The Contribution of Tourism to Economic Growth:

A Research on the Turkey

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Abstract

Having the second biggest share in total exports after manufacturing industry, tourism receipts of Turkey, refers to the importance of tourism as an export-led growth strategy. This study aims to determine the relationship between tourism receipts and long-term economic growth for Turkey. To this end, the variables specified in the model are determined as Gross Domestic Product, Tourism Receipts and Real Exchange Rate. In the study covered the period 1972-2014 using annual data, Johansen co-integration test was performed to determine the long-term relations. As a result two co-integration vectors have been found, meaning that tourism incomes have had a positive effect on Turkey's economic growth. The results of the study show that 1% increase in tourism receipts leads to economic growth by 0.314%. Granger causality test results also verify that the existence of cointegration relationship. Based on this evidence, it may be stated that tourism directly affects Turkey's economic growth.

Keywords: Tourism Receipts, Economic Growth, Time Series Analysis, Turkey.

Turizmin Ekonomik Büyümeye Katkısı: Türkiye Üzerine Bir Araştırma

Özet

Turizm gelirlerinin, Türkiye'nin toplam ihracat gelirleri içerinde imalat sanayiden sonra ikinci en büyük paya sahip olması, ihracata dayalı bir büyüme stratejisi olarak turizmin önemine işaret etmektedir. Bu çalışma, Türkiye için turizm gelirleri ve iktisadi büyüme arasındaki uzun dönem ilişkisini belirlemeyi amaçlamaktadır. Bu amaçla belirlenen modelde yer alan değişkenler; Gayrisafi Yurtiçi Hasıla, Turizm Gelirleri ve Reel Döviz Kurudur. 1972-2014 dönemi kapsamında yıllık verilerin kullanıldığı çalışmada uzun dönem ilişkisinin belirlenmesine yönelik Johansen eş-bütünleşme testi yapılmıştır. İki eş-bütünleşme vektörünün bulunduğu test sonuçlarına göre, turizm gelirleri Türkiye'nin iktisadi büyümesini pozitif yönde etkilemektedir. Buna göre, turizm gelirlerindeki %1'lik bir artış reel milli gelir düzeyini %0,314 artırmaktadır. Granger nedensellik test sonuçları da bu eş-bütünleşme ilişkisini doğrulamaktadır. Buradan yola çıkarak, turizmin Türkiye'nin iktisadi büyümesini doğrudan etkilediği ifade edilebilir.

Anahtar Kelimeler: Turizm Gelirleri, İktisadi Büyüme, Zaman Serisi Analizi, Türkiye.

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1. Introduction

Tourism movements have become considerably widespread among developed countries since the end of World War II. Although the importance of tourism sector for domestic economies was recognized by the mid-twentieth century, global investigations aimed at growth and development often ignored it until 1950s (Crouch and Ritchie, 1999: 138). Growth and development literature started to consider tourism as of 1950s when it also entered in the growth-oriented economic policies of individual countries. Within the context of ever-increasing importance of tourism, many countries are observed to adopt specific incentives dedicated to development of tourism sector. In the light of the outcomes of these incentive policies which have been based on the purpose of supporting economic growth through the mediation of tourism sector, one can observe that some countries have been successful while some others could not achieve their goals in this sense (Deakin, 1972: 747; Copeland, 1991: 515).

Tourism is regarded as an important economic activity for developed or developing countries. Increasing importance attached to the tourism and accompanying incentive policies across the globe give a considerable acceleration into the development of the tourism sector. Researches in the existing literature reveal the main factors that have been playing role in development of the tourism as follows: increase in household income, growing transportation possibilities, extended duration of paid vacations in developed countries, improvement in communication technologies, new social organization caused by industrialization, change in family structure, daily stress caused by technologic life, and largely secured the world peace (Aktaş, 2005: 164). Advances in the worldwide tourism sector are also reflected in statistics. According to the data published by World Tourism Organization (WTO), tourism receipts made up 9% of the global GDP in 2012. In 2014, number of international tourists grew by 4.7% as compared to the previous year, and it is expected to grow 3-4% in 2015. While it was 20 million in 1950, the number of tourists has currently exceeded 1 billion thanks to an increase by approximately fifty times. Researches signal that the number of international tourists would reach up to 1.8 billion by 2030 (UNWTO, 2014).

One of the countries contributing to the worldwide development of international tourism movements is Turkey. Particularly after 2000, Turkey experienced significant growth in terms of the number of inbound tourists. In parallel with the increase in the number of inbound tourists, tourism receipts of Turkey has considerably risen. Aimed at analyzing the

impact of tourism receipts on the growth of the Turkish Economy, this study is organized as follows: Second part provides theoretical background of tourism and detailed information about the evolution of the tourism sector both at local and global level. Third part presents a review of the empirical literature on this issue. Fourth part consists of dataset and methodology. Fifth part consist of empirical findings. Finally, sixth part gives some concluding remarks.

2. Theoretical Background and Evolution of Tourism

Currently, tourism can be defined as the practice of traveling temporarily to another country by millions of people for pleasure, recreation, relaxation, sightseeing or learning to meet their socio-cultural and psychological needs. Even though the tourism is a phenomenon that involves social and cultural dimensions, it is actually is a social activity which deserves attention due to its economic dimension for the most part (Kar *et al*, 2004: 88). During external tourism which reflects domestic expenditures by foreign tourists, they pay in foreign currency in return for the services such as trips, accommodation, meals, museum visits, souvenirs and so forth. This source of income is widely called "chimney-free industry" as it acts like merchandise exports in terms of a given domestic economy. Contrary to this, all tourism expenditures made abroad by domestic people act like merchandise import as a debit item of any domestic economy's balance sheet. Tourism incomes and expenditures are presented in balance of services part of current account in the balance of payments. Services import and export are also called invisible trade (Seyidoğlu, 2013: 335). In this regard, expenditures by foreign tourists fall within the scope of invisible trade and regarded as services export. While calculating tourism receipts, primary outputs of touristic activity such as accommodation, transportation, shopping and entertainment expenditures are taken into account, whereas secondary (indirect) outputs are disregarded as it is so hard and complicated to calculate such items.

Traditional international trade theories (Theory of Absolute Advantages, Theory of Comparative Advantages and Heckscher-Ohlin Theorem) state that any domestic economy needs to specialize in the production of certain goods and services depending on the availability of it resources. By doing so, resources would be allocated in a more efficient way, and each country would benefit from international trade more. Heckscher-Ohlin theorem, on the other hand, indicates that relative differences among countries in terms of factor endowments would directly affect development of the international trade. According to

Heckscher-Ohlin theorem, if any given country has a larger inventory of any factor of production, then that country would have a comparative advantage and therefor would specialize in production of the products that intensively use such factor of production (Leamer, 1995: 1-3). According to this approach, countries that have a greater tourism potential must specialize in and give priority to export of tourism services which include relatively labor-intensive products (Deakin, 1972: 746). The fact that tourism receipts have a greater share in total export proceeds recently indicates that tourism may be an important factor in export-led growth models. If a country's foreign exchange earnings from tourism are more than foreign exchange expenditures for tourism, then it can be stated that the tourism sector has a positive impact on balance of payments. Thus, as the case in export-led growth hypothesis, tourism-oriented growth hypothesis accepts that the tourism sector would contribute to economic growth in the long run (Balaguer and Cantavella-Jorda, 2002). Tourism-oriented growth hypothesis is predicated on the assumption that economic growth would be supported by new employment opportunities and rises in income level, being caused by improvement of the tourism sector. According to this hypothesis, the tourism would positively affect the entire market by way of spillover effects and positive externalities, which turns the tourism sector into an important strategic factor for economic growth (Fayissa *et al*, 2007: 2; Oh, 2005: 40).

General opinion about the impacts of tourism on economy says that the tourism sector triggers economic growth through not only foreign exchange receipts but also new employment opportunities. Therefore, further development of tourism is set an important target by many countries, notably developing economies (Samimi *et al*, 2011: 28). This can be clearly seen in tourism-related statistics as well. According to the data published by United Nations World Tourism Organization (UNWTO), average increase in annual worldwide tourism movements were 4.1% from 1990 to 2005, while it was 6.5% among developing countries for the same period. In 1995, total number of international tourists was 529 million, while it reached up to 1.138 billion in as of 2014 (UNWTO, 2015).

Tourism movements which have a general uptrend and are expected to keep on this trend in the future can affect domestic economies through a great number of ways. It is stated that in many countries having a great tourism potential, particularly in developing economies, the tourism sector put contribution to ensuring the equilibrium of the balance of payments, increasing employment, enhancement of income level, mitigating debt burden, and therefore

to elevation of general wealth (Bahar, 2006: 138; Kızılgöl and Erbaykal, 2008: 353). Foreign exchange inflows and outflows generated by tourism activities affect balance of payments through increasing foreign exchange demand of tourist originating country and foreign exchange supply of host country. With this specific character, tourism receipts represent an source of foreign exchange for the countries suffering from lack of foreign exchange and balance of payments deficit (Kar *et al*, 2004: 89). Similarly, the surplus countries encourage their citizens to take part in international tourism in order to mitigate inflationist pressure that might be caused by foreign exchange surplus (Kızılgöz and Erbaykal, 2008: 354).

The impact of tourism on employment manifests itself in the form of direct, indirect and stimulated employment. The scope of direct employment effect includes accommodation, catering, transportation enterprises, travel agencies and tour operators. On the other hand, indirect employment effects the businesses that provide such goods and services as are needed by the tourism sector as well as the enterprises that take advantage of the expenditures made by tourists. Stimulated employment effect refers to additional employment generated by consumption of the revenues obtained from direct and indirect employment effects (Yıldız, 2011: 60). The importance of employment effect of tourism becomes much more important when it is considered that production of tourism products involves relatively small quantities of capital and that it is by nature a labor-intensive sector (Bahar and Bozkurt, 2010: 256).

Another reason why many countries, notably developing economies, use the tourism sector as a means of economic development is that tourism generates a significant amount of income in the form of invisible export. On account of the fact that the tourism sector has close relations with other sectors (i.e., it has a strong back-and-forth interaction), tourism receipts enable consumption and export of many goods and services. Because, any expenditure made by visitors provide benefits to not only those who are engaged in economy activity but also the other sectors from which tourists make purchases. Moreover, tourism investments aimed at meeting ever-increasing demand increase factor revenues both in the tourism sector and in other feeding sectors. Therefore, tourism expenditures generate further income via multiplier mechanism (Kızılgöl and Erbaykal, 2008: 354). Kar *et al*. (2004) point out disagreement on the multiplier coefficient of tourism expenditures although certain empirical researches on Turkey found it around 2. Taking the multiplier coefficient as 2 means that any increase in tourism expenditures leads to two times more rise in current national income.

Contrary to its numerous positive impacts, the tourism sector is stated to have some negative impacts on the economy. Honey and Gilpin (2009) underline the fact that tourism acts as an intermediary in spread of epidemics and terrorism. Another potentially-negative impact of tourism is form time to time seen in the countries whose tourism receipts have a considerably high share in export revenues. Akama and Kieti (2007) remark that in the regions where tourism receipts are too high, interest groups may attempt to take control of domestic resources of tourism. This may give rise to negative impacts on domestic economy including conflict of interests over such resources and increased level of corruption. Such a conflict of interests over tourism resources, which are classified under renewable natural resources class, in point of fact, precisely refers to "resource curse" hypothesis theorized by Auty (1994). Resources curse hypothesis argues that the countries which are rich in natural resources show a slower economic growth as compared to those which fewer natural resources.

The most prominent implication of natural resource curse hypothesis is Dutch disease approach. Basically asserting that revival in the natural resources sector would lead to a setback in manufacturing industry, and thus would lead to a negative effect on economic growth, Dutch disease approach can also be associated with the tourism sector. A revival in the tourism sector would lead to an increase in demand for tourism products, which fall in the category of the goods and services directly subject to trade. As the tourism sector is a labor-intensive sector that needs additional labor force to meet increasing demand, real wages would rise, escalating the marginal productivity of labor. As a result, labor force would start to import from manufacturing industry (or agricultural sector) producing merchantable goods to non-tradable tourism sector. This would cause a diminishing level of production in manufacturing industry, and would end up with the so-called deindustrialization phenomenon. Another effect of a revival in the tourism sector is that in parallel with the amount of increase in the inflow of foreign currency, domestic currency would appreciate. Appreciation of domestic currency, in turn, would lead to rise in nominal exchange rates and therefore in current real exchange rates. This also would give rise to loss of competitiveness in manufacturing industry that produces merchantable goods, which is also conceptualized as deindustrialization. This mechanism operating from revival of tourism sector to setback in manufacturing industry and hindered economic growth is predicated on the assumption that manufacturing industry in the engine of growth (Akça, 2015). Chao *et al*. (2006) emphasize that as a result of a revival in the tourism sector, the price of non-tradable goods would

increase more than the price of tradable goods, decreasing the demand for capital in tradable goods sector. At the end of the day, deindustrialization in tradable goods sector would obviously diminish the general welfare. Capo *et al*. (2007) discover the symptoms of Dutch disease in a research on Canary and Belarik Islands, whose economies are mostly dependent on the tourism sector. They argue that in both islands, giving priority to tourism impair the level of education, innovation and technological advancement; and therefore such a prioritization may restrain long-term growth. Defining the Dutch disease in the tourism sector as "Beach disease", Holzner (2010) investigates more than 130 countries, each having a considerable share in their domestic economy, but could not find the symptoms of "Beach Disease".

Even though the tourism sector may have certain negativities on the economy, general opinion on this issue may be summarized as follows: tourism increases foreign exchange earnings, gives rise to economies of scale, positively affects balance of international trade, supports employment and enhances national income as a whole; thus it has positive impacts on economic growth.

Tourism is one of the fastest-growing sectors across the globe. When global tourism movements and resulting revenues are examined, a stable increase can be seen clearly. Number of people participating in international tourism was 455.9 million in 1990, it reached up to 1.138 billion as of 2014. Throughout this 23-year-period, the number of international tourists has increased more than double. When it comes to tourism receipts, it has increased from $ 473.4 billion in 2000 to $1.197 billion in 2014. During this 13-year-period tourism receipts have increased more than double (UNWTO, 2015). Figure 1 illustrates the distribution of tourism movements in 2014.

Figure 1. Distribution of Tourism Movements to World Geography (2014)

Source: (UNWTO, 2015).

The most visited region in 2014 is Europe with 588 million tourists, forming 52.1% of total international tourism movements. In this category, Europe is followed by Asia and Pacific region with 263 million, America with 181 million, Africa with 56 million and Middle East with 50 million tourists. Table 1 below indicates the list of top ten countries that are mostly preferred by tourists.

Table 1. Top 10 Countries Mostly Preferred in Tourism Movements (Million People)

Country	2009	2010	2011	2012	2013
France	76.8	76.8	79.5	82.2	83.1
USA	55	59.7	62.4	66.1	69.8
Spain	52.2	52.7	56.7	57.7	60.7
China	50.9	55.7	57.6	57.4	55.7
Italy	43.2	43.6	46.1	45.9	47.7
Turkey	28.2	28.1	29.2	35.6	37.8
Germany	24.2	26.9	28.4	30.4	31.5
UK	25.5	27	30	29.2	31.2
Russia	21.4	20.2	22.7	25.7	28.4
Thailand	14.2	15.9	19.2	22.4	26.5

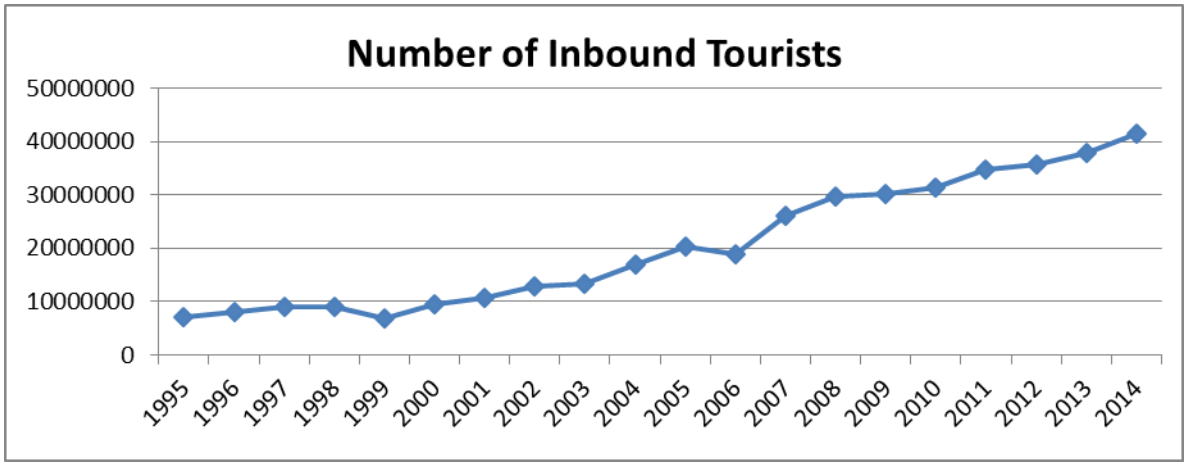
Note: Country ranking is according to 2013 data.
Source: (UNWTO, 2014).

As is seen in Table 1, France is the most preferred country as of 2013, with 83.1 million tourists, which is followed by USD with 69.8 million. Turkey ranks number six with 37.8 million tourists. Eight of top ten countries classified in terms of the number of inbound tourists are also take part in the list of top ten countries by tourism receipts. In this regard, USA is the first with $139.6 billion, and Spain ranks number two with $56.3 billion. Only two

of top ten countries classified in terms of the number of inbound tourists, namely Russia and Turkey, could not find a place in the list of top ten countries by tourism receipts. This can be interpreted as an indication of the fact that the tourists visiting Turkey and Russia spend less as compared to other countries. Considering the investments in tourism as of 2013, China is the first with $ 102 billion, which is followed by USA with $ 83.5 billion and Germany with $ 81.3 billion (UNWTO, 2015).

"Tourism Promotion Law" dated 1982 and numbered 2634, investment incentives and financial supports for tourism are of vital importance in rapid growth of the share of tourism in the Turkish Economy (Bahar, 2006: 13). Thanks to these incentives, the structure of tourism underwent a considerable change after 1980 in terms of both quality and operation. Acting as the number two sector which creates the highest jobs by using the least investment, the tourism sector generates almost 1.2 million jobs, which means that it affects the lives of 5 million people when employees' families are taken into account. In addition, it is said that the tourism sector has a direct effect on 54 sectors in the economy (AKTOB, 2014: 8). Figure 2 illustrates the trend of the number of inbound tourists visiting Turkey in the period 1995-2014.

Figure 2. Number of Inbound Tourists Visiting Turkey in the Period 1995-2014



Source: (World Bank- WDI, 2015).

As it can be understood from Figure 2, the number of inbound tourists visiting Turkey has continuously increased throughout the period 1995-2014 except for 1999 and 2006. It has risen from 7 million eighty three thousand tourists in 1995 to 41 million four hundred fifteen thousand in 2014. Figure 3 depicts the evolution of the share of tourism sector in total export proceeds in Turkey throughout the period 1972-2014.

Figure 3. Share of Tourism Sector in Total Export Proceeds (1972-2014)

Source: http://www.tursab.org.tr

As is seen in Figure 3, the share of tourism sector in total export proceeds in Turkey fluctuates throughout the period 1972-2014. This fluctuation may be caused by variability in tourism receipts or in total export proceeds. Table 2 shows some indicators as to Turkey's tourism sector.

Table 2. Indicators as to Turkey's Foreign Trade and Tourism Sector

Years	Export (billion $)	Tourism Receipts (million $)	Tourism Receipts/GNP (%)	Import (billion $)	Tourism Expenditures (million $)	Tourism Expenditures/Import (%)
1975	1 401.1	200.9	0.5	4 738.7	155.0	3.3
1980	2 910.1	326.7	0.6	7 909.4	114.7	1.5
1985	7 958.0	1 482.0	2.8	11 343.4	323.6	2.9
1990	12 959.3	3 225.0	2.1	22 302.1	520.0	2.3
1995	21 637.0	4 957.0	2.9	35 709.0	912.0	2.6
2000	27 774.9	7 636.0	2.9	54 502.8	1 711.0	3.1
2005	73 476.4	20 322.1	4.2	116 774.2	3 394.6	2.9
2010	113 883.2	24 931.0	3.4	185 544.3	5 874.5	3.2
2011	134 906.9	28 115.7	3.6	240 841.7	5 531.5	2.3
2012	152 478.5	29 351.4	3.7	236 545.1	4 593.4	1.9
2013	151 700.2	32 300.4	4.1	251 651.2	5 253.6	2.1
2014	157 622.3	34 306.2	4.3	242 224.4	5 470.5	2.3

Source: http://www.tursab.org.tr.

Total export and import level, share of tourism receipts and expenditures in total foreign trade as well as share of tourism receipts in national income of Turkey are shown in Table 2. According to this table, in 2014, tourism receipts generate 21.7% of total exportation amounting to $ 157 billion. Tourism receipts amounting to $ 34 billion correspond to 4.3% of GNP. The expenditures that Turkey spent for foreign tourism activities generate only 2.3% of

its total importation. From this point of view, it is understood that tourism influences services balance accordingly current accounts and balance of payment positively.

3. Literature Review

Theoretical model setting up over untraded goods have an impact on increase in the number of studies on tourism-based growth hypothesis which can be assessed within the scope of export-based growth (Gunduz and Hatemi-J, 2005). Balaguer and Cantavella-Jorda (2002) have investigated the role of tourism in Spain's long term economic growth. By using quarterly data between 1975-1997, the writers have applied cointegration and causality tests in order to investigate whether tourism-based growth hypothesis is valid or not in Spain. According to the results that writers obtained from the study, the long term economic growth of Spain is quite responsive to the development of international tourism. Tourism expenditures in Spain trigger economic growth by creating multiplier effect. Eugenio-Martin et. al (2004), by using panel data as to the period of 1985-1998, have researched the relation between tourism and economic growth for Latin American nations. According to research results, some findings have been obtained showing that tourism sector is enough for economic growth in low and middle-income countries, but not enough in developed countries. Moreover, there is another result obtained from the study that low-income countries must improve their infrastructure and education level, and that middle-income countries must increase social progress level and per capita income in order to get more tourists.

Brau at al. (2007) analyze the empirical relationship between growth, country size and tourism specialization by using a dataset covering the period 1980-2003. They find that tourism countries grow significantly faster than all the other sub-groups according to their analysis results. Another finding of their paper is that small states are fast-growing only when they are highly specialized in tourism. Fayissa *et al*. (2007) have researched the contribution of tourism to economic growth and development for Africa region. The writers, by using panel data as to the period of 1995-2004 for 42 African countries, got the results showing that tourism receipts make a contribution to current national income level accordingly to economic growth and development. Samimi *et al*. (2011), have researched the causality and long term relation between tourism development and economic growth in developing countries for the period of 1995-2009 by using P-VAR model. Findings obtained from the study display that there is a bilateral causality between tourism development and economic growth, and a positive long term relation as well.

On the contrary most of the empirical literature in this field of study, Figini and Vici (2010) provided evidence that tourism specialisation can not be the cure to solve problems of development and growth. Their empirical evidence showed that a tourism-based country does not grow, on average, differently from any other type of country. In addition to their findings, Oh (2005) has analyzed the causality and long term relation between tourism development and economic growth in South Korea by Engle-Granger approach and using bivariate VAR model. Results from the study show that there is no long term relation between tourism and economic growth. Furthermore, according to Granger causality test results, it is understood that there is a unilateral causality only from economic growth to tourism development.

Tourism receipts have the second biggest portion in Turkey's total export proceeds after manufacturing industry. This situation shows how tourism sector as export-based growth strategy is important for Turkey. Therefore, the impact of tourism development on economic growth in Turkey came to researchers' attention. Gunduz and Hatemi-J (2005) have researched the contribution of tourism to economic growth in Turkey. According to the causality test results performed by using the annual data as to the period of 1963-2002, they got results showing that tourism-based growth hypothesis in Turkey is supported experientially. Kızılgöl and Erbaykal (2008), by using quarterly data for the period of 1991-2006, have researched the causality relationship between tourism receipts and economic growth within the framework of Toda-Yamamoto method. The results obtained from this study show that there is a unilateral causality from economic growth to tourism receipts. Therefore, Turkey must execute a sustainable economic growth in order to get more tourism receipts. Bahar (2006), by using VAR model, has analyzed whether there is a long term relationship between tourism sector and economic growth in Turkey between the years of 1963 and 2004. Empirical results obtained from the study demonstrate that there is a long term relationship between tourism and economic growth, and that tourism makes positive contribution to economic growth. Bahar and Bozkurt (2010) have analyzed the existence of a long term positive relationship between tourism sector and economic growth in developing countries by using dynamic panel data analysis method. Within this context, they generated a panel data set as to the period of 1998-2005 for 21 developing countries including Turkey, and carried out two-stage GMM-System analysis. In consequence of the analysis made, it is determined that there is a positive and significant relationship between tourism and economic growth in terms of developing countries, and that 1% of an increase in tourism receipts leads to 2.825% of a rise in long term economic growth.

In general, related literature points that the development of tourism sector makes positive contribution to economic growth. Starting from this point of view, it is considered very important to analyze at which rate tourism receipts contribute to economy in Turkey and similar countries which accept tourism as an important sector.

4. Data Set and Methodology

In this part of the study, long-term relation between tourism receipts and gross domestic product (GDP) has been economically determined in the light of Turkey's annual data as to the period of 1972-2014. Therefore, the impact of tourism receipts, as a determinant, on economic growth has been researched rather than analyzing a growth model. Basically, the variables taking part in the theoretical model of this study, in which contribution of tourism receipts to Turkey's long term economic growth has been researched, have been determined as GDP, tourism receipts and real exchange rate. While GDP, as a dependent variable, takes part in the model representing long term economic growth; real exchange rate, as one of the independent variables, is included in the model representing competitiveness power with other countries. Moreover, presence of real exchange rate in the model is important to display macroeconomic stability's importance and to increase the estimation power of model. The data used in the study, their explanations and data sources are summarized in Table 3. In order to protect the series against possible changing variance and autocorrelation partially, natural logarithmic transformation for all variables have been done, and the series have been analyzed in this way. Thanks to this, coefficients obtained from the estimation of regression model can be interpreted as elasticity. Furthermore, all variables have been realized in order to make the series free from possible price change effects.

Table 3.Variables Used, Explanations and Data Sources

Time Series	Variable	Explanation	Source
Economic Growth	***Y***	Real GDP (in national currency), with fixed price of 1998, CPI Based, 2010=100.	IMF-IFS, 2015
Tourism Receipts	***TOUR***	Real Tourism Receipts in National Currency, CPI Based, 2010=100.	TURSAB, 2015
Real Exchange Rate	***RER***	USD Based, 2010=100.	IMF-IFS, 2015
Modification Data	***CPI***	Consumer Price Index (CPI), 2010=100.	IMF-IFS, 2015

Theoretical model of the study aiming to analyze the long term relation between tourism receipts and economic growth has been identified below with reference to studies made by Balaguer and Cantavella-Jorda (2002) and Gunduz and Hatemi-J (2005):

$$Y = f(TOUR, RER) \quad (1)$$

In the model, Y means 'GDP', TOUR 'tourism receipts', and RER 'real exchange rate'. In the study, by integrated approach, long term linear regression model aiming to show how and in which way the explanatory (independent) variables affect real GDP (dependent variable) is shown below:

$$Y_t = \beta_0 + \beta_1 TOUR_t + \beta_2 RER_t + u_t$$
$$(t = 1972, 1973, ..., 2014) \quad (2)$$

While all the variables in logarithmic form here are same as defined in the table above, β_0 demonstrates a constant and u_t means error term representing the factors which are not included in the deterministic part. Although it is not so clear in the direction of findings obtained from theoretical explanations and previous studies, it is expected that tourism receipts increase GDP, economic growth, (β_1>0). Another case is the impact of exchange rates on growth. Theoretically, as long as foreign exchange earnings from export go up, national currency becomes more valuable, and especially import of industrial goods increases. This situation will influence the growth negatively. In case of a decrease in export proceeds, opposite effects will appear. Considering these general expectations, the impact of exchange rates on growth is uncertain for developing countries like Turkey. Because, in case that relative prices are in favor of developing countries, then some other conditions must be met in order for the said situation to increase net import accordingly economic growth. In the mentioned conditions, there are some criteria such as: supply and demand elasticity of the exported goods is high, change in relative prices do not cause inflation and an increase in total expenditures, import-substitute power is high. It is also known that these criteria are not completely fulfilled by the developing countries (Doğanlar, 1999). Therefore, the sign of β_2 coefficient is uncertain.

5. Results

At the estimation stage of regression model identified in order to analyze the long term relation between tourism receipts and economic growth, the series to be analyzed must be stationary series in order to get economically significant relationship between the variables. In case that time series are not stationary, the relationship between variables resulting from the regression analyze shows up as spurious regression. In order for series to be stationary, it must have constant mean and constant variance, and covariance between error terms must be

zero (Asterio and Hall, 2011: 267). Therefore, to analyze the long term relation between the variables, first of all it must be examined whether series are stationary or not. Testing the stationary situation of time series shall ensure to identify appropriate method to be used in econometric model estimation. For this purpose, ADF (Augmented Dickey Fuller) and PP (Phillips Perron) unit root test results performed for all variables taking part in the model are shown in the Table 4 and Table 5 respectively.

Table 4. ADF Unit Root Test Results

Variable		With Trend		Without Trend	
		Test sta.	***P*****	***Test sta.***	***P*****
LNRGSYH	At level	-0,515[0]	0,878	-3,253[0]	0,088
	First Variation	-6,447[0]**	0,000	-6,375[0]**	0,000
LNTOUR	At level	-1,122[2]	0,698	-1,487[0]	0,818
	First Variation	-5,479[1]**	0,000	-5,514[1]**	0,000
LNRER	At level	-1,278[0]	0,631	-1,339[0]	0,864
	First Variation	-5,141[0]**	0,000	-5,161[0]**	0,000

Note: ** shows that statistics are significant at the level of 5%. Optimal time lag length has been determined according to Schwarz Information Criterion. The values in the brackets show the time lag lengths which are used in ADF test to remove the autocorrelation among error terms.

Table 5. PP Unit Root Test Results

Variable	Level	With Trend		Without Trend	
		Test sta.	***P*****	***Test sta.***	***P*****
LNRGSYH	At level	-0,534	0,874	-3,423	0,062
	First Variation	-6,741**	0,000	-6,635**	0,000
LNTOUR	At level	-1,188	0,671	-1,488	0,819
	First Variation	-5,568**	0,000	-5,495**	0,000
LNRER	At level	-1,637	0,455	-1,651	0,755
	First Variation	-5,155**	0,000	-5,165**	0,001

Note: ** shows that statistics are significant at the level of 5%. Newey-West band width has been used.

According to the results of ADF and PP unit root test performed in order to identify the integrated degrees of the series, it is seen that all variables are not stationary at the level for both with trend processes and without trend processes; but however they become stationary when the first variations are calculated. Since all the series become stationary after the calculation of first variations and therefore the information as to long term disappear; a regression analysis shall not display a long term balance relationship. Therefore, cointegration techniques are considered appropriate to be used in the long term analysis. Although the series relating to economic variables are not stationary, cointegration analysis asserts that these series may have a stationary linear combination and that it can be determined econometrically (Asterio and Hall, 2011). Based on this, possible cointegration relation between the variables

are being researched. Johansen cointegration method has been used in the cointegration analysis. This method estimates the long term relationship between non-stationary series by using maximum probability procedure predicting the number and parameters of cointegration relationship (Balaguer and Cantavella-Jorda, 2002: 880). Optimal time lag length in VAR analysis performed for cointegration analysis has been found as 3 according to Akaike Information Criterion (AIC). Concerning the analyzed model, it is seen that there is no autocorrelation and changing variance problem and that the model meets the stability condition (adverse roots are in the unit circle). Pantula principle which was proposed by Johansen ve Juselius (1992) has been used in the selection of deterministic variables in the cointegration test. Number of cointegrated vectors are determined according to trace test and maximum eigen value test statistics. Cointegration test results are shown in the Table 6.

Table 6. Johansen Cointegration Test Results

	Trace Test			Maximum Eigen Test		
Number of Cointegration	**Test Statistics**	**Critical Value (%5)**	**P****	**Test Statistics**	**Critical Value (%5)**	**P****
r=0	67,979**	42,915	0,000	36,403**	25,823	0,001
r≤1	31,577**	25,872	0,008	24,201**	19,387	0,009
r≤2	7,376	12,521	0,307	7,376	12,518	0,307

Note: ** shows that null hypothesis is rejected at the level of 5%, in other words the presence of cointegration relationship.

According to trace test and maximum eigen test results, it is seen that there are two cointegration relationships. Normalized cointegration equation is:

$$\ln Y_t = 0,314 \ln TOUR_t + 0,536 \ln RER_t \qquad (3)$$

According to equation 3, tourism receipts influence Turkey's long term economic growth positively. When examining the parameter estimation results which are considered as statistically significant, it is understood how multiplier effect of tourism receipts is important. When we interpret the contribution of tourism receipts to economic growth as elasticity; 1% of an increase in tourism receipts leads to 0.314% of a growth in real national income level. In other words, 5% of an increase in tourism receipts leads to 1,57% of a grow in real national income level. After the determination of long term relationship by Johansen cointegration method, error correction model (ECM) is applied in order to identify how much the presence of deviation from long term balance and average deviation get close to average. Being statistically significant of error correction coefficient, which is expressed as adjustment speed or adaptation speed, indicates that there is deviation from long term averages and that the said

deviation will disappear after a while. Error correction coefficient shows at what rate short term imbalances can be corrected at the end of a term (Asterio and Hall, 2011). Adaptation speed coefficient obtained from ECM is found as -0,325. According to adaptation speed coefficient determined as statistically significant at the level of 5% (t value = -2,183), it is understood that approximately 32% of the deviations from long term balance values occurred in short term disappear at each term. Therefore, it is also understood that deviations from long term balance will completely disapper and reach the balance after 3,13 terms.

Existence of a long term relationship between tourism receipts and economic growth means that there must be at least a unilateral causality among the variables (Engle and Granger, 1987: 259). Results of Granger causality test applied for this purpose are shown in the Table 7.

Table 7. Granger Causality Test Results

Null Hypothesis (H_0)	F statistics	P**
LnTOUR is not the Granger causal to lnY.	20,02**	0,000
LnY is not the Granger causal to lnTOUR.	6,243	0,101
LnRER is not the Granger causal to lnY.	13,198**	0,000
LnY is not the Granger causal to lnRER.	16,845**	0,000
LnRER is not the Granger causal to lnTOUR.	3,579	0,311
LnTOUR is not the Granger causal to lnRER.	7,951**	0,047

Not: ** shows that statistics are significant at the level of 5%. Granger Causality test was performed on the series became stationary after taking first difference.

According to Granger causality test results, it is understood that there is a unilateral causality from tourism receipts to real GDP, and a bilateral causality between real exchange rate and real GDP. Starting from this point, it can be stated that change in relative prices increase the competitiveness power, so that it influences real GDP as well as economic growth of Turkey. Accordingly, empirical results, which are coherence with theoretical expectations, support the idea that growth hypothesis for Turkey based on tourism is an appropriate policy.

6. Concluding Remarks

Tourism is one of the fastest-growing sectors across the globe. When global tourism movements and resulting revenues are examined, a stable increase can be seen clearly. Having the second biggest share in total exports after manufacturing industry, tourism receipts of Turkey, refers to the importance of tourism as an export-led growth strategy.

This study aims to determine the long-term relationship between tourism receipts and economic growth for Turkey. In this regard, this study also tries to analyze the contribution of

tourism receipts to long-term growth performance of the Turkish Economy. The variables specified in the model are Gross Domestic Product, Tourism Receipts and Real Exchange Rate. In the study covered the period 1972-2014 using annual data, Johansen co-integration test and Granger causality test were performed to determine the long-term relations. As a result of cointegration test results, tourism receipts positively affect the long-term growth performance of the Turkish Economy. If we interpret the contribution of tourism receipts to economic growth as flexibility, 1% increase in tourism receipts leads to economic growth by almost 0.314%. In other words, 5% increase in tourism receipts elevates real GDP by 1,57%. Granger causality test results also verify that the existence of cointegration relationship. According to Granger causality test results, there is a one-way causality from tourism receipts to GDP, whereas there is a two-way causality between the real exchange rate and real GDP. From this finding, it may be stated that changes in relative prices increase competitiveness, affecting real GDP; moreover, the tourism sector has a direct impact on the growth performance of the Turkish Economy. Therefore, general conclusion to be drawn in the light of this study is that the policies aimed at increasing tourism receipts in Turkey also put great contributions to economic growth; and that additional measures devoted to expanding potential should be maintained.

References

AKAMA, John; Kieti, DAMIANNAH. (2007), "Tourism and Socio-economic Development in Developing Countries: A Case of Mombasa Resort in Kenya", Journal of Sustainable Tuorism, Vol. 15, No. 6, ss. 735-748.

AKÇA, Emrah Eray. (2015), Doğal Kaynakların Ekonomik Gelişme Üzerine Etkisi: Seçilmiş Ülke Deneyimleri, İktisadi Araştırmalar Vakfı İktisadi İşletmesi Yayınları, İstanbul.

AKTAŞ, Cengiz (2005), "Türkiye'nin Turizm Gelirlerini Etkileyen Değişkenler İçin En Uygun Regresyon Denkleminin Belirlenmesi", Doğuş Üniversitesi Dergisi, 6(2), ss. 163-174.

AKTOB (2014), "2023'e Doğru Türkiye'de Turizmin 100 Yılı-Turizm Sektörünün Yapısı, Büyüklüğü ve Ekonomiye Katkısı", http://www.aktob.org.tr/pdf/arastirma2014.pdf, Erişim Tarihi: 10.09.2015.

ASTERIO, Dimitrios; HALL, Stephen G. (2011). Applied Econometrics. Palgrave Macmillan, Second Edition.

AUTY, Richard M. (1994), "Industrial policy reform in six large newly industrializing countries: The Resource Curse Thesis", World Development, Vol. 22, Sayı 1, ss. 11-26.

BAHAR, Ozan (2006), "Turizm Sektörünün Türkiye'nin Ekonomik Büyümesi Üzerindeki Etkisi: VAR Analizi Yaklaşımı", Yönetim ve Ekonomi, Cilt 13, Sayı 2, ss. 137-150.

BAHAR, Ozan; BOZKURT, Kurtulmuş (2010), "Gelişmekte Olan Ülkelerde Turizm-Ekonomik Büyüme İlişkisi: Dinamik Panel Veri Analizi", Anatolia: Turizm Araştırmaları Dergisi, Cilt 21, Sayı 2, ss. 255-265.

BALAGUER, Jacint; CANTAVELLA-JORDA Manuel (2002), "Tourism As a Long-run Economic Growth Factor: The Spanish Case", Applied Economics, 34:7, ss. 877-884.

BRAU, Rinaldo; LANZA, Alessandro; PIGLIARU, Francesco (2007), "How fast are small tourism countries growing? Evidence from the data for 1980-2003", Tourism Economics, Vol 13, No 4, ss. 603-614.

CAPO, Javier; FONT, Antoni Riera; NADAL, Jaume Rossello (2007), "Dutch Disease in Tourism Economics: Evidence from the Balearics and the Canary Islands", Journal of Sustainable Tourism, Vol. 15, Sayı 6, ss. 615-627.

CHAO, Chi-Chur; HAZARI, Bharat R.; LAFFARGUE, Jean-Pierre; SGRO, Pasquale M; YU, Eden S.H. (2006), "Tourism, Dutch Disease And Welfare In An Open Dynamic Economy", The Japanese Economic Review, Vol. 57, No 4, ss. 501-515.

COPELAND, Brian R. (1991), "Tourism, Welfare and De-industrialization in a Small Open Economy", Economica, New Series, Vol. 58, No. 232, ss. 515-529.

CROUCH, Geoffrey I.; RITCHIE, J.R.Brent (1999), "Tourism, Competitiveness, and Sociteal Prosperity". Journal of Business Research 44, ss. 137-152.

DEAKIN, B. M. (1972), "International Travel-International Trade", The Economic Journal, Vol. 82, No. 326, ss. 746-748.

DOĞANLAR, Murat (1999), "Marshall-Lerner Koşulu Yeterli Olabilir mi?", İktisat İşletme ve Finans, Vol. 14, Sayı 162, ss. 79-88.

ENGLE, Robert F.; GRANGER, Clive W. J. (1987), "Co-integration and Error Correction: Representation, Estimation, and Testing", Econometrica, Vol. 55, No. 2, ss. 251-276.

EUGENIO-MARTIN, Juan Luis; MORALES, Noelia Martin; SCARPE, Riccardo (2004), "Tourism and Economic Growth in Latin American Countries: A Panel Data Approach", FEEM Working Paper, No. 26, ss. 1-28.

FAYISSA, Bichaka; NSIAH, Christian; TADASSE, Badassa (2007), "The Impact of Tourism on Economic Growth and Development in Africa", Department of Economics and Finance Working Paper Series, ss. 1-27.

FIGINI, Paolo; VICI, Laura (2010), "Tourism and growth in a cross section of countries", Tourism Economics, Vol 16, No 4, ss. 789-805.

GUNDUZ, Lokman; HATEMI-J, Abdulnasser (2005), "Is The Tourism-led Growth Hyphotesis Valid for Turkey?". Applied Economics Letters, 12, ss. 499-504.

HOLZNER, Mario (2010), "Tourism and Economic Development: The Beach Disease?", The Vienna Institute for International Economic Studies Working Papers 66, ss. 1-43.

HONEY, Martha; GILPIN, Raymond (2009), "Tourism in the Developing World", U. S. Institute of Peace Special Report 233, ss. 1-11.

JOHANSEN, Soren; JUSELIUS, Katarina (1992), "Structural Tests in a Multivariate Cointegration Analysis of the PPP and the UIP for UK", Journal of Econometrics, 53, ss. 211-244.

KAR, Muhsin; ZORKİRİŞÇİ, Ebru; YILDIRIM, Metin (2004), "Turizmin Ekonomiye Katkısı Üzerine Ampirik Bir Değerlendirme", Akdeniz İ.İ.B.F Dergisi (8), ss. 87-112.

KIZILGÖZ, Özlem; ERBAYKAL, Erman (2008), "Türkiye'de Turizm Gelirleri İle Ekonomik Büyüme İlişkisi: Bir Nedensellik Analizi", Süleyman Demirel Üniversitesi İ.İ.B.F. Dergisi, Cilt 13, Sayı 2, ss. 351-360.

LEAMER, E. Edward (1995), The Heckscher-Ohlin Model in Theory and Practice, Princeton Studies in International Finance, 77, New Jersey: Princeton.

OH, Chi-Ok (2005), "The contribution of tourism development to economic growth in the Korea economy", Tourism Management 26, ss. 39-44.

SAMIMI, Ahmad Jafari; SADEGHI, Somaye; SADEGHI, Soraya (2011), "Tourism and Economic Growth in Developing Countries: P-Var Approach", Middle-East Journal of Scientific Research 10 (1): ss. 28-32.

SEYİDOĞLU, Halil (2013), Uluslararası İktisat-Teori Politika ve Uygulama, Geliştirilmiş 18. Baskı, Güzem Can Yayınları, İstanbul.

United Nations World Tourism Organiziation (UNWTO), (2014) Tourism Highlights, http://dtxtq4w60xqpw.cloudfront.net/sites/all/files/pdf/unwto_annual_report_2014.pdf, Erişim Tarihi: 22.08.2015.

United Nations World Tourism Organiziation (UNWTO), (2015) Tourism Highlights, http://www.e-unwto.org/doi/pdf/10.18111/9789284416899, Erişim Tarihi: 08.09.2015.

Yıldız, Zafer (2011), "Turizm Sektörünün Gelişimi ve İstihdam Üzerindeki Etkisi", Süleyman Demirel Üniversitesi Vizyoner Dergisi, Cilt 3, Sayı 5, ss. 54-71.

http://www.tursab.org.tr/tr/istatistikler/turist-sayisi-ve-turizm-geliri, Erişim Tarihi: 15.07.2015)

http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators, Erişim Tarihi: 18.07.2015.

http://data.imf.org/?sk=7CB6619C-CF87-48DC-9443-2973E161ABEB&ss=1420495318386, Erişim Tarihi: 23.07.2015)