, Chile, Thailand, and Turkey.

2.3.1 Unit Root Test

Before running the causality test, checking the stationarity of the series for each country is necessary. According to Brooks (2014), three potential problems arise while using non-stationary series in the analysis:

- A non-stationary series can strongly influence its properties and behavior. And the persistence of shocks to the series will always be infinite.

- The use of non-stationary series can lead to a spurious regression which means variables are associated but not causally related.

- It can be proved that while using a non-stationary series the standard assumptions of asymptotic analysis are not valid.

Hence, ADF test is applied and the results (available upon request) indicate the stationarity of the series employed in our study.

2.4 Methodology

2.4.1 Pairwise Granger Causality Test

While studying the relationship between variables, usually the first thing that comes to mind is correlation. But correlation never implies causation in econometrics. Many correlations can be found in economics which are meaningless or spurious. The Granger (1969) introduces an approach to find a chronological ordering of movements of variables. In our study, this approach validly implies that movements in the tourism variable appear to lead those of economic growth and vice versa. Therefore, the Granger causality method is used in this paper to study the variations in tourism development and economic growth in each country separately. Lag order selection criteria are applied to select the appropriate lag length. One and five are specified as the minimum and maximum number of lags included in the model. These lag numbers imply the relevance of all past information and need to correspond to reasonable time-span which one variable can be used to predict the other variable. In this method, bivariate regressions of the following form are considered:

$$EG_t = a_0 + a_1 EG_{t-1} \ldots + a_l\, EG_{t-l} + b_1\, TR_{t-1} + \cdots + b_l\, TR_{t-l} + \varepsilon_t \quad (2.2)$$

$$TR_t = a_0 + a_1 TR_{t-1} \ldots + a_l\, TR_{t-l} + b_1\, EG_{t-1} + \cdots + b_l\, EG_{t-l} + u_t \quad (2.3)$$

l denotes the number of lags included in the model and t denotes time period. This test can show linkages between economic growth (annual %) (EG) and international tourism receipts (% GDP) (TR).

The null hypothesis of 1st regression is TR does not Granger-cause EG. The null hypothesis of 2nd regression is EG does not Granger-cause TR.

If TR causes EG, at least one of the lags of TR should be significant in the equation for EG and not vice versa. In this case, there is a unidirectional causality from TR to EG. On the other hand, if EG causes TR, at least one of the lags of EG should be significant in the equation for TR. If both sets of lags are significant, we say there is 'bi-directional causality' between series. It is said that TR and EG are independent, if neither set of lags are statistically significant in the equation for the other variable.

In the next step, our proxies of tourism development and economic growth are changed to International tourism receipts (current US$) and GDP (current US$) respectively, and the same process is followed to compare the misleading outcomes of selecting inappropriate variables to represent tourism and economic growth. Equations (2.4) and (2.5) are applied for this purpose:

$$\$GDP_t = a_0 + a_1 \$GDP_{t-1} \dots + a_l \$GDP_{t-l} + b_1 TR_{t-1} + \cdots + b_l TR_{t-l} + \varepsilon_t \quad (2.4)$$

$$\$TR_t = a_0 + a_1 \$TR_{t-1} \dots + a_l \$TR_{t-l} + b_1 \$GDP_{t-1} + \cdots + b_l \$GDP_{t-l} + u_t \quad (2.5)$$

l denotes the number of lags included in the model and t denotes time period. This test can show linkages between the GDP (current US$) and International tourism receipts (current US$).

Finally, the word 'causality' is somewhat of a misnomer. When there is a Granger-causality between two series, actually there is a correlation between the current value of one variable and lag-values of another variable; it does not mean that movements of one variable cause movements of another. In other words, causality implies a chronological ordering of movements in the series (Brooks, 2014).

2.4.2 Impulse Responses

Granger causality test cannot answer two questions: 1- Do changes in the measure of a variable have a negative or positive impact on another variable. 2- How long does

the effect require to take place and work through the system. To solve these problems, Impulse responses are used to track the responsiveness of one variable to shocks to another variable (Brooks, 2014).

2.5 Results

Table 1 shows the results of Granger causality tests for emerging economies. Estimated findings are according to annual data between 1995-2014. In our causality analysis, the calculated p-value indicates that some estimations are significant and the null hypothesis of no causality between tourism development and economic growth can be rejected.

Table 1: Granger causality test results

	Null Hypothesis			
Country	**TR does not Granger-cause EG**	**EG does not Granger-cause TR**	**Lag**	**Results**
Brazil	3.7139 (0.0719)*	2.1292 (0.1639)	1	TR→EG
China	0.7782 (0.4795)	2.9287 (0.0891)*	2	TR←EG
Chile	3.0537 (0.0818)*	3.4241 (0.0639)*	2	TR↔EG
Colombia	1.8548 (0.1921)	0.4243(0.5241)	1	No
Hungary	1.8723 (0.1929)	0.1498 (0.8624)	2	No
India	1.0382 (0.3234)	8.8243 (0.0090)***	1	TR←EG
Indonesia	2.5071 (0.1329)	6.3095 (0.0231)*	1	TR←EG
Malaysia	1.1756 (0.4503)	4.2359 (0.0934)*	5	TR←EG
Mexico	4.6492 (0.0466)*	0.5136 (0.4839)	1	TR→EG
Peru	1.21378 (0.2869)	4.13262 (0.0590)*	1	TR←EG
Philippines	3.0671 (0.0933)*	0.6573 (0.6406)	4	TR→EG
Poland	3.2621 (0.1375)	2.1077 (0.2449)	5	No
Russia	0.6131 (0.7005)	1.5787 (0.3394)	5	No
South Africa	1.5043 (0.2584)	0.7055 (0.5118)	2	No
Thailand	0.9276(0.4202)	0.3477 (0.7127)	2	No
Turkey	1.36328 (0.5754)	3.9007 (0.3693)	5	No

Note: 1. The numbers in the parentheses are P-values.
2. *** and * indicate significance at 1% and 10% level.

As we can see in Table 1, for the sample of sixteen emerging economies, in 10% significance level, there is a uni-directional causality from tourism receipts to GDP

growth in Brazil, Mexico, and Philippines. At 10% significance level, there is a uni-directional causality from GDP growth to tourism receipts in China, Indonesia, Malaysia and Peru. This causality exists for India at 1% significance level. At 10% significance level, there is a bi-directional causality between tourism receipts and GDP growth in Chile. No causality is detected between tourism receipts and GDP growth in Colombia, Hungary, Poland, Russian Federation, South Africa, Thailand and Turkey. So, the neutrality hypothesis is justified for these seven countries.

Table 1 shows mixed results in the context of tourism-led growth hypothesis. The causal relationship between tourism and economic growth vary, depending on different dynamics in sectoral interrelations, initial conditions and economic structures of the countries (Tugcu, 2014). Therefore, this instability of the causal relationship can be also obtained between tourism and economic growth for the same sample of countries in different time intervals, which can be explored in future studies.

The results indicate that the direction of causality is country-specific. No causality is detected from tourism to economic growth in some countries. The investment and growth in other sectors could be higher than tourism sector in those countries. Therefore, economic growth is mostly caused by other sectors rather than tourism sector.

Some countries have more tourist attractions and more potential to expand their economy using tourism sector. It is usually expected to find causality from tourism to economic growth in such countries. On the other hand, the expansion of the economy of some countries is more affected by other sectors. Higher economic growth may provide better opportunities for investment in tourism industry and increase tourism

inflows. It is usually expected to find causality from economic growth to tourism in such countries.

Table 2 shows the results of Granger causality tests for emerging economies, when International tourism receipts (current US$) and GDP (current US$) are used as tourism and economic growth variables.

Table 2: Misleading results of Granger causality test while selecting wrong proxies

	Null Hypothesis				
	$TR does not Granger-cause $GDP	**$GDP does not Granger-cause $TR**			
Brazil	5.46496 (0.0327)**	1.78410 (0.2003)	1	$TR→$GDP	Growth
China	12.4009 (0.0028)***	0.13779 (0.7154)	1	$TR→$GDP	Growth
Chile	0.19544 (0.6643)	12.6452 (0.0026)***	1	$TR←$GDP	Reverse
Colombia	0.66218 (0.4277)	5.47882 (0.0325)**	1	$TR←$GDP	Reverse
Hungary	5.72956 (0.0293)**	9.36209 (0.0075)***	1	$TR↔$GDP	Feedback
India	0.48697 (0.4953)	16.2171 (0.0010)***	1	$TR←$GDP	Reverse
Indonesia	17.9826 (0.0006)***	17.5897 (0.0007)***	1	$TR↔$GDP	Feedback
Malaysia	3.15104 (0.0949)*	0.01045 (0.9199)	1	$TR→$GDP	Growth
Mexico	0.30273 (0.8674)	2.02663 (0.1949)	4	No	Neutrality
Peru	2.96270 (0.0871)*	5.45174 (0.0191)**	2	$TR↔$GDP	Feedback
Philippines	0.61191 (0.4455)	4.82723 (0.0431)**	1	$TR←$GDP	Reverse
Poland	3.75162 (0.0517)*	4.59393 (0.0310)**	2	$TR↔$GDP	Feedback
Russia	3.72936 (0.0714)*	15.2814 (0.0012)***	1	$TR↔$GDP	Feedback
South Africa	3.88560 (0.0663)*	0.86140 (0.3671)	1	$TR→$GDP	Growth
Thailand	1.58675 (0.2259)	5.92087 (0.0271)**	1	$TR←$GDP	Reverse
Turkey	6.26648 (0.0124)**	0.49870 (0.6185)	2	$TR→$GDP	Growth

Note: 1. The numbers in the parentheses are P-values.
2. *** ,** and * indicate significance at 1%, 5% and 10% level.

As we can see in Table 2, for the sample of sixteen emerging economies, completely different and misleading results could be estimated by selecting wrong variables for representing tourism and economic growth. The relationship between international tourism receipts (current US$) and GDP (current US$) is identified in 15 out of 16 countries.

Figure 1 gives the impulse responses for economic growth (%GDP) associated with unit shocks to international tourism receipts (%GDP) for the case of Brazil and Mexico. Considering the signs of the responses in the case of Brazil, increasing international tourism receipts has a significant negative impact on the economic growth in the 2nd period after the shock, but beyond that, the shock appears to have worked its way out of the system.

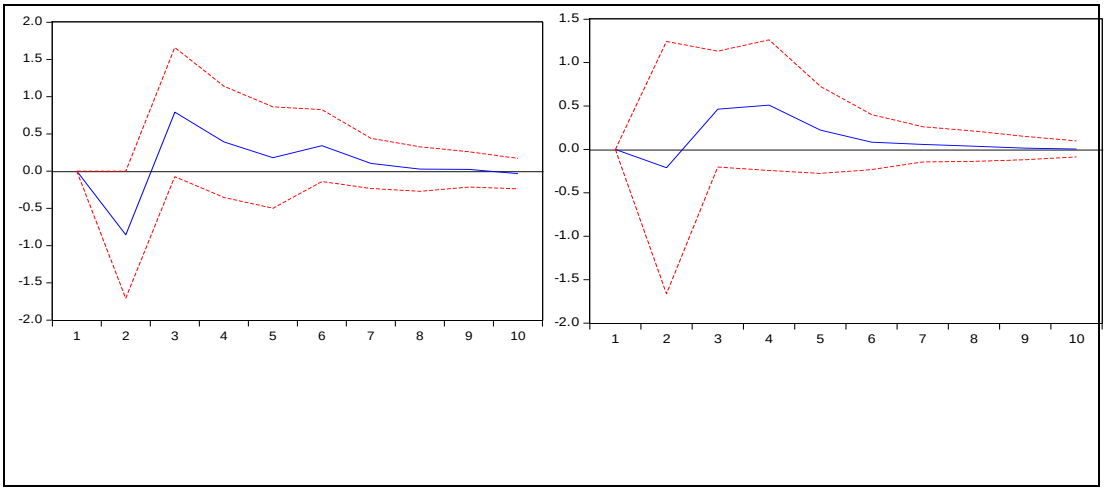


Figure 1: Impulse responses and standard error bands for shocks to international tourism receipts (%GDP) of Brazil (left) and Mexico (right)

Usually, the negative relationship between international tourism receipts and economic growth is because of exchange rate fluctuations. As the economic growth rate of a country increases, the value of local currency appreciates and effects tourism exports negatively. On the other hand, local currency devaluation could expand

international tourism sector. During the time period of our study, the reduction of the Brazilian official interest rate, and political instabilities influenced the exchange rate variations, especially when investors were unaware of the economic policy to be implemented by the front runner candidate during the presidential election of 2002. Tourism may also impose adverse environmental costs on the economy. Other negative externalities associated with tourism include property destruction, congestion and crowding of public transportation, roads and cities and conflict between residents and tourists.

Figure 2 gives the impulse responses for economic growth (%GDP) associated with unit shocks to international tourism receipts (%GDP) for the case of Philippines. Considering the signs of the responses, increasing international tourism receipts has a significant negative impact on the economic growth in the 3rd period after the shock, but beyond that, the shock appears to have worked its way out of the system.

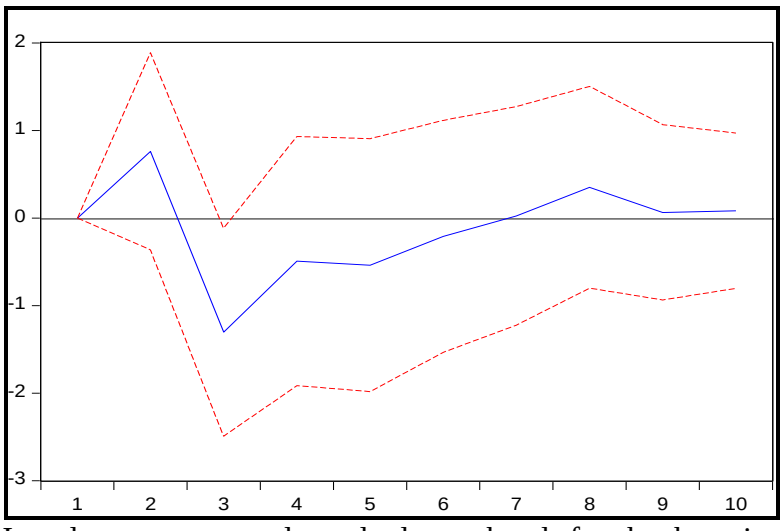


Figure 2: Impulse responses and standard error bands for shocks to international tourism receipts (%GDP) of Philippines

The expansion of tourism revenues leads to economic dependence of domestic community on tourism. Local businesses embrace tourism to experience a rapid growth, but the impact of natural disasters in Philippines carries a high risk for tourism industry and may lead to a great decline in the economy.

Figure 3 gives the impulse responses for international tourism receipts (%GDP) associated with unit shocks to economic growth (%GDP) for the case of Malaysia, India, Indonesia, and Peru. Considering the signs of the responses in the case of India and Peru, increasing economic growth has a positive impact for the 2nd and 3rd periods, but beyond that, the shock effect is disappeared gradually. Intuitively the positive impact of economic growth on tourism could be (at least partly) explained by the idea that as economic growth rate rises, the corresponding rise in per-capita incomes and living standards in India and Peru might be accompanied both by an increase in the global attractiveness of these countries (in terms of tourism services) and an increase in the rate of investment in tourism sector. In relation to the latter point, it seems likely that in these countries, an increase in the growth rate of GDP (which is expected to increase the domestic saving rate) might be leading to a proportionately higher rate of investment in tourism sector relative to the rest of the economy. It is worth to mention that both India and Peru experienced a high economic growth rate and stable exchange rate in the time period of our study that helped this positive interaction.

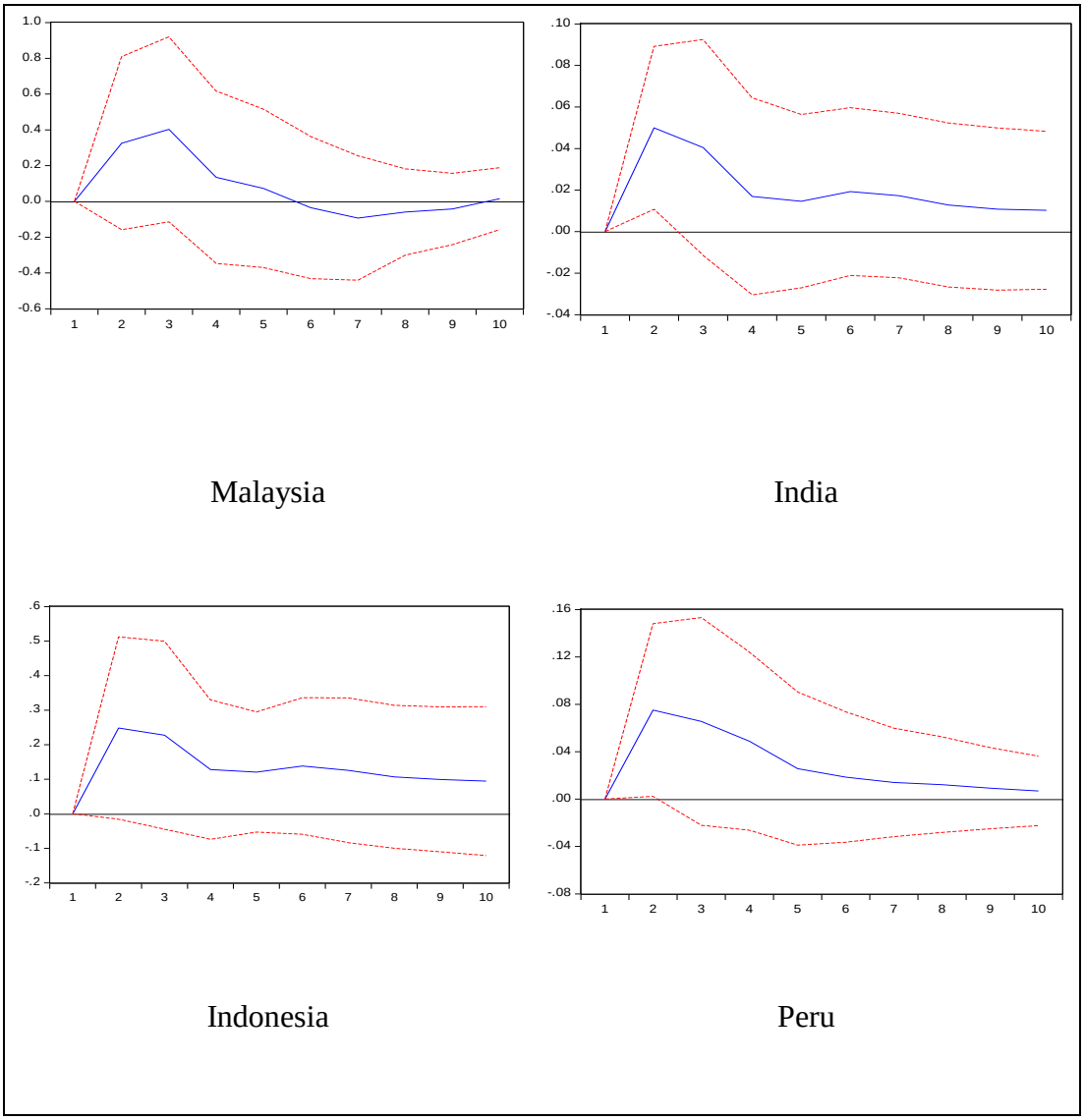


Figure 3: Impulse responses and standard error bands for shocks to economic growth of Malaysia, India, Indonesia and Peru

Figure 4 gives the impulse responses for international tourism receipts (%GDP) associated with unit shocks to economic growth (%GDP) for the case of China. Considering the signs of the responses, increasing economic growth has a negative impact on tourism.

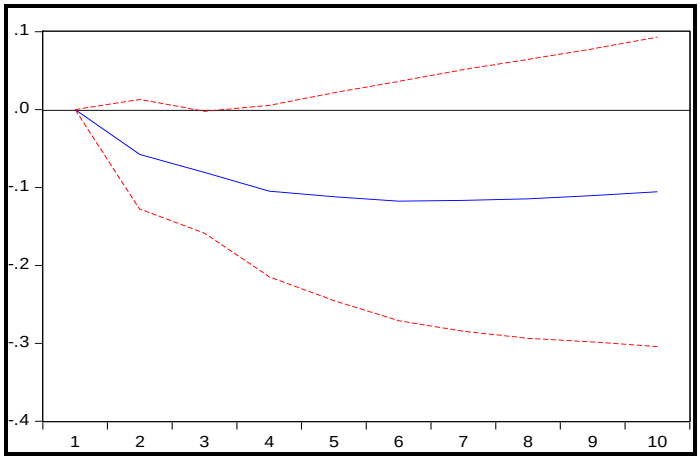


Figure 4: Impulse responses and standard error bands for shocks to economic growth of China

In a country like China with high potential in the manufacturing sector, economic growth motivates investors to invest in other sectors (with a higher rate of return) rather than tourism sector. That could be the reason behind the negative relationship between economic growth and tourism expansion in China.

2.6 Conclusions

The aim of this study is to analyze the likely effect of international tourism on the economic growth of countries while they are in the process of economic development. To this end, the sample of the present study has been deliberately chosen as emerging economies that are in the process of relatively high rates of industrialization and economic growth. These countries play a growing role both in terms of the global economy and politics. Furthermore, this paper uses tourism receipts as a percentage of GDP to measure tourism development and study its causal relationship with economic growth proxied by the annual growth rate of real GDP in emerging market economies. One of the main reasons for choosing to use the 'degree of tourism specialization' as the relevant tourism variable is the fact that this variable is simply the best proxy for measuring the relative size of tourism sector in overall economic activity and therefore, it seems to have relatively bigger potential in yielding policy insights regarding

whether or not ‘choosing strategically to specialize in tourism’ is likely to enhance the process of economic development in the country in question.

This study applies two different and yet complementary empirical methodologies (causality testing and impulse responses functions) to examine the nature of the relationship between the variables. Our paper result is based on individual country analysis and joint tests on all of the lags of variables, rather than a sample analysis and individual coefficient estimates. Finding causality from tourism development to economic growth in many countries in the literature proves selecting inappropriate proxies may lead to incorrect conclusions. Unlike what Tang and Tan (2015), and Lee and Brahmasrene (2013) using dollar value of variables reported, the findings of this study indicate that expanding tourism sector is not likely to stimulate economic growth in the short-run in any country of our sample. Besides, the overall effect of tourism development on the economic growth rate of Brazil, Philippines and Chile is negative. This finding is not consistent with Fayissa et al. (2011) that used panel regression to prove tourism industry revenues contribute positively to the growth rate of GDP per capita in Latin American countries. Therefore, directing the investments to the other industries could be more efficient to enhance the economic growth of developing countries of our sample. The governments can transfer incentives to other sectors (rather than tourism sector) without any negative impact on economic growth in the short-run.

The causality from economic growth to tourism in India, Indonesia, Malaysia, and Peru, complemented by impulse responses patterns indicates that economic growth can develop tourism sector in India and Peru. In the case of Malaysia, it is worth mentioning that Gunduz and Hatemi (2005) and Tang and Tan (2015) employed a

wrong variable ($ value of international tourism receipts) and claimed to find a causality from tourism to economic growth. The positive impact of economic growth on international tourism receipts in India and Peru could be explained by the idea that as economic growth rate rises, the corresponding rise in per-capita incomes and living standards in these countries might be accompanied both by an increase in the global attractiveness of this country (in terms of tourism services) and an increase in the rate of investment in tourism sector. In relation to the latter point, it seems likely that in these countries, an increase in the growth rate of GDP (which is expected to increase the domestic saving rate) might be leading to a proportionately higher rate of investment in tourism sector relative to the rest of the economy.

In the case of Turkey, our finding is in line with Tugcu (2014) who used causality test and Katircioglu (2009) who applied the cointegration method to study tourism receipt-economic growth nexus. Tourism is a sector that sometimes imposes adverse ecological, economic and environmental costs on a country's economy (Lee and Chang, 2008), and developing countries of our sample especially Colombia, South Africa, Thailand, and Turkey usually face these kinds of costs that can break down the link between economic growth and tourism. So, the validity of the neutrality hypothesis in these countries can be the natural outcome of the economic structure.

Comparing tables 1 and 2 indicates that selecting different proxies in studying tourism-economic growth nexus, leads to completely different results, and employing inappropriate proxies may lead to wrong conclusions. Therefore, we need to be very careful in selecting suitable variables before starting a study and applying the results in the policies.

The impulse responses analysis detects the linkage between economic growth and tourism receipts. As a contribution to the field, this analysis shows that counting on causality tests in studying tourism-economic growth nexus without analyzing the sign of the relationship and the time-span that effect requires to take place and work through the system is very simplistic and may come to wrong decisions and policy implications.

Chapter 3

DOES FOREIGN DIRECT INVESTMENT ACCELERATE TOURISM AND ECONOMIC GROWTH WITHIN EUROPE?

3.1 Introduction

International tourism has been one of the fastest-growing sectors and an important source of foreign exchange in a significant number of countries around the world. Its contribution to a country's economy is usually assessed by its impact on the GDP growth. The capacity of an economy to benefit from tourism depends on the availability of (international) capital to invest in infrastructure development especially development of transportation and accommodation services (Proença & Soukiazis, 2008).

Another macroeconomic factor which affects economic growth (directly and indirectly) is FDI inflows. Its direct effect on the economy is through providing valuable tangible and intangible assets such as technology and its related physical assets, capital formation and innovation capability (Wang, 2009; Liu, Shu & Sinclair, 2009). Its indirect effect is through facilitating the acquirement of capital financing and generating positive externalities for different sectors of the host country such as the tourism sector. It also introduces new managerial skills in the tourism industry and, consequently, stimulates economic growth by employing a substantial proportion of

the labor force, increasing government tourism revenues and, finally, net foreign exchange earnings will also improve the balance of payments. Therefore, the complex interactions between economic growth, FDI inflows, and tourism receipts are of great importance for making consistent economic policies in line with optimal growth strategy.

Despite a significant body of empirical and theoretical research analyzing these relationships, the empirical evidence more often than not remains ambiguous due to inappropriate methods and variables being employed and, furthermore, there is still no clear empirical evidence of FDI or international tourism's role in economic growth.

In this context, the main objective of this study is to provide a more informed exploration of the relationship between FDI inflows, tourism receipts, and economic growth by using Block Exogeneity Wald Test. This test detects the causal relationship between the variables but cannot explain two important factors; the first being the qualitative nature of the relationship. It is identified that one variable causes the other variable, but it is not clear whether the effect is positive or negative. The second factor being the length of time it takes for these effects to work through the system. Therefore, this study uses the analysis of impulse responses to overcome these two problems and traces out the responsiveness of the dependent variables in the VAR to shocks to each of the variables. Many studies have used cointegration and causality test results to demonstrate the positive effect of tourism receipts or FDI on economic growth (and vice versa), without giving attention to the fact that these two tests fail to explain the sign (+/-) of the relationships (e.g. Chen and Chiou-Wei, 2009; Oh, 2005; Durbarry, 2004).

Furthermore, the variables used in the literature to study the effect of FDI and tourism sector on the economy of a country are usually 'FDI (current US$)' or 'tourism receipts (current US$)' or 'tourism receipts (% of imports)'. By using these variables, many spurious causalities have been reported between FDI, tourism development and economic growth, because these variables cannot be suitable proxies for this purpose. Sometimes, US$-value of tourism receipts or FDI increases in a country, but its share in the economy declines simultaneously because other macroeconomic factors grow faster and contribute a larger share to the economy. Therefore, in this study, FDI net inflows (% of GDP) and international tourism receipts (% of GDP) are employed to study the effect of their variation on economic growth. Surprisingly, the empirical literature neglects the qualitative nature of the relationship between these three variables almost entirely.

Drawing upon the discussion above, this paper aims to assess whether and, if so, to what extent economic growth responds to the evolution of FDI either directly or via the tourism sector. Hence, seven European countries with significant shares of FDI inflows and tourism receipts in their economies have been selected to check whether their policies regarding attraction of this level of FDI and tourism are welfare-improving or not.

Therefore, this study contributes to the existing literature in three ways: First, adopting suitable variables as a proxy to account for economic growth, FDI inflows, and tourism development and prevent misleading results as reported in current literature. Second, employing two complementary methods to investigate FDI-tourism-economic growth nexus in seven European countries. To the best of our knowledge, this study constitutes

the first attempt to investigate empirically the role of FDI on economic growth through tourism exports, using these methodologies.

The remainder of this paper is structured as follows: The following section conducts a brief review of literature. Sections 3.3 and 3.4 provide details about variables, data and the methodology employed in this study. Section 3.5 presents and discusses the results of our analysis. Conclusions and policy implications are drawn in the last section.

3.2 Theory

During the past decades, economists have tried to investigate the cross-country income differences by modeling causes and the mechanics of economic growth while developing simple frameworks. The output of goods and services in an economy is determined by quantities of available inputs such as labor and capital and productivity of them. Neo-classical production function describes the relationship between inputs and outputs:

$$Y = A\,F(K, L) \tag{3.1}$$

Equation (1) shows how productivity (A), labor (L), and capital (K) determines total output (Y). Actually, A in equation (3.1) represents TFP introduced in the introduction section. According to Gehrels (1991) and Weil (2005), TFP depends on technology (T) and efficiency (E).

$$A = T * E \tag{3.2}$$

Equation (3.2) shows TFP depends on how efficient a country is in using its labor and capital resources together with the existing technology. Given a level of technology, a country can be highly efficient or inefficient and hence, TFP can be either high or low. The logarithmic transformation of equation (3.2) shows the growth rate of TFP:

$$\frac{\Delta A}{A} = \frac{\Delta T}{T} + \frac{\Delta E}{E} \tag{3.3}$$

Equation (3.4) driven from the logarithmic transformation of equation (3.1) illustrates how economic growth ($\frac{\Delta Y}{Y}$) depends on TPF growth ($\frac{\Delta A}{A}$)

$$\frac{\Delta Y}{Y} = \alpha \frac{\Delta K}{K} + \beta \frac{\Delta L}{L} + \gamma \frac{\Delta A}{A} \quad (3.4)$$

Now the question is how changing the sectoral composition of output via increasing the GDP share of tourism affects economic growth. Tourism sector which mainly includes restaurants, hotels, and transportation services is a part of service sector. In comparison with the other sectors (especially manufacturing and agriculture), service sector is not highly affected by technological progress. Therefore, productivity growth in service sector , in general, and tourism sector, in particular, is not expected to grow faster than other sectors. The past empirical evidence suggests that TFP growth is generally higher in traded good sectors (e.g. manufacturing and agriculture) and the rate of technological progress in these sectors has been historically higher than service sector (Weil, 2005; Gehrels, 1991). Therefore, if the sectoral composition of output is changed in favor of service sector, TFP growth is expected to decline, because this change is made at the expense of other sectors, while empirical evidence indicates that productivity growth in agriculture sector has been higher than other sectors (Steger, 2000).

In tracing the impact of any kind of investment, including FDI, on the tourism sector and, subsequently, on economic growth, one of the most important factors is the rate of return on investment. In this section, we study the interactions between investment, rate of return on investment, and rate of economic growth by focusing on a modern approach (developed by Harberger, 1998) to the analysis of economic growth. First, we attribute a marginal product (measured by its economic reward) to each input:

$$\Delta y = w\Delta L + (\rho + \delta)\Delta K + R \quad (3.5)$$

where:

$\Delta y =$ change in output (GDP);

$w =$ initial real wage;

$\Delta L =$ change in labor input;

$\Delta K =$ change in capital stock;

$\delta =$ rate of real depreciation of capital;

$\rho =$ initial real rate of return to capital; and

$R =$ the residual of growth unexplained by increases in traditional inputs.

We can rewrite equation (3.5) in two more familiar forms:

$$\frac{\Delta y}{y} = \left(\frac{wL}{y}\right)\left(\frac{\Delta L}{L}\right) + \left[(\rho + \delta)\frac{K}{y}\right]\left(\frac{\Delta K}{k}\right) + \left(\frac{R}{y}\right) \quad (3.6)$$

$$\frac{\Delta y}{y} = s_l\left(\frac{\Delta L}{L}\right) + s_k\left(\frac{\Delta K}{k}\right) + \left(\frac{R}{y}\right) \quad (3.7)$$

s_l, s_k, and $\frac{R}{y}$ are share of labor, capital, and cost reduction in GDP respectively. In these equations, R representing 'real cost reduction (RCR)', 'improvement in Total Factor Productivity (TPF)', or 'technical change' is based on truly new ways of doing things and improved labor quality. RCR, a defense against diversity in bad times and a path to profit in good times, is on the mind of most production managers and business executives in modern economies. They usually use two tools to achieve this goal: 1- Shifting to more modern management techniques. 2- Downsizing by reducing the labor force or capital stock (at replacement cost).

The second term in the right-hand side of equation (6), $(\rho + \delta)\frac{\Delta K}{y}$, represents capital's contribution to the rate of growth. $\frac{\Delta K}{y}$ is the GDP share of net investment, and $(\rho + \delta)$ is the rate of return. It is a critical factor that determines whether or not FDI can stimulate tourism expansion and economic growth within economies. High rates of

return play an important role in motivating economic agents and yield a high capital contribution to growth by creating attractive investment opportunities. On the other hand, an economy may experience a low GDP growth rate in the wake of low capital contributions associated with low rates of return and weak RCRs.

Equations (3.6) and (3.7) imply that investment rate, rate of return on investment, and RCR are the components of economic growth. All of these components should work together to stimulate economic growth via tourism investment or FDI. If capital is attracted to a country but it is not invested in the best projects with acceptable rates of return or, if firms that use that capital do not have performance efficiency, the investment not only cannot generate economic growth, but also has a negative impact on growth rate. In this thesis, we study different European economies separately to see whether investments have generated economic growth or not. We investigate the reasons behind the detected relationships and provide some policy implications to stimulate growth according to the potentials of each economy.

According to Anderson (1983), in studying the yield of investment, the attention is focused on the incentive structures, choice of investments, and pricing policies. On the efficiency of investments, attention is focused on institutional shortcomings in the capital markets (especially in developing countries) that may diminish the financial intermediaries' capacities to identify and finance best projects, on the incentives to save and invest, and on the measurable costs of any administrative constraints or distortions that might be acting on such incentives. And on the labor side, attention is focused on institutional and educational factors that prevent or facilitate the redeployment of labor to those investments with higher earnings per worker and ultimately, higher yields. It is worth mentioning that even in the case of a high

investment rate, the capital-output ratio does not rise significantly if the output growth, driven by growth in total factor productivity and in the labor force is rapid. Therefore, the country experiences a high rate of return on investment (Bai et al., 2006).

According to Haberger (1998), some other factors that negatively affect the components of growth include: 1- inflation, 2- incorrect signals and distortions due to incorrect government policies such as tariffs and other interventions, 3- ill-conceived laws and bureaucratic hurdles which are usually perceived in the complexity of tax codes and labor laws, 4- international trade distortions such as licenses, quotas, tariffs, etc. 5- state-owned enterprises. 6- lack of a sound institutional and legal framework, 7- lack of political consensus regarding outlines of economic policies.

It is worth to mention that investments in the current period give us the ability to have a higher level of income in the next periods, but it doesn't necessarily change the rate of economic growth. In the case of FDI, especially FDI in Public Private Partnerships (PPPs), the domestic government pays foreign investor and capital flows out. Let's name it 'economic cost of FDI' (ECOFDI). Therefore, capital's contribution to the rate of growth will be $((\rho + \delta) - ECOFDI)\frac{\Delta K}{y}$, where ECOFDI is return repatriated to foreign owner of capital. Obviously, if $(\rho + \delta) < ECOFDI$, growth contribution of FDI will be negative.

3.3 Literature Review

3.3.1 FDI and Economic Growth

There are several theories on the beneficial effect of FDI on economic growth. However, in a long-standing debate, empirical findings appear to be mixed.

Feeny, Iamsiraroj and McGillivray (2014), Iamsiraroj and Ulubaşoğlu (2015), Pegkas (2015), Iamsiraroj (2016), and Barrell and Holland (2000) reported a beneficial effect of FDI on the economy. Omri, Nguyen, and Rault (2014) also detected a causality between growth and FDI. On the other hand, Temiz and Gökmen (2014) and Damijan, Knell, Majcen, and Rojec (2003) did not identify any positive relationship between these two factors. Furthermore, Carkovic and Levine (2005) and Easterly (1993) detected the negative impact of FDI on the economy. The details of these studies are reviewed as follows.

FDI inflows may affect economic growth by increasing the country's capital stock as well as providing managerial skills and better technologies to key infrastructures and increase productivity in the host country. Pegkas (2015) employed Fully Modified OLS (FMOLS) and Dynamic OLS (DOLS) methods to analyze the impact of FDI on the economic growth of Eurozone countries between 2002 and 2012. His findings show that economic growth is positively affected by FDI.

Barrell and Holland (2000) employed a panel data of 11 manufacturing sectors within Hungary, Czech Republic, and Poland to analyze the impact of FDI on them. Evidence provided that labor productivity increased by FDI in most manufacturing sectors. The effect of FDI on economic growth of 209 countries over the period 1971 to 2010 was examined by Feeny, Iamsiraroj and McGillivray (2014). They included an FDI–Pacific interaction term to investigate whether this relationship is different in Pacific countries, or not. They claim that the effect of FDI on growth is lower in Pacific countries. In the sample of all countries, a 10% increase in FDI (% GDP) leads to a 2% increase in growth rate, however, this increase is around 0.1% in Pacific countries. The results reported in the sample of all countries is illogical. Suppose that initially the volume of

FDI is 10% of GDP and economic growth rate is 5%. According to their results, if the real FDI rate increases from 10% to 11%, the growth rate increases from 5% to 7%, which means these countries can increase their growth rate dramatically by a small change in the real FDI rate.

An 'informed' econometric analysis based on details reported in 108 published papers was used by Iamsiraroj and Ulubaşoğlu (2015) to investigate global FDI–growth nexus in a sample of 140 countries over the period 1970-2009. They confirmed a positive relationship between FDI and economic growth. Furthermore, Iamsiraroj (2016) applied a simultaneous system of equations approach for a cross-section of 124 countries for the period 1971–2010. His results provide evidence of a positive relationship between FDI and growth. The nature of the FDI data undertaken in this study is not clear. The dynamic simultaneous-equation panel data models was employed by Omri, Nguyen, and Rault (2014) to analyze the causal links between economic growth, FDI and CO_2 emissions in a cross-section of 54 countries over the period 1990–2011. They also considered three regional sub-panels in their second analysis: 1- North Africa, Middle East, and sub-Saharan Africa, 2- Latin America and the Caribbean, 3- Europe and Central Asia. Their findings indicate a bidirectional causality between FDI inflows and economic growth in their three sub-panels. They used annual data for the GDP (constant 2005 US$) and FDI inflows (constant 2005 US$) which are not appropriate proxies to reflect the macroeconomic situation of a country in these two areas.

Temiz and Gökmen (2014) studied FDI-GDP growth nexus in Turkey by using the Granger causality and Johansen cointegration tests and ordinary least squares (OLS) method. No significant relationship was discovered between GDP growth and FDI

inflows, neither in the short-run nor in the long-run. There was no mention of what kind of variables ($-value or GDP share) were adopted to represent FDI.

The question that has arisen since the import substitution strategies of the 1960s and 1970s in transition market economies is whether or not the opening up of most economies to foreign investment has a positive impact on domestic firms. More specifically, does the growing presence of FDI have a positive effect on the efficiency of domestic firms in transition economies? FDI is one of the most important channels of technology transfer from developed to developing countries. These channels have been studied by Damijan et al. (2003) by using firm-level data on transition countries including Estonia, Bulgaria, and Hungary over the period 1994–1998. Their findings prove that direct foreign linkages are the main channel of technology transfer to local firms, but no positive intra-industry spillover is generated by FDI for domestic firms.

Many studies have focused on firm-level panel data to analyze FDI spillovers in different countries. For example, Damijan et al. (2013) investigated different channels of technology transfer and FDI spillovers in transition countries including Bulgaria, Croatia and Estonia by using a firm-level dataset of more than 90,000 firms. They proved that the absorptive capacity and productivity levels of individual firms affects both the spillovers from foreign firms as well as direct effects from foreign ownership. If multinational enterprises acquire special benefits (e.g. preferential tax treatments) from host governments, the distortions caused lead to significant adverse effects on growth (Easterly, 1993). Subsidies and preferential tax treatments serve to attract FDI investment that has a rate of return lower than average economic rate of return. Hence, after repatriating the financial cost of these funds, the net economic return retained in the country may be negative causing its overall growth rate to slow down.

3.3.2 FDI and Tourism Development

FDI is one of the routes through which countries can expand their capacity for providing tourism services, but it usually causes special concerns and challenges. This section provides a summary of studies on FDI-tourism nexus that are significantly relevant to our topic.

According to the theory of firm internationalization introduced by Dunning (1993, 2002), there are three primary incentives for FDI: resource seeking or strategic asset seeking, efficiency seeking, and foreign market seeking. However, economists have questioned the applicability of this theory in explaining FDI from developing economies, because this theory focuses on FDI flows from industrialized countries (Buckley et al., 2007; Zhang & Daly, 2011). At the same time, there has been a growing interest in studying the link between tourism and FDI at individual country level (e.g. Sanford & Dong, 2000; Tang, Selvanathan and Selvanathan, 2007; Selvanathan, Selvanathan, & Viswanathan, 2009) or in a sample of countries (e.g. Craigwell & Moore, 2007; Khoshnevis Yazdi, Nateghian, & Sheikh Rezaie, 2017).

Foreign investors can assist a country in attracting more tourists by improving tourist attractions and transportation and accommodation facilities such as airports and hotels (Craigwell & Moore, 2007; Tang et al., 2007). There is also a direct link between the level of FDI and the number of managers and entrepreneurs who look for investment opportunities in tourism in the host countries (Selvanathan et al., 2009). Sanford and Dong (2000) also proved that FDI is positively affected by tourism development.

The causal link between tourism and FDI in China was investigated by Tang et al. (2007) by using Zapata-Rambaldi VAR framework. They reported a unidirectional

causal relationship from FDI to tourism and interpreted it as a reason behind the rapid expansion of the Chinese tourism market. In addition, FDI- international tourism nexus in 27 EU countries between 1995 and 2014 has been investigated by Khoshnevis Yazdi et al. (2017). They claimed there is no causality between FDI and international tourism receipts, although some errors in their econometric analysis are noted, particularly in the units of measurement of variables.

3.3.3 Tourism and Economic Growth

There is no clear consensus regarding the way in which tourism policy analysis should be approached. The contribution of tourism to national economic growth has been widely studied due to the important role that it plays in the balance of payments, employment, and production. Among the papers that studied the relationship between tourism development and the rate of economic growth, some investigated this relationship in a single country and some in a sample of countries. Some of these papers confirmed the positive and some the negative effect of tourism on the economy.

Sinclair (1998), Sinclair and Bote Gómez (1996), Gimeno (1988), Ivanov and Webster (2007), and Balaguer and Cantavella-Jorda (2002) studied the tourism-economy nexus in Spain, and Soukiazis and Proença (2008) examined this nexus in Portugal. Proença and Soukiazis (2008) and Garcia (2014) analyzed it in both Spain and Portugal. This relationship has been studied by Payne and Mervar (2010) and Mervar and Payne (2007) in the case of Croatia, and by Stanchev, Stancheva and Young (2015) in the case of Bulgaria. And finally, the tourism industry of Estonia has been studied by Cottrell and Cottrell (2015) and Smith (2015).

Tourism is one of the critical sectors of the economy in the Baltic States of Lithuania, Latvia, and Estonia especially after regaining their independence. A common recent

historical background and the geographical proximity of each, make the tourism experience unique in these countries (Cottrell & Cottrell, 2015). Health tourism, which includes clinics and hospitals for medical procedures, holistic, spiritual or retreats, spa and wellness hotels and resorts, hot springs and thermal baths has become one of the collaborative trademarks for Estonia (Smith, 2015).

The positive impact of tourism on the economy has been reported by Hazari and Sgro (2015), Sinclair (1998), Sinclair and Bote Gómez (1996), Proença and Soukiazis (2008), Gimeno (1988), Balaguer and Cantavella-Jorda (2002), Soukiazis and Proença (2008), Lee and Brahmasrene (2013), and Dritsakis (2012). Garcia (2014) and Stanchev, Stancheva, and Young (2015) also believe that tourism is an influential factor in economic development. These research papers are reviewed as follows.

A dynamic model developed by Hazari and Sgro (2015) shows a positive effect of tourism demand on a small economy's long-run growth. In actual fact, tourism demand leads to a lower saving rate requirement which allows local residents to consume now rather than later.

Spain, an international tourism destination considered in our study, has an economy which is very open to international trade with large foreign exchange earnings originating from tourism into its current account. Sinclair (1998) and Sinclair and Bote Gómez (1996) provide two well-documented sets of evidence on the positive effect of inbound tourism on the level of foreign exchange income in the Spanish economy. As a labor-intensive sector, the Spanish tourism industry is a fundamental source of employment in Spain (Balaguer & Cantavella-Jorda, 2002). This industry has financed technology and machinery imports needed to stimulate Spain's economic development

after ‘the 1959 Stabilization and Liberalization Plan’ (Gimeno, 1988). Balaguer and Cantavella-Jordá (2002) applied cointegration and Granger causality tests to study the relationship between Spain’s economic growth and tourism for the period 1975–1997. They claimed that Spain’s economic growth has been positively affected by persistent inbound tourism expansion over recent decades. This claim is unreliable because cointegration and Granger causality approaches detect the direction of the effect but are unable to detect the sign of effect. The detected effect could be either positive or negative.

An empirical analysis based on the conditional convergence approach and panel data techniques was employed by Proença and Soukiazis (2008a) to examine the link between tourism and the population’s standard of living in Spain, Portugal, Italy and Greece as a tourist destination from 1990 to 2004. Their results pointed out that tourism can be accepted as a strong influential factor in the standard of living in these four Southern European countries. In another study, the importance of tourism as a conditioning factor in the economy of Portugal was examined by Soukiazis and Proença (2008b). Based on conditional convergence and endogenous growth theory, they employed accommodation capacity and per-capita income as tourism and economic growth indicators in three different methodologies including system GMM, Fixed Effects Method (LSDV) and Random Effects Method (GLS) over the period 1993–2001. They proved tourism has a positive impact on the economic growth of Portugal and may improve standards of living significantly. An interesting comparison and analysis of the evolvement of tourism policies in Portugal and Spain by Garcia (2014) concentrates on differences and similarities in the policies in these two countries. According to this study, policymakers have attempted to promote and

improve the external image of their countries. Strategies have been changed to maximize tourism revenue.

Coastal tourism in Bulgaria is a rapidly growing sector in the economy. The coastal population has grown substantially as a result of tourism development over the last decade. Apparently, this tourism development is vital for the Bulgarian economy, however, a degree of priority must logically be given to preserve the coastal environment in order to preserve the economic benefits (Stanchev, Stancheva & Young, 2015).

On the other hand, the negative impact of tourism on the economy has been detected by Milne (1990), Long, Perdue, and Allen (1990), Liu and Var (1986), Hazari and Ng (1993), Dunn and Dunn (2002) and Ivanov and Webster (2007). A detailed review of these studies is provided below.

In actual fact, associated with the economic advantages of tourism, there are some adverse environmental, socio-cultural and economic impacts which have been extensively reported by Milne (1990), Long, Perdue, and Allen (1990) and Liu and Var (1986). They suggested considering a wide range of social, environmental and economic costs of tourism development. Moreover, most of the tertiary and non-durable goods consumption sectors are affected by tourism because domestic consumption patterns can be changed by international tourism expenditures via the so-called demonstration effect which leads to increases in the inflation rate. This statement is incorrect as tourism expenditure cannot cause the demonstration effect as this has nothing to do with the inflation rate. But apparently, increased foreign

exchange earnings lead to an appreciation in the domestic currency and a lower rate of inflation.

Meanwhile, the negative effect of domestic price increases on the country's overall welfare would be greater than the positive effects of these expenditures (Hazari and Ng, 1993). Expansion of the tourism industry in some countries is also associated with an increase in crime and violence rates and incurs costs of improving public security and crime control (Dunn and Dunn, 2002).

A growth decomposition methodology has been applied by Ivanov and Webster (2007) to study the tourism-economic growth nexus in Spain, Greece, and Cyprus. Economic growth was studied in two disaggregated parts: growth generated by the tourism sector and growth generated by other sectors. 'Gross Value Added in tourism activities' and 'GDP per capita growth' were employed as a proxy for tourism and economic growth respectively. Results determined that these two indicators move in different directions in some time intervals, demonstrating that the tourism industry decreases economic growth in the case of Spain.

Mervar and Payne (2007) and Payne and Mervar (2010) confirmed the positive impact of economic growth on the tourism industry. Mervar and Payne (2007) studied Foreign Tourism Demand for Croatian Destinations by estimating Long-Run Elasticities. They used the quarterly data on the aggregate number of foreign overnight stays in Croatia as a proxy for foreign tourism demand in an Autoregressive Distributed Lag (ARDL) model in the period 1994-2004. Their results reveal that tourism demand is highly elastic and positively affected by GDP of tourist-generating countries. Payne and Mervar (2010) extended this line of research to the case of Croatia. Tourism revenue

is a considerable source of foreign exchange income for Croatia in light of the popularity among international tourists of the Adriatic coastline. They applied the Yamamoto long-run causality test to investigate the Tourism-Economic Growth nexus by employing quarterly data between 2000 and 2008. They claim their results support the economy-driven tourism growth hypothesis by detecting a unidirectional causality from real GDP to international tourism receipts. No complementary methods were employed to find the qualitative nature of this causal relationship.

Lee and Brahmasrene (2013), Tugcu (2014), Dritsakis (2012), Sokhanvar, Aghaei and Aker (2018), Sokhanvar, Çiftçioğlu and Javid (2018) and Sokhanvar (2019) studied the tourism-economic growth nexus in different samples of countries rather than a single country. A review of these articles is provided as follows.

Lee and Brahmasrene (2013) used the data on CO_2 emissions, FDI, economic growth and tourism in fixed-effects models for EU countries between 1988 and 2009. A long-run relationship was reported between these variables. It was also proved that FDI, CO_2 emissions and tourism have significant positive effects on economic growth. Apparently, energy consumption is an important factor in economic growth, and in the study, CO_2 emissions reflect energy consumption.

A panel of European, Asian and African countries with a Mediterranean coastline was employed by Tugcu (2014) over the period 1998-2011 to seek evidence to confirm tourism-led growth hypothesis (TLEG) in these regions by using the panel Granger causality test. Results proved that in some countries causality goes from economic growth to tourism, while tourism causes economic growth in others. It is concluded from these results that European countries in the Mediterranean region seem to be

benefitting from tourism as an effective input for economic growth. This is an uncertain conclusion as this research method is unable to identify the sign of the relationship.

The tourism-economic growth nexus in seven Mediterranean countries was also analyzed by Dritsakis (2012) over the period 1980-2007. The results of FMOLS approach and panel cointegration tests indicate that the GDP of these countries is significantly affected by their tourism receipts. In another study, Sokhanvar, Aghaei and Aker (2018) implemented a two-stage least squares estimation approach and used an annual panel data of 98 countries to examine the relationships between prosperity sub-indices and international tourism expenditure. Their analysis didn't detect any relationship between countries' economic performance and tourism expenditures. The causal relationships between economic growth and tourism in emerging market countries were investigated by Sokhanvar, Çiftçioğlu and Javid (2018). They confirmed the validity of TLEG hypothesis in Philippines, Mexico and Brazil and the reverse hypothesis in Peru, Malaysia, Indonesia, India, and China. A summary of research reviewed in this section is provided in Appendix 1.

One of the most common methods applied in econometrics is vector auto-regression (VAR). However, it has been proved that if the series are integrated or cointegrated, conventional asymptotic theory cannot be used to test economic hypotheses (Park and Phillips, 1989; Sims, Stock & Watson, 1990). Therefore, prior to estimating the VAR model, cointegration and unit-root tests are required. The tests developed for cointegration include Stock and Watson (1988), Phillips and Ouliaris (1990), and Johansen (1991). And some of the tests available to check the existence of unit-root(s) in a time series include Dickey and Fuller (1979), Phillips and Perron (1988), and

Pantula (1989). But, these tests are known to have low power (Reimers, 1992; Toda, 1995). Hence, the results of hypothesis testing conditioned on the estimation of a cointegrating rank, and a unit-root test may be affected by severe pretest biases. Likewise, the application of Granger non-causality (in levels) based on the usual Wald test statistic has a non-standard asymptotic distribution (Toda and Phillips, 1993). In this case, applying an approach robust to the cointegration and integration properties of the series is desirable. Therefore, this study uses Toda-Yamamoto causality test for hypothesis testing in studying the relationship between the variables in a VAR model. The details of this technique are provided in the methodology section. Payne and Mervar (2010) and Lean and Tang (2010) are the research papers that employed this approach to study the tourism-growth nexus.

3.4 Data and Variables

This study employs annual time series data on GDP (current US$), international tourism receipts (current US$), GDP growth (annual %) and FDI net inflows (% of GDP) over the period 1995-2014 for selected European economies. The data source is the World Bank datasets. International tourism receipts (% of GDP) are obtained by dividing international tourism receipts (current US$) over GDP (current US$).

3.4.1 List of Selected Countries

In this study, all of the European countries are first ranked according to GDP share of international tourism receipts (average of 2012-2014) and then according to GDP share of FDI net inflows (average of 2012-2014) with the top 10 countries in each list being selected. Finally, seven countries which are common in both lists are selected as a sample in this study. These seven countries include Bulgaria, Croatia, Estonia, Hungary, Iceland, Portugal, and Spain. Figures 1 and 2 illustrate the top ten European

countries with the highest GDP share of international tourism receipts and GDP share of FDI net inflows respectively.

		% of GDP	Billion USD
1	Croatia	16.74%	9.57
2	Estonia	7.29%	1.85
3	Portugal	7.21%	16.17
4	Bulgaria	7.17%	4.30
5	Greece	7.16%	17.20
6	Iceland	7.04%	1.11
7	Slovenia	5.97%	2.86
8	Hungary	5.05%	6.77
9	Austria	4.71%	20.02
10	Spain	4.53%	61.85

Figure 5: Top ten european countries with the highest international tourism receipts

		% of GDP	Billion USD
1	Netherlands	26.12%	228.67
2	Ireland	24.29%	59.23
3	Portugal	6.90%	15.32
4	Estonia	6.16%	1.55
5	Hungary	4.86%	6.58
6	Czech Republic	3.98%	8.29
7	Croatia	3.72%	2.12
8	Bulgaria	3.51%	1.95
9	Iceland	3.09%	0.75
10	Spain	2.76%	37.36

Figure 6: Top ten european countries with the highest FDI net inflows (% of GDP)

3.4.2 Unit Root Test

It's necessary to check the stationarity of the series before running the Block Exogeneity Wald Test because, according to Brooks (2014) it is likely that spurious results will be obtained by employing non-stationary data. Therefore, a Zivot-Andrews Unit Root Test is employed and the results (available upon request) indicate that the

series are I (1) which means the first difference of the series are stationary. Hence, the first difference of all variables is employed in our analysis.

3.5 Methodology

The 'Block Exogeneity Tests' and 'Impulse Responses' are employed in this study to investigate the interactions between the variables.

3.5.1 Block Exogeneity Tests

Most studies in econometrics aim at analyzing the relationship between variables by identifying whether a change in one variable can be predicted by a change in the previous values of another variable. Block Exogeneity Wald Test is a method to detect "a chronological ordering of movements of variables". In this paper, it is hypothesized that movements in FDI appear to lead those of tourism receipts and economic growth and vice versa. Hence, this approach is employed to investigate the variations in these three variables in each country separately.

In order to find the appropriate lag length, Lag order selection criteria based on Akaike's information criterion (AIC) is employed. In this method, tri-variate Vector Autoregressions (VAR) of the following forms are considered:

$$\begin{cases} FDI_t = a_0 + a_1 FDI_{t-1} \dots + a_k\, FDI_{t-k} + b_1\, EG_{t-1} + \cdots + b_k\, EG_{t-k} + c_1 TR_{t-1} \dots + c_k\, TR_{t-k} + \varepsilon_t \\ TR_t = a_0 + a_1 TR_{t-1} \dots + a_k\, TR_{t-k} + b_1\, EG_{t-1} + \cdots + b_k\, EG_{t-k} + c_1 FDI_{t-1} \dots + c_k\, FDI_{t-k} + \varepsilon_t \\ EG_t = a_0 + a_1 EG_{t-1} \dots + a_k\, EG_{t-k} + b_1\, TR_{t-1} + \cdots + b_k\, TR_{t-k} + c_1 FDI_{t-1} \dots + c_k\, FDI_{t-k} + \varepsilon_t \end{cases} \quad (3.8)$$

It denotes time period and *k* denotes number of lags included in the VAR system. This test can detect the relationship between GDP share of international tourism receipts (TR), GDP share of FDI net inflows and economic growth (annual %) (EG).

The null hypothesis of 1st, 2nd and 3rd regression is:

- TR and EG do not cause FDI.
- EG and FDI do not cause TR.

- FDI and TR do not cause EG.

According to Brooks (2014):

> "the word 'causality' is somewhat of a misnomer, Granger-causality really means only a correlation between the current value of one variable and the past values of others; it does not mean that movements of one variable cause movements of another."

3.5.2 Impulse Responses

Block exogeneity tests cannot answer two questions: According to Brooks (2014):

> "It cannot not reveal whether changes in the value of a given variable have a positive or negative effect on other variables in the system, or how long it would take for the effect of that variable to work through the system".

Therefore, impulse responses function is employed to study the interactions between the shocks to one variable and responsiveness of another variable.

For each country, one unit of positive shock is applied to FDI and TR series and the responses of TR and EG to separate shocks of the series are estimated and plotted. Based on Doan (1994), the Monte Carlo integration method is used to calculate two standard error bands.

3.6 Results

3.6.1 Block Exogeneity Tests Results

Table 3 illustrates the results of Block Exogeneity Wald tests for our sample of seven European countries.

Table 3: Block exogeneity wald tests results

Country	Dependent variable	FDI			TR			EG	
Bulgaria	Excluded	TR	EG		FDI	EG		FDI	TR
	Chi-sq	1.6824	3.4791		9.6708	15.987		96.984	70.608
	Optimum Lag	3	3		3	3		3	3
	Prob.	0.6408	0.3235		0.0216**	0.0011**		0.000***	0.000***
Croatia	Excluded	TR	EG		FDI	EG		FDI	TR
	Chi-sq	0.3342	1.8425		1.1134	0.0378		0.2467	0.1675
	Optimum Lag	1	1		1	1		1	1
	Prob.	0.5632	0.1746		0.2913	0.8457		0.6194	0.6823
Estonia	Excluded	TR	EG		FDI	EG		FDI	TR
	Chi-sq	1.1424	1.8463		12.863	4.2266		10.728	10.045
	Optimum Lag	3	3		3	3		3	3
	Prob.	0.7668	0.6049		0.0049***	0.2380		0.0133**	0.0182**
Hungary	Excluded	TR	EG		FDI	EG		FDI	TR
	Chi-sq	1.5806	3.4739		0.8749	0.6116		8.0163	0.6261
	Optimum Lag	1	1		1	1		1	1
	Prob.	0.2087	0.0623*		0.3496	0.4342		0.0046***	0.4288
Iceland	Excluded	TR	EG		FDI	EG		FDI	TR
	Chi-sq	1.8292	2.5179		3.0122	6.7612		11.650	3.0804
	Optimum Lag	3	3		3	3		3	3
	Prob.	0.6086	0.4721		0.3897	0.0799*		0.0087***	0.3794
Portugal	Excluded	TR	EG		FDI	EG		FDI	TR
	Chi-sq	1.9515	1.5251		0.0267	0.6530		0.4215	1.5026
	Optimum Lag	1	1		1	1		1	1
	Prob.	0.1624	0.2168		0.8700	0.4190		0.5162	0.2203
Spain	Excluded	TR	EG		FDI	EG		FDI	TR
	Chi-sq	1.1296	0.3042		4.1919	5.3180		31.661	33.317
	Optimum Lag	3	3		3	3		3	3
	Prob.	0.7699	0.9592		0.2415	0.1499		0.000***	0.000***

*, **, *** denote statistical significance at 1%, 5%, and 10% levels, respectively.

The results in Table 3, unsurprisingly, show the evidence of lead-lag interactions among the variables in different countries, although, few linkages between the variables are established. Since a tri-variate VAR is estimated for each country, three panels are provided, with one for each dependent variable in the system.

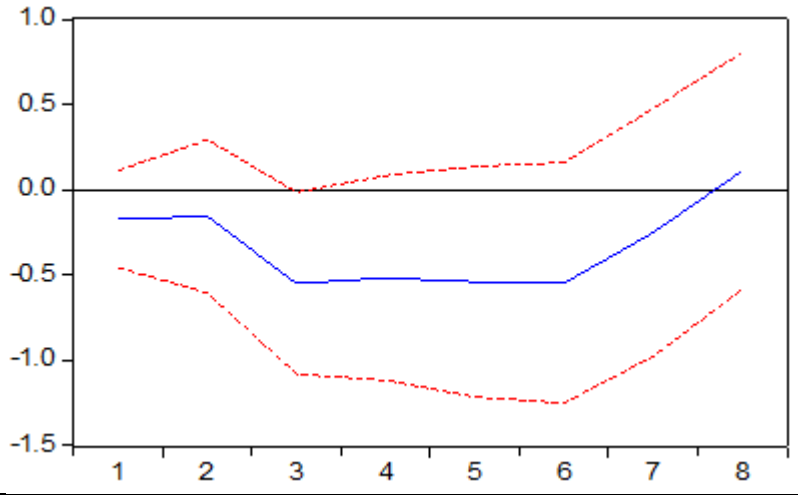
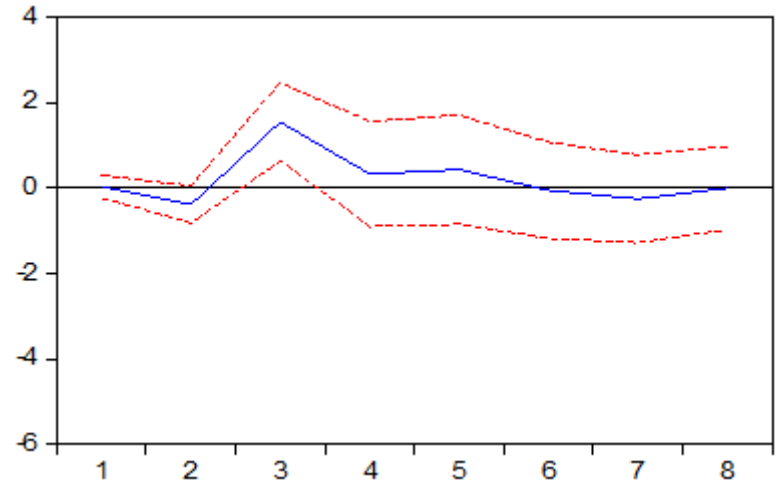
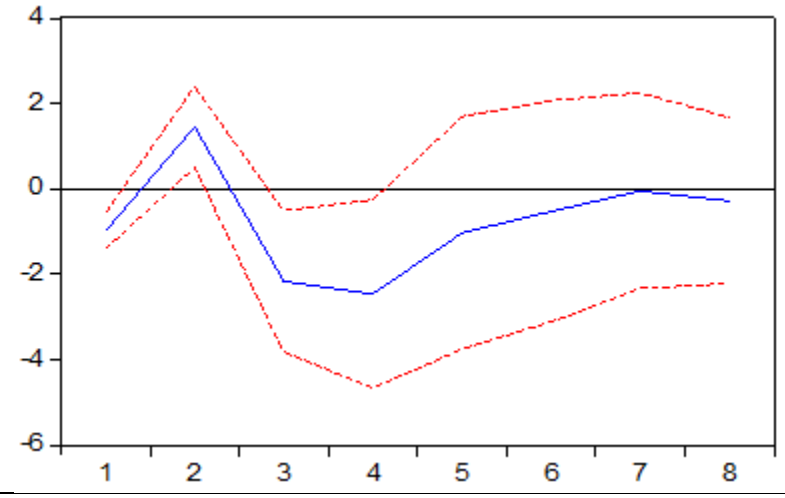
No causality is detected from TR to FDI in any country. Furthermore, there is no causality from EG to FDI in any country except Hungary. The causality from FDI to TR is obtained only in Bulgaria and Estonia. The causality from FDI to EG is found in all of the countries except Croatia and Portugal. And finally, the causality from TR to EG is confirmed in only three countries including Bulgaria, Estonia, and Spain. The results in table 3 for Croatia and Portugal is what made it so unexpectedly interesting because there is no causality between the series in these two countries.

At this stage, we know that economic growth is affected by FDI and tourism receipts (% of GDP) in some countries in the short-run. To analyze the qualitative nature of the causal relationships detected in table 3, the impulse responses functions are obtained in the next section. These functions can explain how long these impacts require to take place as well.

3.6.2 Impulse Reponses Results

The VARs are usually interpreted by using joint tests of restrictions and impulse responses. A summary of the causal effects of FDI on TR and EG in different countries are presented in tables 4, 5 and 6. These tables also illustrate the responses and ‘standard error bands’ of EG and TR to unit shocks to FDI.

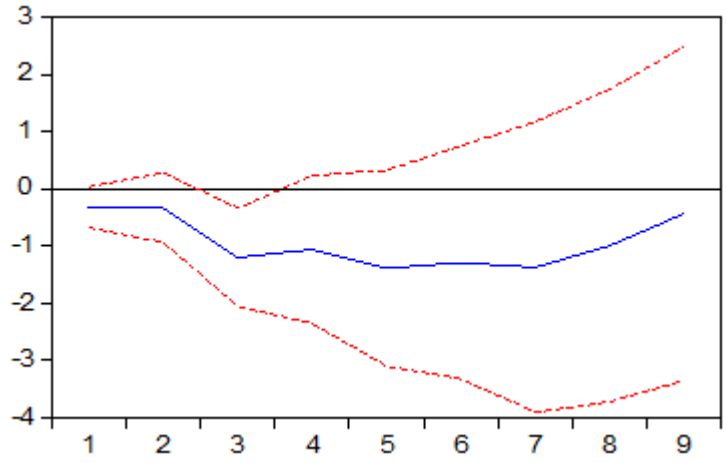
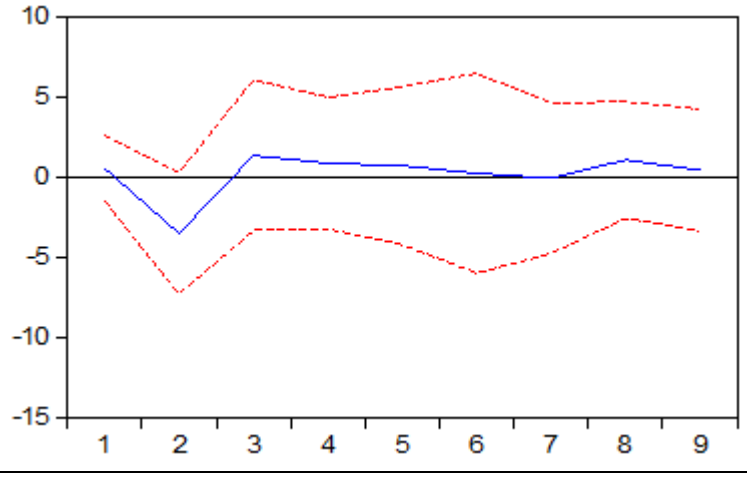
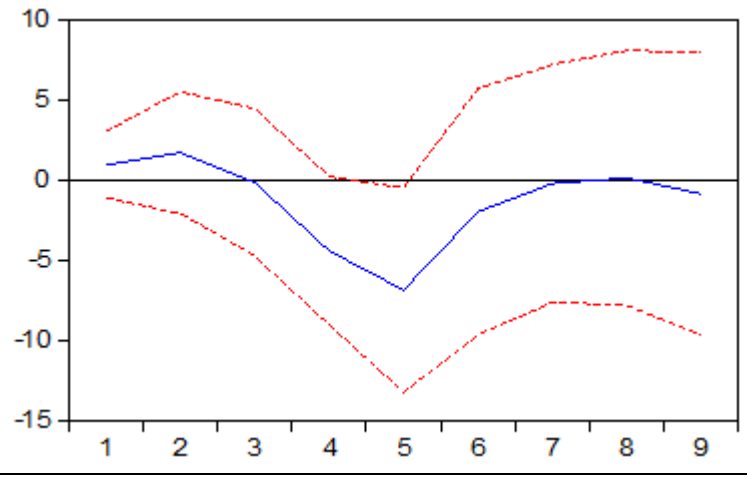
Table 4: Impulse responses and standard error bands for innovations in FDI and TR in Bulgaria

Causal Effects	Impulse Responses
FDI → TR	
TR → EG	
FDI → EG	

Considering the signs of responses in the case of Bulgaria, illustrated in table 4, innovations to FDI always have a negative impact on the TR, since the impact of the shock is negative and doesn't die down until eight years. Increasing TR has a significant negative effect on EG in the 2nd period, and a significant positive effect in the 3rd period, but beyond that, the shock appears to have worked its way out of the system. It is important to note that, the negative impact in the 2nd period is far smaller than the positive impact in the 3rd period.

Increasing FDI has a significant positive impact on EG in the 2nd period, and a significant negative impact in the 3rd and 4th years after the shock.

Table 5: Impulse responses and standard error bands for innovations in FDI and TR in Estonia

Causal Effects	Impulse Responses
FDI → TR	
TR → EG	
FDI → EG	

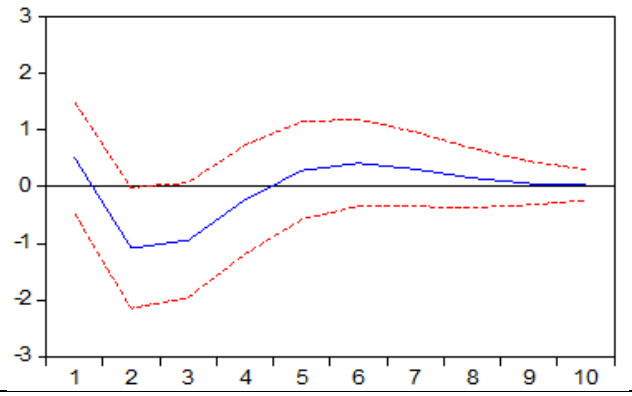
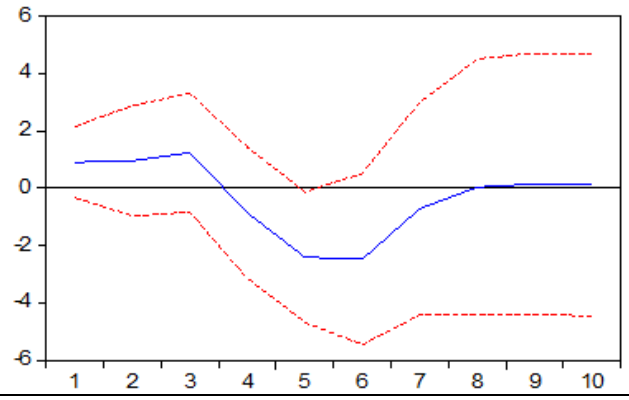
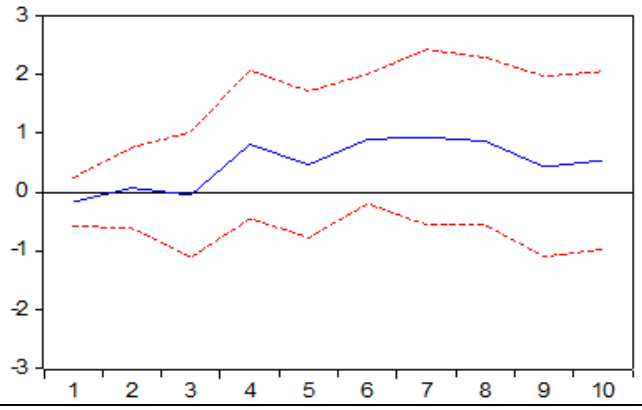
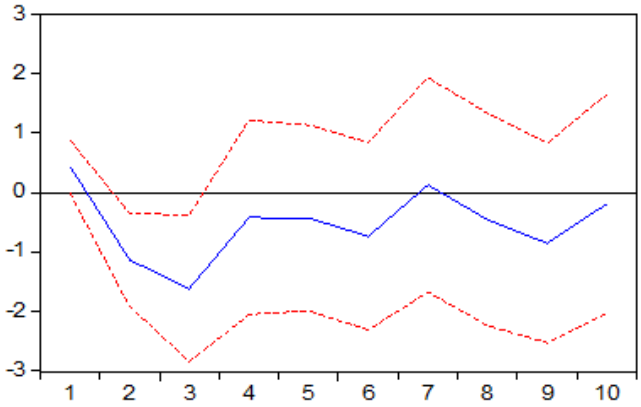
Considering the signs of responses in the case of Estonia, illustrated in table 5, innovations to FDI in Estonia always have a negative impact on the TR which is significant in the 3rd period, Increasing TR has a negative effect on EG in the 2nd period after the shock, and finally, Increasing FDI has a significant negative impact on EG in the 4th and 5th periods.

The reason behind the negative impact of FDI inflows on the share of tourism sector in Bulgaria and Estonia's economy could be summarized in 1- local currency appreciation and 2- more investment in the other sectors. Real exchange rate appreciation is one of the unfavorable side effects of FDI inflows that could adversely affect the export sectors. Therefore, tourism services exports could also be affected negatively. In addition, the flow of capital within corporations in the other sectors rather than tourism sector can decrease the relative GDP share of tourism in these two countries.

On the other hand, in the case of Bulgaria, foreign investments in other sectors and consequently, economic growth can be stimulated by international tourism receipts and related foreign exchange earnings. In other words, employment generation and contributions to government revenues could be the real explanation for the positive impact of tourism receipts on the economic growth of Bulgaria. More jobs are created directly through casinos, hotels, and restaurants while development of international tourism. Moreover, government revenues are increased by duties on goods and services provided to tourists.

FDI inflows in Bulgaria can stimulate the construction sector. More apartments and hotels are built and GDP growth increases in the short-run. But, if the rate of return on these investments is low, it affects the economic growth negatively in the long-run.

Table 6: Impulse responses and standard error bands for innovations in FDI and TR in Hungary, Iceland and Spain

country	causal effects	impulse responses
Hungary	FDI → EG	
Iceland	FDI → EG	
Spain	TR → EG	
	FDI → EG	

As we can see in table 6, in the case of Hungary, the impulse response of EG to a unit shock to FDI is negatively significant in the 2nd and 3rd periods. FDI also has a negative significant impact on EG of Iceland in the 5th period after the shock. In the case of Spain, an increase in TR does not have any significant effect on EG. FDI has a significant negative impact on EG in the 2nd and 3rd periods after the shock. 'Market stealing effect' and 'repatriation of profit' have been mentioned as main reasons of the negative impact of FDI on domestic economies in the literature (e.g. Schoors & van der Tol (2001); Konings (2001)). This usually happens when FDI is subsidized. An example is Chinese FDI in South Africa. This country has recently experienced a recovery in FDI inflows due to some diversified investments supported by resource-seeking inflows. In what 'The economist' calls "The new scramble for Africa", China plays an important role in this investment climate. Chinese investors are benefited from subsidy, free land, and tax-free holidays in South Africa to compete with existing companies. The domestic companies are replaced by their companies that usually are at the same level of efficiency. Overall, the products of these Chinese producers become more expensive for the domestic economy and at the same time, they repatriate their profits back to their home country.

The incompatibility of old management methods with new management methods adopted by MNEs causes substantial conflicts that lead to an increase in investing costs and decrease in production and employment (Melnyk, Kubatko & Pysarenko, 2014). According to Damijan et al. (2003) foreign investment enterprises in Bulgaria and Hungary do not seem to grow faster than domestic firms. In addition, MNEs do not necessarily transfer more complex technology to their subsidiaries. All these could be the simple reasons why FDI inflows have a negative impact on the economic growth in five countries of our sample especially Bulgaria and Hungary.

3.7 Conclusions

The main objective of this study has been to investigate the importance of FDI as a determining factor of economic growth either directly or indirectly (via stimulating tourism sector) for a sample of seven European countries where FDI and tourism receipts are considerable parts of the economy. In attempting to attain this purpose, the Block Exogeneity tests and impulse responses which are believed to be complement of each other have been used. Actually, the main contribution of this study to the existing literature on 'the effect of FDI on tourism and economic growth' is applying impulse responses functions to determine the qualitative nature of the relationships (detected by Block Exogeneity tests) between the variables.

The findings of this study are not strongly suggestive of any considerable influences of FDI and international tourism receipts on the variation of the economic growth in Croatia and Portugal. There is, however, some evidence of contemporaneous effects of these two variables on economic growth in Bulgaria and Estonia.

The impulse responses analysis detects the relationship (and its qualitative nature) between tourism receipts, FDI and economic growth. As a contribution to the field, this analysis reveals that counting on causality tests in studying tourism-FDI-economic growth nexus without analyzing 'the qualitative nature of the effects' or 'how long these impacts require to take place' is very simplistic and may lead to wrong policy implications and decisions.

According to our findings, international tourism expansion is of great importance for economic growth in Bulgaria, which can be the evidence of significant role of tourism in improvement of standards of living in these countries.

Therefore, economic growth can be stimulated by tourism development in this country more than the other countries. Improving tourism offer structure in tourist destinations can enhance the level of tourism receipts in these countries. To attain this goal, Budinoski (2011) recommends governments to start the policy of organizing events like conferences and festivals, advertising of the destination offers, and improving service quality.

The high percentage of GDP share of FDI in our sample of countries shows that FDI is at the forefront of economic decisions of policy makers in these countries, as it can accelerate restructuring of enterprises towards creating a dynamic and efficient economy, but our findings prove that at least in the short-run this idea is wishful thinking, and FDI could even have a negative impact on economic growth. In other words, negative effect of FDI on GDP growth in most of the countries of our sample implies that engaging in an integration process, trade liberalization and higher FDI may not always be beneficial for the economy of a country. In the next chapter, we analyze the long-run impacts of further share of FDI and tourism on the economic growth of these European countries.

Chapter 4

THE LONG-RUN EFFECTS OF FDI AND TOURISM ON ECONOMIC GROWTH WITHIN EUROPE

4.1 Introduction

During the last decades, the globalization and integration of the markets caused a dramatic increase in the flows of Foreign Direct Investment (FDI) in Europe. FDI inflow is one of the macroeconomic factors that affect economic growth directly and indirectly. Its direct effect on the economy is through providing valuable tangible and intangible assets such as technology and its related physical assets, capital formation and innovation capability (Wang, 2009; Liu, Shu & Sinclair, 2009). Its indirect effect is through facilitating the acquirement of capital financing and generating positive externalities for different sectors of the host country such as the tourism sector. It also introduces new managerial skills in the tourism industry and, consequently, stimulates economic growth by employing a substantial proportion of the labor force, increasing government tourism revenues and, finally, net foreign exchange earnings will also improve the balance of payments.

The nature of interactions between FDI, tourism expansion, and overall macroeconomic performance has been a subject of both theoretical and empirical research to make consistent economic policies in line with optimal growth strategy.

Many governments facing macroeconomic bottlenecks (particularly in terms of unemployment) have considered both FDI inflows and international tourism expansion as critical factors to overcome domestic macroeconomic imbalances (Brohman, 1996).

The past literature has frequently used cointegration and causality testing to study the relationship between FDI, tourism development, and economic growth (e.g. Durbarry, 2004; Oh, 2005; Chen and Chiou-Wei, 2009). They often assumed that the presence of cointegration between the variables or a causal flow from a variable to another one automatically verifies the positive relationship between the variables. It is important to realize that detecting a cointegration or a causal effect doesn't necessarily imply that the effect is positive.

In addition, the variables employed in the literature to investigate the impact of tourism development and FDI on an economy are usually 'GDP (current US $)' as a proxy for economic growth, 'tourism receipts (% of imports)', 'tourism receipts (current US $)', or 'the number of tourism arrivals' as a proxy for tourism development, and 'FDI inflows (current US $)' as a proxy for FDI. Many spurious cointegrations or causal relationships have been identified between tourism development, FDI, and economic growth by using these variables, because these variables cannot measure the relative size of FDI and tourism sector in overall economic activity.

In this context, the main motivation of this study is to analyze the nature of relationship between FDI (proxied by GDP share of FDI inflows), the degree of tourism specialization (proxied by GDP share of international tourism receipts), and economic growth (proxied by annual rate of GDP growth) in a sample of seven European countries selected in chapter 3. These variables have a relatively greater potential in

yielding policy insights regarding whether or not ‘a bigger share of FDI inflows in the economy’ or ‘choosing to specialize in tourism’ can improve the process of economic growth.

A Nonlinear Autoregressive Distributed Lag (NARDL) technique is employed in this study to investigate the above-mentioned relationship in the long-run. This technique not only identifies the qualitative and quantitative nature of the long-run effects of FDI and tourism expansion on economic growth but also reveals the likely asymmetries in these effects. To the best of our knowledge, the asymmetric long-run impacts of the degree of tourism specialization and GDP share of FDI inflows on economic growth have not been investigated using a non-linear approach for the countries of our sample.

The rest of this paper is organized as follows: The next section reviews the relevant literature. The data and methodology are explained in sections 4.3 and 4.4. Sections 4.5 and 4.6 present the analysis of empirical results and discussion. Finally, section 4.7 provides concluding remarks and their policy implications.

4.2 Literature Review

4.2.1 Tourism and Economic Growth

At least some of the past literature have chosen to examine the tourism-growth nexus in the framework of four alternative hypotheses; Tourism-Led Economic Growth (TLEG) hypothesis, the reverse hypothesis, feedback hypothesis, and the neutrality hypothesis. In light of this, in this section, we attempt to report the findings of the selected past literature that have investigated the validity of these hypotheses for individual or a group of countries from different parts of the globe.

Durbarry (2004) developed a model comprising different variables (including capital stock, human capital, real tourism receipts, and exports) in empirically analyzing the relationship between economic growth and tourism for the island of Mauritius. Using annual data for the period of 1952-1999, he produced evidence of the positive effects of tourism earnings on the rate of economic expansion. The same relationship is also detected by Balaguer and Cantavella-Jorda (2002) for the case of the Spanish economy. Furthermore, their empirical work showed that tourism has a uni-directional positive effect on Spanish economic growth. On the other hand, Oh (2005) has been unable to produce support for TLEG hypothesis in the case of Korea. His cointegration tests based on quarterly data (for the period of 1975: Q1 till 2001: Q1) has indicated that there is no long-run equilibrium relationship between aggregate tourism receipts and real GDP. Furthermore, his causality tests have shown that there is a uni-directional causal effect of real GDP on tourism receipts suggesting that 'Economy-Driven Tourism' hypothesis (so-called the reverse hypothesis) seems to be operational for the Korean economy. This result could be because of the small share of tourism (relative to other sectors) in this economy.

The empirical results obtained by Proença and Soukiazis (2008) have produced evidence of a positive effect of tourism on the process of economic growth and living standards of the host populations in Spain, Portugal, Greece, and Italy. A subsequent study by Cortés-Jimenez and Pulina (2010) has also analyzed the nature of the relationship between tourism and economic growth for only two of these four Southern European countries. In particular, they applied multivariate Granger causality and cointegration test for Spain (for the period 1964-2000) and Italy (for the period 1954-2000). The statistical results obtained from their method which also included physical and human capital (in addition to international tourism receipts per capita) have

suggested that TLEG hypothesis is verified for Italy. In the case of Spain, the nature of causality was bi-directional and they reported the feedback hypothesis based on their statistical results. Another study that has produced evidence of positive growth effects of tourism receipts for the Spanish economy was carried out by Nowak et al. (2007). What is noteworthy about their study (which utilized data for the period of 1960-2003) is that it has suggested that the main channel through which these positive growth effects have taken place is the additional imports of foreign capital goods. Again, their methodology was based on cointegration and Granger causality tests. On the other hand, Ivanov and Webster (2007) who have also empirically analyzed tourism-growth nexus for Spain as well as for Greece and Cyprus have found only a weak relationship between per capita real GDP growth generated by tourism industry and receipts from tourism for all three countries.

The results of panel causality tests employed by Tugcu (2014) for a large number of African, Asian, and European countries (bordering the Mediterranean Sea) have suggested that the direction of causality can vary not only from one group of countries to another but also from one tourism indicator chosen for tourism to another. Based on his causality test results (for the period of 1988-2011) author concluded that the group of countries that have been benefiting from tourism in terms of economic growth are particularly the European countries in the Mediterranean region. However, his conclusions (just like some other studies) are based on an implicit assumption that the detection of a causal effect of tourism on economic growth automatically implies a positive effect. This is especially true for studies (like his own) that used the ratio of tourism receipts to GDP (which is a proxy for the degree of tourism specialization) as an indicator of tourism in their empirical investigation of the nature of tourism- growth nexus. This assumption seems to render Tugcu's and some others' conclusions about

their empirical results questionable at best. Theoretically, the expansion of the relative GDP share of service sector (which includes tourism industry) especially at the expense of manufacturing and industry is likely to lower the growth rate of total factor productivity. This is simply because historically the productivity growth in manufacturing has been found to be relatively higher than that of service sector (Weil, 2005). On the other hand, tourism generally starts with a natural or geographical asset (like a beach or archaeological site) and an investment on that asset (to build clean and equipped beaches or historical landmarks) can usually generate a high marginal product and rate of return. Therefore, intuitively one would expect the qualitative nature of the effect of the increase in the relative size of tourism sector in overall economy to be ambiguous (if not negative) at best. Fayissa et al. (2008) have specifically tested TLEG hypothesis for a sample of African countries. Using the panel data of 42 African countries for the period 1995-2004 they found out that tourism receipts contribute significantly to the current level of GDP in Sub-Saharan African countries. However, it is worth to raise a critical question about the policy implications of the results of such studies which have detected a positive relationship between the level of GDP and tourism receipts which should normally be expected to be positive a priori: Does this justify the policy choices in these African countries so as to deliberately aim at increasing the relative size of tourism industry which will require diversion of available limited resources from the other sectors (such as agriculture and manufacturing) to tourism sector? We believe that such a policy recommendation can only be justified only when the relevant empirical analysis suggests that an increase in the relative GDP share of tourism industry (or alternatively further specialization in tourism) is highly likely to raise the rate of economic growth (real GDP growth).

4.2.2 FDI and Economic Growth

There are several theories on the beneficial effect of FDI on economic growth. However, in a long-standing debate, empirical findings appear to be mixed.

Feeny, Iamsiraroj and McGillivray (2014), Iamsiraroj and Ulubaşoğlu (2015), Pegkas (2015), Iamsiraroj (2016), and Barrell and Holland (2000) reported a beneficial effect of FDI on the economy. Omri, Nguyen, and Rault (2014) also detected a causality between growth and FDI. On the other hand, Temiz and Gökmen (2014) and Damijan, Knell, Majcen, and Rojec (2003) did not identify any positive relationship between these two factors. Furthermore, Carkovic and Levine (2005) and Easterly (1993) detected the negative impact of FDI on the economy. The details of these studies are reviewed as follows.

FDI inflows may affect economic growth by increasing the country's capital stock as well as providing managerial skills and better technologies to key infrastructures and increase productivity in the host country. Pegkas (2015) employed Fully Modified OLS (FMOLS) and Dynamic OLS (DOLS) methods to analyze the impact of FDI on the economic growth of Eurozone countries between 2002 and 2012. His findings show that economic growth is positively affected by FDI.

Feeny, Iamsiraroj, and McGillivray (2014) examined the effect of FDI on the economic growth of 209 countries over the period 1971 to 2010. They included an FDI–Pacific interaction term to investigate whether this relationship is different in Pacific countries, or not. They claim that the effect of FDI on growth is lower in Pacific countries. In the sample of all countries, a 10% increase in FDI (% GDP) leads to a 2% increase in growth rate, however, this increase is around 0.1% in Pacific countries.

The results reported in the sample of all countries is illogical. Suppose that initially the volume of FDI is 10% of GDP and economic growth rate is 5%. According to their results, if the real FDI rate increases from 10% to 11%, the growth rate increases from 5% to 7%, which means these countries can increase their growth rate dramatically by a small change in the real FDI rate.

One of the studies that investigate FDI-productivity nexus at industry level is that of Barrell and Holland (2000). They employed a panel data of 11 manufacturing sectors within Hungary, Czech Republic, and Poland to analyze the impact of FDI on them. Evidence provided that labor productivity increased by FDI in most manufacturing sectors. Iamsiraroj and Ulubaşoğlu (2015) used an 'informed' econometric analysis based on details reported in 108 published papers to investigate global FDI–growth nexus in a sample of 140 countries over the period 1970-2009. They confirmed a positive relationship between FDI and economic growth. In another study, Iamsiraroj (2016) applied a simultaneous system of equations approach for a cross-section of 124 countries for the period 1971–2010. His results provide evidence of a positive relationship between FDI and growth. The nature of the FDI data undertaken in this study is not clear.Omri, Nguyen and Rault (2014) employed dynamic simultaneous-equation panel data models to analyze the causal links between economic growth, FDI and CO_2 emissions in a cross-section of 54 countries over the period 1990–2011. They also considered three regional sub-panels in their second analysis: 1- North Africa, Middle East, and sub-Saharan Africa, 2- Latin America and the Caribbean, 3- Europe and Central Asia. Their findings indicate bidirectional causality between FDI inflows and economic growth in their three sub-panels. They used annual data for the GDP (constant 2005 US$) and FDI inflows (constant 2005 US$) which are not appropriate proxies to reflect the macroeconomic situation of a country in these two areas. On the

other hand, Temiz and Gökmen (2014) studied FDI-GDP growth nexus in Turkey by using the Granger causality and Johansen cointegration tests and ordinary least squares (OLS) method. No significant relationship was discovered between GDP growth and FDI inflows, neither in the short-run nor in the long-run. There was no mention of what kind of variables ($-value or GDP share) were adopted to represent FDI.

The question that has arisen since the import substitution strategies of the 1960s and 1970s in transition market economies is whether or not the opening up of most economies to foreign investment has a positive impact on domestic firms. More specifically, does the growing presence of FDI have a positive effect on the efficiency of domestic firms in transition economies? FDI is one of the most important channels of technology transfer from developed to developing countries. These channels have been studied by Damijan et al. (2003) by using firm-level data on transition countries including Estonia, Bulgaria, and Hungary over the period 1994–1998. Their findings prove that direct foreign linkages are the main channel of technology transfer to local firms, but no positive intra-industry spillover is generated by FDI for domestic firms.

Many studies have focused on firm-level panel data to analyze FDI spillovers in different countries. For example, Damijan et al. (2013) investigated different channels of technology transfer and FDI spillovers in transition countries including Bulgaria, Croatia and Estonia by using a firm-level dataset of more than 90,000 firms. They proved that the absorptive capacity and productivity levels of individual firms affects both the spillovers from foreign firms as well as direct effects from foreign ownership. If multinational enterprises acquire special benefits (e.g. preferential tax treatments) from host governments, the distortions caused lead to significant adverse effects on growth (Easterly, 1993). Subsidies and preferential tax treatments serve to attract FDI

investment that has a lower rate of return than average economic rate of return. Hence, after repatriating the financial cost of these funds, the net economic return retained in the country may be negative causing its overall growth rate to slow down.

4.3 Data and Variables

This study employs annual time series data on GDP (current US$), international tourism receipts (current US$), GDP growth (annual %) and FDI net inflows (% of GDP) over the period 1995-2018 for the European economies investigated in chapter 3. The data source is the World Bank datasets. International tourism receipts (% of GDP) are obtained by dividing international tourism receipts (current US$) over GDP (current US$).

Zivot-Andrews Unit Root Test is employed to identify the integration order of the series. The results (available upon request) indicate that the series are I (1) and NARDL approach can be applied in this study.

4.4 Methodology

The non-linearity of many processes and variables has long been noted. The joint issues of non-linearity and non-stationarity considered in a substantial body of literature reveal that the assumption of linear adjustment is restrictive and linear models are not able to provide reliable forecasts or sufficiently rich information about phenomena.

Sometimes, the usual cointegration tests do not detect any long-run relationship between the series, but a hidden cointegration can be detected between negative and positive components of those series (Granger and Yoon, 2002). Although the symmetric linear combination of non-stationary variables is used to present the long-

run relationships in most of the studies, it has been also tried to model the asymmetry of the relationship between different variables in some research papers (e.g. Shiller, 1993, 2005). Most of these papers used the two steps Engle-Granger method that is not efficient inherently. In this paper, we employ Dynamic Multipliers and Asymmetric Cointegration test in a non-linear ARDL framework developed by Shin, Yu, and Greenwood-Nimmo (2014). This technique is able to model asymmetries both in the patterns of dynamic adjustment and in the long-run relationship. Actually, when the system moves toward a new equilibrium following a shock to a variable, negative and positive shocks are reflected in asymmetric adjustment patterns which are traced out by asymmetric cumulative dynamic multipliers. A non-parametric bootstrap technique is also used to compute the confidence intervals for dynamic multipliers, and p-values for cointegration tests.

The NARDL method of estimation is valid irrespective of the integration order of the variables (I (0), I (1) or mutually cointegrated). Zivot-Andrews unit root test is employed in this study to ensure that the maximum order of integration is one.

4.4.1 The Non-linear ARDL Model

Equation (4.1) shows the NARDL (p,q,r) model considered in this study.

$$EG_t = \sum_{j=1}^{p} \varphi_j \, EG_{t-j} + \sum_{j=0}^{q} \left(\theta_j^{+} \, FDI_{t-j}^{+} + \theta_j^{-} \, FDI_{t-j}^{-} \right) + \sum_{j=0}^{r} \eta_j \, TR_{t-j} + \varepsilon_t \qquad (4.1)$$

where θ_j^{+} and θ_j^{-} are the asymmetric distributed lag parameters, φ_j is the autoregressive parameter, and ε_t is the error term. FDI is decomposed into FDI^{-} and FDI^{+} representing the partial sum processes of negative and positive changes in FDI. Equation (1) shows how economic growth rate is a function of its own lags, the lags of FDI components, and the lags of GDP share of tourism receipts. $p, q,$ and r represent

the maximum number of lags considered for economic growth rate, FDI components, and tourism respectively.

4.4.2 Bounds-Testing the Asymmetric Long-Run Relationship

Equation (4.2) is used to test whether there is asymmetric cointegration between variables.

$$\Delta EG_t = \rho\,\xi_{t-1} + \sum_{j=1}^{p-1}\gamma_j\,\Delta EG_{t-j} + \sum_{j=0}^{q-1}\left(\pi_j^{+}\,\Delta FDI_{t-j}^{+} + \pi_j^{-}\,\Delta FDI_{t-j}^{-}\right) + \sum_{j=0}^{r}\alpha_j\,\Delta TR_{t-j} + e_t \qquad (4.2)$$

where Δ indicates the 1st difference, and $\xi_{t-1} = EG_t - \beta^{+}FDI_t^{+} - \beta^{-}FDI_t^{-} - \delta TR_t$ is the non-linear error-correction term. Where $\beta^{+} = -\frac{\theta^{+}}{\rho}$ and $\beta^{-} = -\frac{\theta^{-}}{\rho}$ are asymmetric long-run coefficients. If $\rho = 0$, equation (2) reduces to an equation containing only 1st differences which means no cointegration exists between the levels of EG_t, FDI_t^{+}, FDI_t^{-}, and TR_t. F_{PSS} is defined based on the F-test of the joint null, $\rho = \theta^{+} = \theta^{-} = \eta = 0$.

For each significance level, two sets of critical values are presented by Pesaran et al. (2001). One set is derived on the assumption that all variables in the model are I (1), while the other set assumes that variables are I (0). If the calculated F_{PSS} exceeds both critical bounds values, the null hypothesis is rejected and the variables are cointegrated. If it is less than both critical values, the null hypothesis is not rejected, and it is between them, the result is inconclusive.

4.4.3 Asymmetric Long-Run Coefficients and Dynamic Multipliers

In this paper, we study two general forms of asymmetry: 1- adjustment asymmetry presented by the patterns of adjustment from initial to final equilibrium after the shock. 2- reaction or long-run asymmetry identified by $\beta^{+} \neq \beta^{-}$.

The asymmetric dynamic multipliers of one unite change in FDI_t^+or FDI_t^- on EG can be derived by using an 'ARDL in levels' presented by equation (4.3)

$$\varphi(L)EG_t = \theta^+(L)FDI_t^+ + \theta^-(L)FDI_t^- + \eta TR_t + e_t \quad (4.3)$$

The cumulative dynamic multiplier impacts of FDI_t^+ and FDI_t^- on EG_t is defined as follows:

$$m_h^+ = \sum_{j=0}^{h} \frac{\partial EG_{t+j}}{\partial FDI_t^+}\,,\ m_h^- = \sum_{j=0}^{h} \frac{\partial EG_{t+j}}{\partial FDI_t^-}\,,\ h = 0, 1, 2, \ldots \quad (4.4)$$

m_h^+ indicates the summation of changes in EG_t due to the positive changes in FDI. On the other hand, m_h^- indicates the summation of changes in EG_t due to the negative changes in FDI. Usually, dynamic adjustment patterns associated with m_h^+ and m_h^- are not symmetric and illustrate the duration of disequilibrium, which is an important feature of the non-linear ARDL model.

4.5 Results

4.5.1 Asymmetric Bounds Testing Results

The results of asymmetric bounds testing are presented in table 7. The null hypothesis of this test is "no long-run relationship between variables". According to this table, F_{PSS} exceeds upper bound in four cases and rejects the null hypothesis. Therefore, there is a cointegration between FDI_t^+, FDI_t^-, TR_t, and EG_t in the case of Bulgaria, Estonia, Portugal, and Spain.

Table 7: Asymmetric bounds testing results

Country	Significance	I(0) Bound	I(1) Bound	F-statistic	Asymmetric Cointegration
Bulgaria	10%	2.915	3.695	7.321***	Yes
	5%	3.538	4.428		
	1%	5.155	6.265		
Croatia	10%	2.676	3.586	3.565	No
	5%	3.272	4.306		
	1%	4.614	5.966		
Estonia	10%	2.676	3.586	4.803**	Yes
	5%	3.272	4.306		
	1%	4.614	5.966		
Hungary	10%	2.676	3.586	3.357	No
	5%	3.272	4.306		
	1%	4.614	5.966		
Iceland	10%	2.915	3.695	2.968	No
	5%	3.538	4.428		
	1%	5.155	6.265		
Portugal	10%	2.676	3.586	3.670*	Yes
	5%	3.272	4.306		
	1%	4.614	5.966		
	10%	2.915	3.695	5.142**	Yes
	5%	3.538	4.428		
	1%	5.155	6.265		
Spain	10%	2.676	3.586	11.482***	Yes
	5%	3.272	4.306		
	1%	4.614	5.966		

*, **, *** indicate significance at 10, 5, and 1 percent level.

This is an important finding that might be taken as strong statistical evidence of possible effects of changing the GDP share of FDI on the economic growth rate in these countries. One possible interpretation of this result is that the expansionary effects operating through productivity improvements (resulting from additional FDI inflow) could be playing a role in this relationship in these countries in the long term. The peculiar results for Croatia, Hungary, and Iceland point out to the fact that the interactions between the quality of FDI inflows and economic growth rate are likely to be more complicated in these countries. In the next step, we try to detect the

qualitative nature of the long-ran relationships revealed between the variables in the case of Bulgaria, Estonia, Portugal, and Spain.

4.5.2 Asymmetric Long-Run Coefficients and Dynamic Multipliers

Table 8 presents the long-run coefficients derived from the level equations of NARDL model. We let TR to be dynamic or fixed in the equations and report the best model in each case. The significance of long-run coefficients obtained in this step is consistent with asymmetric cointegrations detected by asymmetric bounds testing in the previous step. As we can see in table 8, TR has a long-run positive impact on EG in Estonia, Portugal, and Spain.

The significant long-run coefficients obtained in this step show a direct relationship between EG and FDI in the case of Bulgaria and Estonia, and an inverse relationship between these variables in the case of Spain. In the case of Portugal, an increase in FDI decreases EG, but decreases in FDI do not have any significant impact on it.

Both coefficients of $FDI^{+}$and FDI^{-} are significant and almost similar in the case of Bulgaria and Estonia, indicating a symmetric long-run impact of FDI on economic growth rate. On the other hand, the significant coefficient of FDI^{+} and insignificant coefficient of FDI^{-} in the case of Portugal suggest an asymmetric relationship between FDI and economic growth rate.

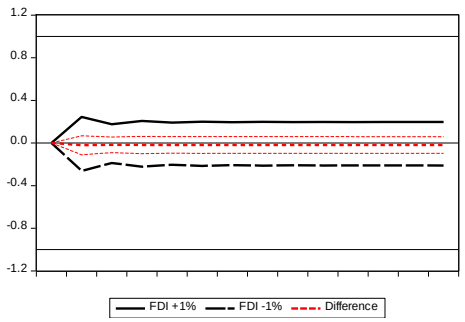
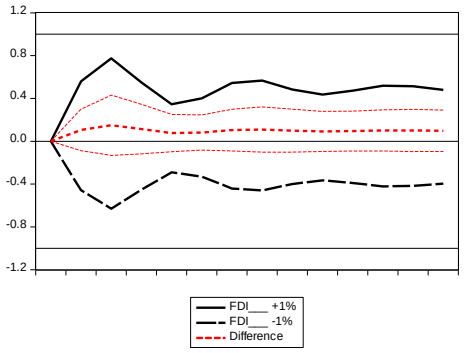
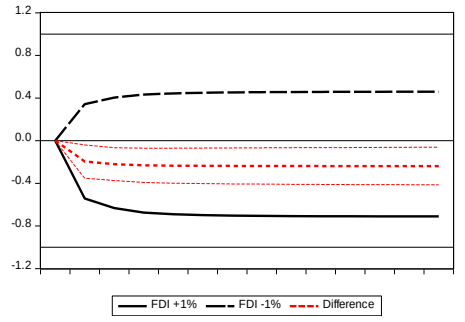
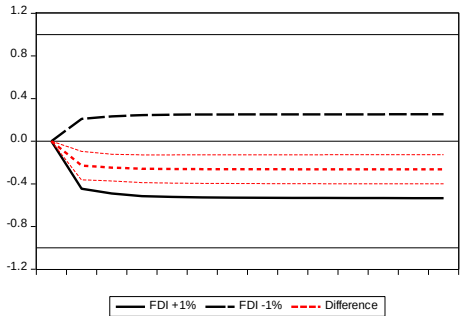
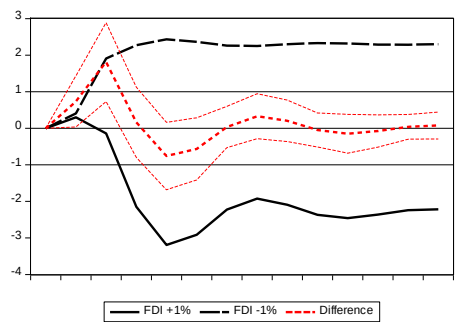
Table 8: EG levels equations and long-run coefficients

Country	Independent variables	Coefficient	P-value
Bulgaria	FDI+	0.1978*	0.0786
	FDI-	0.2147**	0.0456
	C	-0.2961	0.9237
Estonia	FDI+	0.4788*	0.0822
	FDI-	0.3878*	0.0700
	TR	1.4255*	0.0570
	C	-2.2001	0.1810
Portugal	FDI+	-0.6646**	0.0108
	FDI-	-0.4196	0.1100
	TR	1.3046*	0.0821
	C	-1.5144	0.6312
	FDI+	-0.5109**	0.0135
	FDI-	-0.2452	0.2368
	C	-2.3862	0.2854
Spain	FDI+	-0.22469***	0.0054
	FDI-	-0.22399***	0.0068
	TR	0.47510***	0.0007
	C	-0.76007***	0.0027

*, **, *** indicate significance at 10, 5, and 1 percent level.

The above-mentioned symmetric and asymmetric effects are reflected in the related patterns of dynamic multipliers in Table 9.

Table 9: Patterns of dynamic multipliers

Country	Detected long-run relationship	Asymmetry	Pattern
Bulgaria	FDI↑, EG↑ FDI↓, EG↓	Symmetric	
Estonia	FDI↑, EG↑ FDI↓, EG↓	Symmetric	
Portugal	FDI↑, EG↓	Asymmetric	
	FDI↑, EG↓	Asymmetric	
Spain	FDI↑, EG↓ FDI↓, EG↑	Asymmetric	

As we can see in this table, in the case of Bulgaria and Estonia, both short-run and long-run symmetry in the impact of increase and decrease in FDI rate on economic growth rate are noticeable. In these two countries, an increase in FDI as a percentage of GDP increases the economic growth rate and vice versa.

By contrast, the impact of FDI rate on economic growth rate of Portugal and Spain is asymmetric. This asymmetry is noticeable in both short-run and long-run in the case of Portugal, and in the short-run in the case of Spain. In these two countries, an increase in FDI as a percentage of GDP decreases the economic growth rate and vice versa. However, the negative impact of an increase in FDI on economic growth is greater than the positive impact of a decrease in FDI on economic growth in both short-run and long-run in the case of Portugal. In the case of Spain, in the short-run, a decrease in FDI has a significant positive impact on economic growth, but an increase in FDI doesn't have any significant impact on it.

A summary of the findings of this thesis in chapter 3 and 4 is presented in table 10. This table shows the qualitative nature of the short-run and long-ran impacts of the GDP share of international tourism receipts and FDI on the annual GDP growth rate detected by 'impulse responses' and NARDL methodologies. It is worth mentioning that the data on international tourism receipts obtained from the World Bank dataset includes expenditures by international inbound visitors, and these visitors can be tourists, businessmen, consultants, or etc. (This variable might be even a suitable proxy to measure 'international travel'). The point is when a businessman or consultant travels to a country to launch or work on a project, usually the income that he takes out of that destination country is much more than his expenditures in that country. In other words, his activity doesn't generate a value added in the economy in the short-

run. Therefore, his travel has a negative impact on the economic growth of destination country in the short-run and a positive impact in the long-run. This is fact is well-reflected in the short-run and long-run impacts of tourism on economic growth in Table 10.

Table 10: The summary of qualitative nature of detected relationships

	Short-run impacts			Long-run impacts	
Country	FDI→TR	FDI→EG	TR→EG	FDI→EG	TR→EG
Bulgaria	-	+,-	-,+	+	
Estonia	-	-	-	+	+
Hungary		-			
Iceland		-			
Portugal				-	+
Spain		-		-	+

The economic implications of the results presented in this section are discussed in the next section.

4.5.3 Diagnostic Tests

Various diagnostic tests are employed to test the adequacy of our non-linear ARDL models in this study. These tests include: 1- Breusch-Pagan-Godfrey heteroskedasticity test, 2- Breusch-Godfrey serial correlation LM test, 3- error terms normality test. The results (available upon request) indicate that our non-linear ARDL models pass all diagnostic tests.

Cumulative sum (CUSUM) charts are also used to check the structure stability of the models. If the cumulative sums of the standardized deviations exceed a specified range, the model is unstable. The results illustrated in Figure 7 show the stability of our models.

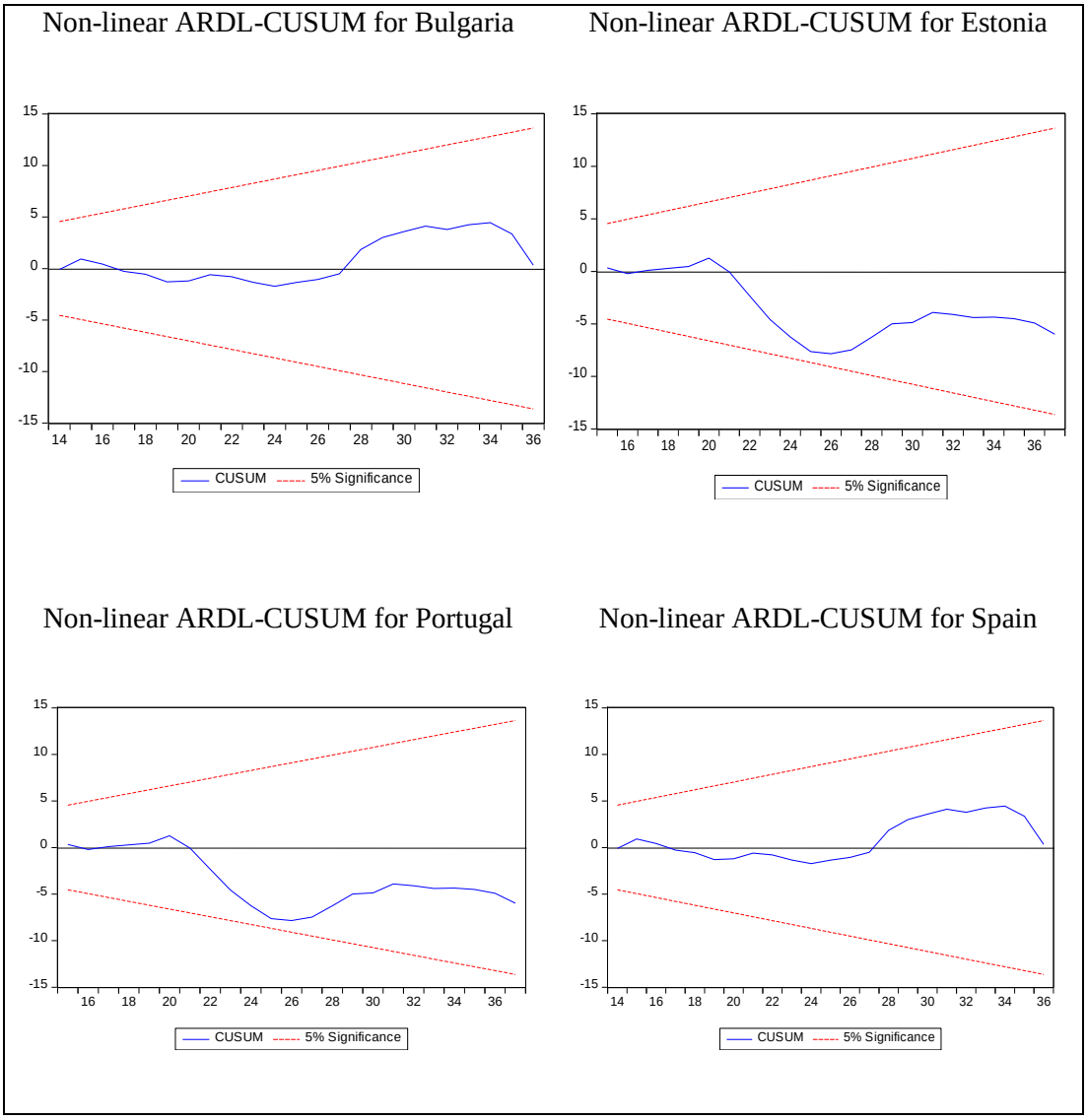


Figure 7: CUSUM charts for non-linear ARDL models

4.6 Discussion

In explaining the impact of FDI and investment in the tourism sector on economic growth, the first thing that comes to mind is the relationship between the rate of economic growth and the rate and allocative efficiency of investment. The return to capital is affected by the growth rate of output prices relative to capital prices, the depreciation rate, the capital-output ratio (where both output and capital are measured at market prices), and the share of capital in total income (Bai, Hsieh, & Qian, 2006).

According to Haberger (1998), investment rate, rate of return, and RCR are components of growth. Some factors that affect these components negatively and may lead to lower economic growth (in spite of high investment rates) in our sample of countries include: 1- ill-conceived legislation and bureaucratic hurdles, 2- lack of a sound institutional and legal framework, 3- lack of political consensus regarding outlines of economic policies.

Some studies state that the characteristics and ownership of the firms are determining factors in their investment rate of return. For example, Grubert (1997) used data on foreign-controlled corporations in the USA and pointed out that firms with less than 50 percent of foreign ownership had low relative rates of return.

4.6.1 Tourism and Economic Growth

Lee and Chang (2008) believe that sometimes the tourism sector incurs adverse ecological and environmental costs on economies, for example, Croatia and Iceland as their natural attractions such as hot springs, geothermal pools, and terraced lakes linked by waterfalls are favorite international tourist destinations. The link between tourism and economic growth might be broken down due to these costs. Therefore, our finding regarding no causality from tourism receipts to economic growth in spite of the great share of tourism in these countries can be the natural outcome of the economic structure.

Another determining factor that makes the impact of international tourism receipts in Iceland's economic growth faded might be the tragic financial crisis in this country between 2008 and 2011. Figure 4 shows the impact of this crisis on the real GDP and unemployment rate of Iceland.

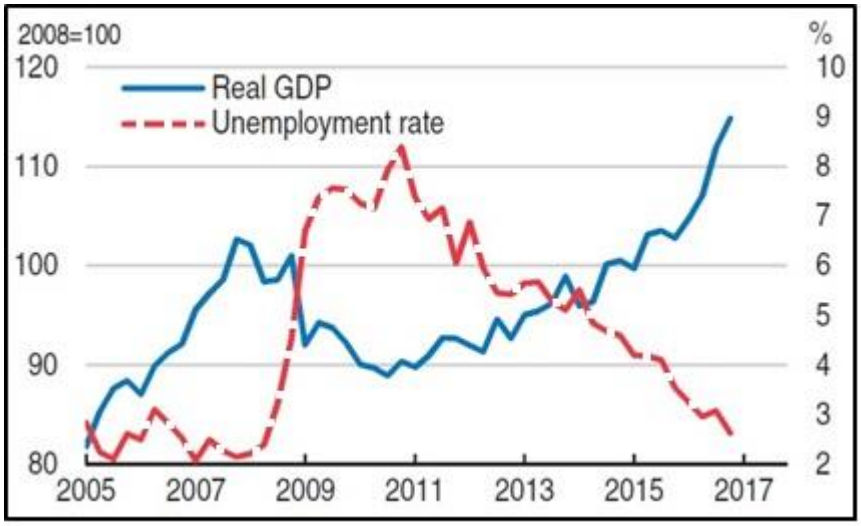


Figure 8: The impact of financial crisis on Iceland's economy

In the 1990s, Iceland undertook extensive free-market reforms and became a popular destination for currency trading and foreign investment due to its quick transition from an export-driven economy with aluminum smelting, energy, and fishing as its main industries into an international financial center. However, this development was unsustainable and the economy started baulking under the size of its own expansive growth. The reason was an inexperienced and poorly managed system. Banks offloaded money to other countries as quickly as they could. Much of the money went into securitized subprime US mortgages. In a tragically poetic timing, the 2008 financial crisis occurred and hit Iceland hard. The stock market was almost wiped out, unemployment soared, and the currency crashed. Although fiscal decline was echoing in all OECD countries, the recession in Iceland was more severe than elsewhere. The third-largest bankruptcy in history happened when three main banks in the country, Glitnir Bank, Landsbanki, and Kaupthing Bank, collapsed. According to Jännäri (2009), the main reasons for this financial crisis in Iceland can be summarized in: 1- Local investor groups gained control of the banks following privatization. The new owners were not traditional commercial bankers; instead, they had the mindset of

investment bankers which favored a strategy of highly leveraged aggressive deals and rapid growth. 2- The banks pursued a highly risky core strategy. They were vulnerable to instability in financial markets, because they borrowed large sums in foreign capital markets to finance the international expansion of Icelandic investment. 3- The banks became very large in relation to the Icelandic economy. 4- Banks took on a lot of extra debt during the boom years based on inflated asset values. When asset prices fell, due to foreign-currency-denominated debts (without matching foreign-currency assets or revenues) the Króna depreciated sharply. Any positive impact of tourism and other industries on economic growth deteriorated under the long shadow of this financial crisis.

Employment generation and contributions to government revenues could be the real explanation for the positive impact of international tourism receipts on the economic growth of Estonia, Portugal, and Spain. More jobs are created directly through casinos, hotels, and restaurants during the development of international tourism. Moreover, government revenues are increased by duties on goods and services provided to tourists.

Portugal has had an impressive export performance, sustaining the economy through years of weak domestic demand which was the consequence of the sovereign debt and banking crisis. According to the 2019 OECD Economic Survey of Portugal, a sustained expansion of the tourism industry has been the reason behind a partial improvement in exports. Between 2009-17, tourism and other closely related sectors such as transportation directly made over one-fifth of the growth in exports. Having won the European Best Destination award in 2012, 2014 and 2017, Portugal has managed to win the hearts of visitors with its beautiful sights and become one of

Europe's top holiday destinations. According to the World Travel and Tourism Council, Portugal's international tourist arrivals have been growing consistently since 2009. The country's fundamentals work in Porto's favor: very low crime rates, acclaimed gastronomy, a low cost of living, a rich culture, and a hot climate, in addition to Portugal's recent economic recovery and political stability.

A reason mentioned for durability of Portugal's tourism sector over the medium-term is diversification. Since 2009, the proportion of tourists aged above 64 that visiting Portugal has doubled, whilst the age profile of Portugal's inbound tourists has gradually broadened. The concentration of the country of origin of visitors has slightly declined, and the number of tourists visiting new parts of Portugal outside the traditional tourist hubs has increased (OECD, 2018).

According to OECD (2018), tourism is an outstanding driver of social development and one of the mainstays of the economy in Spain. It accounts for 13% of employment and 11.1% of the GDP. 54.7 billion Euros in international travel receipts from 75.3 million tourist arrivals, helped Spain to be ranked the second largest destination worldwide in terms of receipts in 2016, and contributed to offset the country's trade deficit substantially. In 2017, Spain was declared the top country for tourism competitiveness for the second time by the World Economic Forum. All of these are well-reflected in the long-run positive impact of tourism development on Spain's economic growth detected in our analysis.

Portugal and Spain have also boosted their appeal to risk-averse investors and tourists by gaining the advantage of social and political instability in nearby countries, such as Tunisia and Turkey. In other words, the heightened perceptions of security risk in

competitor markets have been mentioned for the increase in tourist flows to Portugal and Spain. Focusing on terrorist activities, Ahlfeldt, Franke, and Maennig (2015) highlighted how unanticipated shocks change German tourists' risk perception of selected tourism destinations. In the early 2000s, tourism into Islamic countries was substituted by tourism to (south) European countries in the wake of terror attacks in Morocco (2003), Tunisia (2002), and Egypt (1997). The analysis of the destination of British outbound tourists also indicates that terrorist events have been affecting recent tourist flows. Between 2010-2016, the reduction in the number of travelers from the UK to countries that faced higher levels of terrorist threat such as Tunisia, Egypt, Turkey, and France coincided with an increase in tourists to Portugal and some other southern European countries such as Greece, Italy and Spain (Global Terrorism Database, 2018). Given these patterns, the capacity for a decline or stabilization in perceived security risk elsewhere could lead some of the tourist flows redirected to Spain and Portugal to reverse. These factors could be the real explanation for the long-run positive effect of tourism development on Portugal's and Spain's economic growth reported in our findings.

As noted in OECD (2018) Tourism Trends and Policies, Estonia's inbound tourism has experienced steady growth. Around 6 million international travelers visited Estonia in 2016 (4% annual increase). They spent 1.4 billion Euros on goods and services, generated 1.7 billion Euros of tourism export revenue, and contributed 32% of services exports and 6% of GDP (taking indirect and direct effects together). Therefore, tourism in Estonia is recognized as one of the significant determinants of Estonia's economic growth, exports, and competitiveness and an engine for employment, and this is the reason behind the long-run positive impact of tourism on the economic growth in Estonia detected in our study.

4.6.2 FDI and Economic Growth

'Market stealing effect' and 'repatriation of profit' have been mentioned as the main reasons for the negative impact of FDI on domestic economies in the literature (e.g. Konings, 2001; Dullien, 2005). If multinational enterprises acquire special benefits (e.g. preferential tax treatments or subsidy) from host governments, the distortions caused lead to significant adverse effects on growth (Easterly, 1993). Subsidy means economic cost larger than private cost, and the difference is reflected in the price. In evaluating the cost of a subsidy not only the administrative cost to implement the regulation or run the program but also the financial transfer it may entail is included. Sometimes, subsidies and preferential tax treatments serve to attract FDI investment that has a lower rate of return than average economic rate of return, meanwhile, local industry suffers from lower competition. Hence, after repatriating the financial cost of these funds, the net economic return retained in the country may be negative causing its overall growth rate to slow down. In addition, overvaluation caused by rapid capital inflows or overly rapid consumption growth, or some combination of these factors may lead to a limited absorptive capacity for foreign resources.

The incompatibility of old management methods with new management methods adopted by MNEs causes substantial conflicts that lead to an increase in investment costs and decrease in production and employment (Melnyk, Kubatko & Pysarenko, 2014). According to Damijan et al. (2003), foreign investment enterprises in Hungary do not seem to grow faster than domestic firms. In addition, MNEs do not necessarily transfer more complex technology to their subsidiaries. All these could be the simple reasons why FDI inflows have a negative impact on the economic growth in some countries of our sample.

Villaverde and Maza (2012) asserted there is no link between FDI and growth in Spain. They studied the regional distribution of FDI in Spain and its determinants between 1995 and 2008 and confirmed an extreme regional bias: 79 percent of total FDI went to Cataluña and Madrid. Rodríguez-Pose (1998) warns about the 'persistence of regional disparities' and in the words of Rodríguez-Pose (2000, 93): "Madrid and Catalonia are too economically powerful and have attracted too much FDI to be compared with any of the declining regions."

An important reason behind the negative impact of FDI on economic growth is the low quality of FDI which is equivalent to a low real economic rate of return on assets. If the government guarantees a high financial return to the foreign investor, but the asset actually yields a low economic return, which has often been the case with Public-Private Partnerships (PPPs) then these investments have a negative impact on economic growth rate because the financial return paid to the foreigner investors becomes an economic cost greater than the economic benefit created by the investment.

One example of FDI with a low real rate of return is foreign investments in renewable energy in both Spain and Portugal. Spain ranked first in Europe by attracting 19 inbound renewable energy investment projects in 2018. The Spanish cities of Espejo, Madrid and Alcalá de Guadaira are among Europe's leading cities for renewable energy projects in 2018. Actually, Spain has been the largest European destination for renewable energy investments recently. In one of the largest deals, China Three Gorges, a China-based hydroelectric company, announced the purchase of EDP Renovaveis, a Spanish wind electricity company, for more than $1.3 billion. And

TerraForm Power, a US clean Energy Company, acquired Saeta Yield, a Spanish wind and solar electricity company, for approximately $1.2 billion.

Portugal has recently launched the development of renewable energies, specifically solar energy (Portugal has the second largest solar power station in the world) and wave power (obtained from wave movements). As a matter of fact, the economic rate of return of all the renewable energy investments is very low while at the same time the government is committed to buy power from these PPPs at a very high financial price. In this case, the government will create a deficit and the economy will not be able to finance low return private investment.

In order to achieve both a reduction of dependency on Russian oil and gas deliveries and a reduction of CO_2 emissions, the support and promotion of the renewable energy sector (RES), especially the solar energy sector within the EU, has been a top priority recently. Hence, EU member states made an enormous investment in the RES by implementing a number of tools including different types of tax breaks, various forms of subsidies, and guaranteeing a fixed Feed-in Tariff (FIT) per kWh of produced energy for a certain period of time. However, many EU countries encountered serious budgetary problems in the wake of the overwhelming success of supporting schemes and the ensuing financial crisis. As a result, most EU member states including Spain decided to adopt retroactive measures to reduce and finally abolish FIT tariffs, tax breaks, and subsidies. It created serious financial problems for many of the investors and some of them faced bankruptcy. Investors in RES are frequently small and medium-sized enterprises (SMEs). In addition, both Spain and Portugal's economies were weakened by high levels of private and public debt in the last decade. These

countries have two of the highest levels of debt (as % of GDP) in the EU because practically all the PPPs in these two countries are financed by business external debt.

In explaining the above-mentioned problem which is one of the possible factors contributing to the negative impact of FDI on economic growth, it is worth mentioning that International Investment Agreements (IIAs) and the accompanying Investor-State Dispute Settlement (ISDS) regime are often praised as key to increase FDI flows in countries. However, it creates opportunities for treaty protections to be applied arbitrarily and inconsistently because this regime provides arbitrators with little accountability and guidance. Therefore, it can create uncertainty in the system, constrain the policy space of these countries, and hinder sustainable development. The renewable energy cases against Spain are an obvious example of major obstacles that the ISDS regime can make for sustainable development in the energy sector of a country. With the purpose of incentivizing investment, a number of regulatory measures in renewable energy were implemented by Spain in 2007. But, due to the consequences of the financial crisis and tariff deficit, since 2010, the government has implemented a number of measures which retracted some features of the original regulations. Consequently, approximately 40 arbitrations were initiated against Spain was recently ordered to pay damages of 290.6 million Euros in addition to one-third of the investors' legal costs to two Dutch investors in the NextEra renewable energy case.

Díaz-Vázquez (2003) pointed out that the predominant type of FDI in Spain until 1997 were acquisitions of existing Spanish firms (brown-field investment). This explains why the FDI impact on capital accumulation and economic growth in Spain has been negligible. Even after 1997, FDI inflows have been dominated by foreign takeovers,

especially in the construction sector. We have already mentioned some examples of these takeovers in the renewable energy sector.

The subsequent shift of FDI has been toward greenfield investment. According to FDI Intelligence (2018), Spain attracted 385 greenfield FDI projects in 2017 (61 more than the year before) for a total of USD 13.9 billion, the highest level since 2008, and it was unlikely to deliver a positive impact on growth because of risks of greenfield investments. As with any startup, greenfield investments entail higher risks associated with the cost of building new factories, cost overruns, and accessing capital and labor resources. In addition, companies contemplating greenfield projects typically invest large amounts of time and money in advance research to determine feasibility and cost-effectiveness. These factors are likely to decrease the rate of return on their investment.

4.7 Conclusions and Policy Implications

The aim of this paper has been to investigate the importance of FDI and tourism as determining factors of economic growth using a sample of seven European countries where FDI and tourism receipts are considerable parts of the economy.

In this context, the main motivation of this study is to analyze the nature of relationship between FDI (proxied by GDP share of FDI inflows), the degree of tourism specialization (proxied by GDP share of international tourism receipts), and economic growth (proxied by annual rate of GDP growth) in a sample of seven European countries including Bulgaria, Croatia, Estonia, Hungary, Iceland, Portugal, and Spain. These variables have a relatively greater potential in yielding policy insights regarding whether or not ‘a bigger share of FDI inflows in the economy’ or ‘choosing to specialize in tourism’ can improve the process of economic growth.

An NARDL technique has been employed in this study to investigate the above-mentioned relationship in the long-run. This technique not only identifies the qualitative and quantitative nature of the long-run effects of FDI and tourism expansion on economic growth but also reveals the likely asymmetries in these effects. To the best of our knowledge, this is the first study to investigate the asymmetric long-run impacts of the degree of tourism specialization and GDP share of FDI inflows on the rate of economic growth using a non-linear approach for the countries of our sample.

The findings of the study indicate that there exists an asymmetric cointegration between these three variables in Bulgaria, Estonia, Portugal and Spain. FDI inflows have a symmetric and positive impact on the economic growth rate of Bulgaria and Estonia, and asymmetric and negative impact on the economic growth rate of Portugal and Spain. In addition, economic growth rate is positively affected by international tourism receipts in Estonia, Portugal and Spain. In other words, international tourism expansion is of great importance for the long-run economic growth in Estonia, Portugal, and Spain, which can be evidenced by the significant role of tourism in the improvement of standards of living in these countries.

In explaining the impact of FDI and investment in the sector on economic growth, the first thing that comes to mind is the relationship between the rate of economic growth and the rate and allocative efficiency of investment. Therefore, before recommending that countries expand their tourism sector or attract more FDI, we recommend policy implementation to increase the rate of return on investment.

It is worth mentioning that in approaching the question of policy influence on the rate of economic growth, correcting the accumulation of past mistakes and releasing the economy from its constraints can usually create an episode of noticeable growth. The policy implications provided below are to help countries in our sample in cost reduction and improving the rate of return on investments.

Clear rules of the game play an undeniable role in a well-functioning market economy. Bureaucratic hurdles and ill-conceived regulations impose excess costs on an economy. An obvious example (mentioned in the discussion section) is the problem Spain is facing due to the unclear regulations of the ISDS regime. Another example is large compliance costs imposed by the complexity of taxation rules. In order to design policies in line with promoting growth, regulations and requirements should be justifiable in terms of cost and benefit to the economy. Firms should use their capital more efficiently because inefficient investment spending leads to deteriorating economic performance. Policymakers need to pay special attention to: 1- incentives to save and invest. 2- the measurable costs of any distortions or administrative constraints that might be acting on such incentives. 3- institutional shortcomings in the capital markets that can decrease the capacities of financial intermediaries to identify and finance the best projects. 4- the choice of investments, pricing policies, and again, incentives structures. 5- institutional and educational factors that prevent or facilitate 'the redeployment of labor to high return investments' and 'higher earnings per worker'.

Our findings indicate that economic growth can be stimulated by tourism development in Estonia, Portugal, and Spain more than the other countries. Improving tourism infrastructure in tourist destinations can enhance the level of tourism receipts in these

countries. To attain this goal, Budinoski (2011) recommends governments start the policy of organizing events such as conferences and festivals, advertising destination offers, and improving service quality. In other countries (Croatia, Hungary, and Iceland) investments can be transferred to other sectors without any negative effect on the growth rate of the economy.

Portugal's recent tourism boom has been exceptional. Since 2009, the rise of visitors from the UK has been notable. However, the uncertainty of the impact of Brexit on future flows of UK travelers in addition to the potential for improvements in safety and security in competitor markets implies the possibility that some of the recent tourism boom is deteriorating and policymakers need to take this into account. Diversification has been identified as a major priority in the government's tourism strategy (Araújo, 2017), which is welcome. However, decision-makers need to implement policy to promote other export sectors in the economy away from tourism.

Tourism is also a prominent driver of social development and one of the pillars of the economy in Spain. However, tourism policymakers in Spain should be aware that confidence and tourism could be profoundly lowered by prolonged political instability and increased tensions in Catalonia. The reduction in VAT rates has supported the competitiveness of the tourism sector in Spain, however, according to the travel and tourism competitiveness index (2017), Spain is now the most competitive tourism destination in the OECD, which implies there is scope to increase tax collections in tourism-related areas as tourism promotion via reducing VAT rates may no longer be necessary.

In order to enhance tourism sector benefits for the Spanish economy, the most important recommendations for policymakers can be summarized in: 1- Focusing on key market segments and diversification of products. 2- Collaborating with the regional authorities to promote tourism in international markets. 3- Expediting international tourism relations and co-operation, and supporting Spanish tourism firms abroad. 4- Drawing up programs and plans to guarantee the sustainability of the tourism industry via fostering quality, innovation, and competitiveness of tourism destinations and products. 5- Improving the efficiency and effectiveness of management processes, enhancing the technological capacity of the tourism sector, and finally, driving its modernization.

The 'sharing economy' (including businesses like AirBnB), has recently been seized by big money. An analysis by Exceltur (2015) indicates a rise in the number of international tourists staying in peer-to-peer rentals by 59.7% to 7.4 million between 2010-14 in Spain. It is critical that businesses operating in this area and more traditional areas are treated fairly in terms of regulations and especially with regard to taxation rules. In 2016, Barcelona City Council announced that a significant share of houses used for tourism did not comply with the relevant regulations which affected tax revenues negatively. Some taxation rules were introduced in 2018 to identify those accommodation owners by placing information commitments on digital platforms. This is welcome, but to ensure tax compliance within the sharing economy, further efforts are required.

Our findings indicate that tourism in Estonia is an important determinant of economic growth in this country. However, tourism development should be measured not only in increased overall tourism receipts but also through growth in a greater diversity in

the product offer and service quality. Recent investments in Estonia's tourism sector have been aimed at increasing return visits, motivating visitors to prolong their stay, and also diversifying tourism attractions. This country, in cooperation with Nordic neighbors and other Baltic countries, has recently started promotional activities in long-haul markets to increase awareness of this country in potential target markets, especially in Southern and Western European countries.

Intermodal transport systems, better connectivity, and development of new international transportation routes are some of the preconditions for growth in visitor numbers. The 'Rail Baltic' project that will connect the Baltic States to Western and Central Europe is an example of an eco-friendly and modern high-speed railway. This project will expand tourism, trade and business, and provide the opportunity to travel quickly and comfortably from the Baltics to Central Europe and beyond.

Estonia's tourism policymakers are recommended to implement a tourism development plan offering a high-quality visitor experience for people of all ages and abilities by: 1- A policy approach that allows achieving long-term sustainable tourism development and a plan to shift from EU funding to national funding. 2- Organizing events such as 'Baltic Connecting 2017' focusing on long-haul markets. 3- Developing the small harbor network and coastal and marine tourism.

It is believed that the high percentage of GDP share of FDI in a country can accelerate the restructuring of enterprises towards creating a dynamic and efficient economy, but our findings prove that this idea might be wishful thinking (at least for the economies of Portugal and Spain in the current situation). In all countries in our sample, except Bulgaria and Estonia, FDI has no positive impact on annual economic growth rate, and

also a negative impact on the long-run growth rate of Portugal and Spain. However, we need to pay attention to the fact that FDI attraction has not created this problem. The real reason has been poor macro-policies. Broadly speaking, finding a negative impact of FDI or any other investment on economic growth rate does not mean policymakers should restrict investments. Instead, correction of the accumulation of past mistakes, new paths identified of RCR, and increasing efficiency should be considered to provide additional impetus to economic growth.

Spain and Portugal's governments' decision to support and finance PPPs was an incorrect policy and their failure to meet their commitments led to a reduction in the economic growth rate. They should pay special attention to their medium-term fiscal targets and try to reduce public debt. If growth surprises on the upside, all windfall revenues should be used for a faster reduction in the debt ratio.

We deeply urge that a great part of the action associated with the process of economic growth happens at the level of the firm as the main pillars of growth, including investment rate, the rate of return, and RCR, are key factors in decision-making in firms. Therefore, studying what happens at this level is necessary.

Chapter 5

CONCLUSIONS

This thesis contributes empirically to the existing literature on 'FDI- tourism-economic growth nexus' by applying different and yet complementary empirical methodologies (Granger causality testing, impulse responses functions, and non-linear ARDL) to examine the nature of the relationship between FDI inflows, the degree of tourism specialization, and economic growth.

In light of this, the main findings of the paper can be summarized as follows: 1- The direction of causality in tourism-economic growth nexus is country-dependent. Each individual country should be preferably subjected to careful empirical scrutiny particularly in terms of a better understanding of the mutual dynamic interaction between investment rate, tourism expansion and economic growth by paying special attention to the qualitative nature of the causal effects by employing alternative methodologies. 2- Counting on causality tests in investigating the nexus between these three variables without analyzing 'the sign of the effects' or 'how long these impacts require to take place' is very simplistic and may lead to wrong policy implications and decisions. 3- Diverting a larger share of resources from other sectors (e.g. manufacturing or agriculture sector) to tourism sector can decrease the economic growth rate in some countries. 4- The likelihood of a greater share of FDI inflows in GDP of having positive effects on long-run economic growth seems to be negligible in most of the countries studied in this thesis. The quality of investment is critical in

its nature of impact on tourism and economic growth. FDI with a low rate of return on investment not only cannot increase the economic growth rate but also its costs incurred by economy might have retarding effects on the growth rate. Therefore, before recommending that countries expand their tourism sector or attract more FDI, we recommend policy implementation to increase the rate of return on investment.

It is worth mentioning that in approaching the question of policy influence on the rate of economic growth, correcting the accumulation of past mistakes and releasing the economy from its constraints can usually create an episode of noticeable growth.

According to Haberger (1998), investment rate, rate of return, and RCR are components of growth. The return to capital is affected by the growth rate of output prices relative to capital prices, the depreciation rate, the capital-output ratio (where both output and capital are measured at market prices), and the share of capital in total income (Bai, Hsieh, & Qian, 2006).

In this context, in order to improve the rate of return on investments via cost reduction and increasing the efficiency, policymakers are recommended to forsake bureaucratic hurdles and ill-conceived laws and justify regulations and incentive structures in terms of cost and benefit to the economy. These factors in addition to increasing the capacity of financial intermediaries to identify and finance the best projects can help firms to use their capital more efficiently and increase their economic performance.

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APPENDICES

Appendix A: The Summary of Literature on the Effect of FDI on the Economy

Author (s)	Publishing Year	Sample	Publisher	Methodology	qualitative nature of the effect	Findings
Barrell and Holland	2000	11 different manufacturing sectors in Poland, Hungary and Czech Republic.	Economics of Transition	non-linear least squares	Positive	In most manufacturing sectors labor productivity levels in increased by FDI
Feeny et al.	2014	140 countries	Economic Modelling	OLS	Positive	The effect of FDI on growth is lower in Pacific countries
Iamsiraroj and Ulubaşoğlu	2015	210 countries	Economic Modelling	an 'informed' econometric analysis	Positive	A positive relationship between economic growth and FDI
Iamsiraroj	2016	124 countries	International Review of Economics & Finance	a simultaneous system of equations	Positive	A positive relationship between economic growth and FDI
Pegkas	2015	Eurozone countries	The Journal of Economic Asymmetries	FMOLS and DOLS methods	Positive	Economic growth is positively affected by FDI.
Omri et al.	2014	54 countries	Economic Modelling	dynamic simultaneous-equation	NA	A bidirectional causality between growth and FDI inflows
Damijan et al.	2003	transition countries	Economic systems		No effect	No positive intra-industry spillover is generated by FDI for domestic firms
Temiz and Gökmen	2014	Turkey	International Business Review	Granger causality, Johansen cointegration and OLS	No effect	No significant relationship between GDP growth and FDI inflows
Easterly	1993	.	World Bank Publications	.	Negative	If multinational enterprises acquire special benefits from host governments, the distortions caused lead to significant adverse effects on growth.
Carkovic and Levine	2005	.	Washington, DC : Institute for International Economics	.	Negative	The exogenous component of FDI does not exert a robust, independent influence on growth.
Damijan et al.	2013	transition countries	Journal of comparative economics	.	NA	Productivity level and absorptive capacity of individual firms affect both the spillovers from foreign firms as well as direct effects from foreign ownership.

Appendix B: The Summary of Literature on the Interactions between FDI and Tourism Industry

Author (s)	Publishing Year	Sample	Publisher	Methodology	qualitative nature of the effect	Findings
Khoshnevis Yazdi et al.	2017	27 EU countries	Journal of Policy Research in Tourism	Pooled mean group estimator	No effect	No causal relationship between tourism receipts and FDI
Selvanathan et al.	2009	India	Working Paper	Granger causality test	Positive	A two-way causality link between FDI and tourist arrivals in India
Tang et al.	2007	China	Tourism Economics	Granger causality test under a VAR framework	Positive	A one-directional causality from FDI to tourism
Craigwell & Moore	2007	Small Island Developing States (SIDS)	*Tourism Analysis*	Panel causality	Positive	A bidirectional causal relationship between FDI and tourism
Sanford & Dong	2000	USA	Tourism Economics	TOBIT methodology	Positive	A positive and significant relationship between tourism and subsequent new FDI

Appendix C: The Summary of Literature on the Interactions between Tourism Industry and The Economy

Author (s)	Publishing Year	Sample	Publisher	Methodology	qualitative nature of the effect	Findings
Sinclair and Bote Gómez	1996	Spain	Conference paper	.	Positive	The positive effect of inbound tourism on the level of foreign exchange income
Sinclair	1998	Spain	The Journal of Development Studies	Single equation and system of equations models	Positive	The positive effect of inbound tourism on the level of foreign exchange income
Balaguer and Cantavella-Jorda	2002	Spain	Applied economic	Cointegration and Granger causality tests	Positive	Economic growth in Spain has been sensible to persistent inbound tourism expansion in the last decades
Ivanov and Webster	2007	Spain	Tourism Economic	Growth decomposition	Negative	'gross value added in tourism activities' and 'GDP per capita growth' in Spain move in different directions in some time intervals.
Proença and Soukiazis	2008	Spain and Portugal	Tourism Economic	Conditional convergence and panel data techniques	Positive	The impact of tourism can be accepted as a strong influential factor in the standard of living
Garcia	2014	Spain and Portugal	Tourism Management Perspectives	.	NA	The policy makers have changed their strategies to maximize their tourism revenue.
Soukiazis and Proença	2008	Portugal	Portuguese Economic Journal	System GMM, Fixed Effects Method (LSDV) and Random Effects Method (GLS)	Positive	Tourism can improve the standards of living significantly.
Mervar and Payne	2007	Croatia	Tourism Economics	Estimating Long-Run Elasticities in an ARDL model	Positive	Tourism demand is highly elastic and positively affected by GDP of tourist-generating countries.
Payne and Mervar	2010	Croatia	Tourism Economics	Yamamoto long-run causality tests	Positive	A unidirectional causality from real GDP to international tourism receipts.
Stanchev et al.	2015	Bulgaria	Journal of coastal conservation	Assessing the population changes and tourist growth in the coastal zone	Negative	Tourism peak periods often overwhelm local treatment capacity resulting in significant effects on natural resources and natural geosystems.
Cottrell and Cottrell	2015	Estonia	Scandinavian Journal of Hospitality and Tourism	.	NA	The necessity of collaborative efforts to develop a distinctive tourist image for Baltics
Smith	2015	Estonia	Scandinavian Journal of Hospitality and Tourism	Delphi technique or group communication process	Positive	Health tourism has become one of the collaborative trademarks for Estonia
Hazari and Sgro	2015	It's a theoretical study	Tourism, Trade and National Welfare	A Dynamic Model of Trade	Positive	Tourism demand leads to a lower saving rate requirement which allows local residents to consume now rather than later
Liu and Var	1986	Hawaii	Annals of tourism research	.	Negative	Tourism has cultural and economic advantages but incurs environmental and social costs.

Milne	1990	Small Pacific Island States	New Zealand Journal of Geography	.	Negative	Tourism management methods determines the degree of positive or negative impact of tourism.
Long et al.	1990	residents of 28 rural Colorado communities	Journal of Travel Research	.	Negative	Resident attitudes initially increase in favorability with increasing tourism development, but achieve a threshold level.
Hazari and Ng	1993	.	International Review of Economics and Finance	.	Negative	The negative effect of increase in domestic prices on the country's overall welfare
Dunn and Dunn	2002	Jamaica	Scandinavian Journal of Hospitality and Tourism	Community meetings and in-depth interviews	Negative	Expansion of tourism industry in some countries is associated with increase in crime and violence rate
Dritsakis	2012	seven Mediterranean countries	Tourism Economics	FMOLS and panel cointegration tests	Positive	Tourism receipts have a significant effect on the GDP
Lee and Brahmasrene	2013	EU countries	Tourism Management	fixed-effects models	Positive	FDI, CO2 emissions and tourism have significant positive effect on economic growth.
Tugcu	2014	African, Asian and European countries that border the Mediterranean Sea	Tourism Management	Panel Granger causality test	NA	The tourism indicators and country group are determining factors in causal relationship between tourism and economic growth.
Sokhanvar et al.	2018	98 countries	Tourism Review	Two-stage least squares estimation	Na	No relationship between countries' economic performance and tourism expenditures.
Sokhanvar et al.	2018	emerging market countries	Tourism management perspectives	VAR model and Impulse Responses	Country dependent	Confirmation of tourism-led growth hypothesis in Philippines, Mexico and Brazil and a reverse relationship in Peru, Malaysia, Indonesia, India and China.