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## Causality of Tourism Revenues, Economic Growth and Current Account Balance

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### **Abstract**

*Tourism revenues have a significant place for both international balance of payments and the economic growth for developing countries with raw material and intermediate good import in particular. While tourism revenues assist in meeting foreign currency they also contribute revival of tourism industry and ultimately pioneer increase of investments which form the fundamental of economic growth. This study aims to investigate the effect of tourism revenues on international balance of payments and economic growth.*

Keywords: Tourism Revenues, Economic Growth, and Current Account Balance

### **1. Introduction**

The word globalization, which is often used today, means a clear definition of national boundaries. From this point of view, the phenomenon of globalization brings with it significant opportunities for different cultures to better recognize each other and to destroy cultural conflicts. The tourism sector plays an important role in ensuring sustainable economic growth, which is the basic economic objective of each country, while at the same time it is an important building block in better understanding each other's cultures. Tourism is regarded as one of the most important service sectors that enable an country to gain in economic, social and cultural fields (Çoban and Özcan, 2013: 234). Tourism is an area of activity that provides significant contributions to the economies of many countries on the world scale. Tourism activity is a feature that brings the necessary foreign exchange, especially the developing countries, and increases the employment opportunities and high prosperity for the people of the country (Zengin 2010: 105).

Especially for the developing countries, the tourism sector constitutes an important field of competition. The tourism sector, which has a significant place in developing countries, on the one hand helps to reduce unemployment by increasing employment in the tourism sector and on the other hand it provides foreign exchange, a vital priority for developing countries. Foreign exchange, which comes with Tourism, plays an important role in financing the current budget deficits of the countries. In addition, the tourism economy also indirectly or directly influences the investments made in the construction, accommodation and food sectors, and mediates a resource transfer to undeveloped countries in the developed countries, creating a convergence effect in the country's economies.

## 2. Current Situation of Tourism Economy

An ever-increasing number of destinations worldwide have opened up to, and invested in tourism, turning it into a key driver of socio-economic progress through the creation of jobs and enterprises, export revenues, and infrastructure development. Over the past six decades, tourism has experienced continued expansion and diversification to become one of the largest and fastest-growing economic sectors in the world. Many new destinations have emerged in addition to the traditional favourites of Europe and North America. Tourism has boasted virtually uninterrupted growth over time, despite occasional shocks, demonstrating the sector's strength and resilience. International tourist arrivals have increased from 25 million globally in 1950 to 278 million in 1980, 674 million in 2000, and 1186 million in 2015. Likewise, international tourism receipts earned by destinations worldwide have surged from US\$ 2 billion in 1950 to US\$ 104 billion in 1980, US\$ 495 billion in 2000, and US\$ 1260 billion in 2015. Tourism is a major category of international trade in services. In addition to receipts earned in destinations, international tourism also generated US\$ 211 billion in exports through international passenger transport services rendered to non-residents in 2015, bringing the total value of tourism exports up to US\$ 1.5 trillion, or US\$ 4 billion a day on average. International tourism now represents 7% of the world's exports in goods and services, up from 6% in 2014, as tourism has grown faster than world trade over the past four years. As a worldwide export category, tourism ranks third after fuels and chemicals and ahead of food and automotive products. In many developing countries, tourism ranks as the first export sector (UNWTO 2016:2).

The number of international tourist arrivals (overnight visitors) in 2015 increased by 4.6% to reach a total of 1186 million worldwide, an increase of 52 million over the previous year. It was the sixth consecutive year of above-average growth in international tourism following the 2009 global economic crisis. Tourism flows were influenced by three major factors in 2015: the unusually strong exchange rate fluctuations, the decline in the price of oil and other commodities, and increased global concern about safety and security. By UNWTO region, the Americas and Asia and the Pacific both recorded close to 6% growth in international tourist arrivals, with Europe, the world's most visited region, recording 5%. Arrivals in the Middle East increased by 2%, while in Africa they declined by 3%, mostly due to weak results in North Africa. International tourism receipts grew by 4.4% in real terms (taking into account exchange rate fluctuations and inflation) with total earnings in the destinations estimated at US\$ 1260 billion worldwide in 2015 (euro 1136 billion). France, the United States, Spain and China continued to top the rankings in both international arrivals and receipts. In receipts, Thailand climbed three places to 6th position, and Hong Kong (China) climbed one place to 9th. Mexico moved up one position to come 9th in arrivals. China, the United States and the United Kingdom led outbound tourism in their respective regions in 2015, fuelled by strong currencies and economies. Forecasts prepared by UNWTO in January 2016 point to a continuation of growth in international tourist arrivals at a rate of between 3.5% and 4.5% in 2016, in line with the Tourism Towards 2030 long-term projection of 3.8% growth a year for the period 2010 to 2020 (UNWTO 2016:3).

Table 1: International Tourist Arrivals (Million)

	International Tourist Arrivals (million)							Market Share (%)	Change (%)			Average a year (%)
	1990	1995	2000	2005	2010	2014	2015		2015*	13\12	14\13	
world	435	527	674	809	950	1,134	1,186	100	4.6	4.2	4.6	3.9
A.E. <sup>1</sup>	299	3309	424	470	516	622	653	55.0	4.6	5.7	5.0	3.3
E.E. <sup>2</sup>	136	188	250	339	434	512	533	45.0	4.0	2.4	4.1	4.6

Source: (UNWTO 2016:4)

Table 2: International Tourism Receipts

	International Tourism Receipts Local Currencies, Constant Price (% Change)				Market Share (%)	Receipts , US \$, (billion)		Receipts (Euro) (Billion)	
	12\11	13\12	14\13	15*\14		2015*	2014	2015*	2014
world	4.3	5.9	5.1	4.4	100	1,309	1,260	986	1,136
A.E. <sup>1</sup>	3.6	6.1	4.9	3.1	61.5	829	774	624	698
E.E. <sup>2</sup>	5.4	5.5	5.5	6.7	38.5	481	486	362	438

Source: UNWTO 2016:5

When the data in table 1 and table 2 are examined, it is seen that the tourism sector has grown rapidly over the years.

Expenditure by international visitors on accommodation, food and drink, entertainment, shopping and other services and goods in the destinations reached US\$ 1260 billion (euro 1136 billion) in 2015. In real terms, i.e. taking into account exchange rate fluctuations and inflation, this represents an increase of 4.4% over 2014, mirroring the growth in international arrivals. Unusually strong exchange rate fluctuations in 2015 significantly influenced tourism receipts for individual destinations and regions expressed in US dollars. In real terms, receipts grew by 8% in the Americas, by 4% in both Asia and the Pacific and the Middle East, by 3% in Europe, and by 2% in Africa. In macro-economic terms, expenditure by international visitors counts as exports for the destination country and as imports for the country of residence of the visitor. For many countries inbound tourism is a vital source of foreign currency earnings and an important contributor to the economy, creating much needed employment and further opportunities for development. In addition to receipts earned in the destinations (the travel item of the balance of payments), international tourism also generated US\$ 211 billion in exports through international passenger transport services rendered to non-residents in 2015. Adding these together, the value of tourism exports amounted to US\$ 1.5 trillion, or US\$ 4 billion a day on average (UNWTO 2016:5).

<sup>1</sup> Advanced Economies.

<sup>2</sup> Emerging Economies.

Table 3: International Tourist Arrivals, 2014-2015

Rank		Million		Change (%)	
		2014	2015*	14\13	15*\14
1	France	83.7	84.5	0.1	0.9
2	United States	75.0	77.5	7.2	3.3
3	Spain	64.9	68.2	7.0	5.0
4	China	55.6	56.9	-0.1	2.3
5	Italy	48.6	50.7	1.8	4.4
6	Turkey	39.8	39.5	5.3	-0.8
7	Germany	33.0	35.0	4.6	6.0
8	United Kingdom	32.6	34.4	5.0	5.6
9	Mexico	29.3	32.1	21.5	9.4
10	Russian Federation	29.8	31.3	5.3	5.0

Source: (UNWTO 2016:6)

When table 3 is examined, it is seen that France is the first rank among the international tourist arrivals and turkey is the sixth.

Table 4: International Tourism Receipts, 2014-2015

Rank		US \$				Local Currencies	
		Billion		Change (%)		Change (%)	
		2014	2015*	14\13	15*\14	14\13	14\14
1	United States	191.3	204.5	7.8	6.9	7.8	6.9
2	China	114.1	114.1	n/a	8.3	n/a	9.8
3	Spain	65.1	56.5	3.9	-13.2	3.9	4.0
4	France	58.1	45.9	2.8	-21.0	2.8	-5.4
5	United Kingdom	46.5	45.5	11.8	-2.3	6.2	5.2
6	Thailand	38.4	44.6	-8.0	16.0	-2.7	22.0
7	Italy	45.5	39.4	3.6	-13.3	3.6	3.8
8	Germany	43.3	36.9	4.9	-14.9	4.9	1.9
9	Hong Kong (China)	38.4	36.2	-1.4	-5.8	-1.5	-5.8
10	Macao (China)	42.6	31.3	-1.1	-26.4	-1.1	-26.5

Source: UNWTO 2016:6

When table 4 is examined, it is seen that United States is the first rank among the international tourist receipts and Italy is the seventh. Turkey is not among the top ten.

### 3. Impact on tourism balance and economic growth

Tourism, above all, is an invisible export pen with significant effects on balance of payments. Tourism, in this sense, can be regarded as goods and services exports made at domestic retail prices. The employment / investment ratio is also generally high in the tourism industry, which has limited opportunities to switch to automation and mechanization. Tourism indirectly increases employment and income levels in other sectors due to the stimulus effects it creates (Aktaş 2005: 164).

The reason for tourism is the measure of currency movements in terms of the country's economy, measured in the balance of payments. Foreign exchange movements affect the balance of payments of countries as foreign exchange demand of the tourist sending country plays an

increasing role in foreign exchange supply. With this feature, tourism revenues are a very important source of exchange for countries that attract foreign exchange difficulties and open balance of payments (Kar et al., 2004: 89). It is possible to talk about the positive contribution of the balance of payments as long as the tourist foreign exchange gains are more than the tourist foreign exchange losses. The main reason for encouraging countries in the world today, both in terms of surplus balance and in balance of payments, is to contribute to the balance of tourism payments. Countries with excessive balance of payments encourage their citizens to participate in international tourism in order to prevent this excess from causing inflation and dissolving it (Özen, 2006). Countries that pay balances openly try to close this gap. In this sense, tourism plays a balancing role in the balance of payments of developed and developing countries (Kızılgöl and Erbaykal, 2008: 353-354).

By exporting services to the tourism sector, it is possible to have more foreign currency entry and thus national income (Fayed and Fletcher, 2002: 210). It is possible to say that the theoretical basis for tourism's economic growth comes from the literature of exports and economic growth (Vanegas and Croes, 2003: 315-330). As a matter of fact, it is seen that the tourism, which is included in the international services section of the balance calculations under the current transactions, takes place at the beginning of the traditional service activities subject to international trade. Hence, tourism expenditures made by foreign tourists in another country make an export effect like exporting the same goods in terms of foreign exchange income provided to that country. In other words, tourism is an invisible export item. If the foreign currency earnings of the country is higher than the foreign exchange losses, it will contribute positively to the balance of tourism payments. For this reason, as well as in the export-oriented growth hypothesis, it is accepted that in the tourism-oriented growth hypothesis, tourism may also cause economic growth in the long run (Kara et al. 2012: 80).

Table 5: Literature Review

yazar	metod	ülke	Sonuç
Mdeste (1995)	regression	4 Caribbean country	The growth rate in the tourism sector has an impact on the national income growth rate.
Martin etc. (2004)	dynamic panel	21 latin america country	Spending per tourist is influential over real growth.
Balaguer and Jorda (2002)	Var, Granger Causality	Spain	There is a reciprocal relationship between exchange rate and tourism revenues and growth
Yıldırım and Öcal (2004)	Var	Turkey	Tourism revenues are influential on growth.
Kasman and Kasman (2004)	Var, Granger Causality	Turkey	Tourism revenues are influential on growth.
Gündüz ve Hatemi (2005)	ARCH	Turkey	The number of tourists and the exchange rate are influential on growth.
Bahar (2006)	Var, Granger Causality	Turkey	Tourism revenues are influential on growth.
Yavuz (2006)	Granger Causality	Turkey	Tourism income has no relation to growth.
Gökovalı and Bahar	Panel Data	13 Mediterranean countries	Tourism revenues and fixed capital investments are influential on growth.
Kıtırıcıoğlu (2009)	ARDL Model	Turkey	The number of tourists and the exchange rate are influential on growth.
Lee and Chang (2008)	Panel Cointegration	23 OECD and 32 non-OECD.	Per capita tourism spending, number of tourists and real exchange rate are influential on growth.
Hazari ve Sgro (1995)	Dinamik Panel	OECD	Tourism affects the growth of developing countries positively.
Kulendran and Wilson (2000)	Var, Granger Causality	Australia	There is a strong relationship between international tourism and international trade.
Shan and Wilson (2001)	Var, Granger Causality	China	There is a strong relationship between international tourism and international trade.
Oh (2005)	Var, Granger Causality	Korea	The hypothesis that tourism is causing economic growth has been rejected.
Nowak and etc. (2004)	Panel Data	21 Latin America	The result is that the increase in tourism will result in a fall in the output of the country's GNP and manufacturing sector.
Chen ve ChiouWei'nin (2009)	Var, Granger Causality	Taiwan and South Korea	Taiwan and South Korea tourism is supported by the thesis that led to economic growth.
Dritsakis (2004)	Var, Granger Causality	Greece	There is a relationship between international tourism income and real effective exchange rate and real growth.
Kim and etc. (2006)	Var, Granger Causality	Taiwan	There is a relationship between the number of tourists and GDP.
Brida and etc. (2008)	Var, Granger Causality	Mexican	There is a relationship between tourism spending and real exchange rate and real GDP.
Aslan (2008)	Granger Causality	Turkey	The hypothesis that tourism promotes economic growth is supported.

Kızılgöl ve Erbayraklar (2008)	Granger Causality	Turkey	Economic growth has led to a one-way causality relationship towards tourism revenues.
Bahar and Bozkurt (2010)	Panel Data, GMM	21 Country	Positive and significant relationship between tourism and economic growth has been determined in terms of GOIs
Webber (2001)	Granger Causality	Australia	The exchange rate changes have affected the demand for tourism.
Eugenio-Martin and Morales, (2004)	Panel Data	Latin American Countries	There is a weak relationship between tourism revenues and the exchange rate and purchasing power parity.
Mervar and Payne, (2007)	ARDL	Croatia	The impact of the demand-side exchange rate on tourism in Croatia is weak.
Ghali (1976)	Granger Causality	Hawaii	Tourism has achieved a significant contribution to economic growth.
Narayan and Prasad (2003)	Granger Causality	Fiji	There is a relationship between tourism revenues and growth.
Durbarry (2004)	Granger Causality	Mauritius	There is a relationship between tourism revenues and growth.
Kırbaş and etc. (2004)	Granger Causality	Turkey	As a consequence of a one-way causality from tourism to economic growth They have reached.
Tang and Abosedra	Panel Data	Morocco and Tunisia	tourism Granger-causes economic growth, thus supporting the tourism-led growth hypothesis in Morocco and Tunisia.

Source: (Kara vd. 2012: 81-83).

#### 4. Var Models

In order to investigate the causality between tourism revenues and economic growth, we utilized Vector autoregression (VAR) that was introduced by Sims (1980) as a technique that could be used to characterize the dynamic behavior of variables. A VAR system contains a set of  $m$  variables, each of which is expressed as a linear function of  $p$  lags of itself and of all of the other  $m - 1$  variables, plus an error term. With two variables an order- $p$  VAR would be the two equations:

$$Tourism_t = \alpha + \sum_{i=1}^p \beta_i Tourism_{t-i} + \sum_{j=1}^p \gamma_j Growth_{t-j} + \varepsilon_{1t}$$

$$Growth_t = \alpha + \sum_{i=1}^p \beta_i Tourism_{t-i} + \sum_{j=1}^p \gamma_j Growth_{t-j} + \varepsilon_{2t}$$

Where Tourism is tourism revenue and Growth is economic growth. Variables in VAR system should be stationary. For each variable, Augmented Dickey-Fuller test (ADF) is used to check if data is stationary. For all cases, constant and trend are included.

Table 6: ADF Test Results

Variables	Level	1st Difference
Tourism Revenue	-2.478479 ( 0.3329)	-5.084051 (0.0043)
Growth	-2.985319 (0.2821)	-6.665448 (0.0002)
Signicance Level	%1 : -4.532598 %5 : -3.673616 %10 : -3.277364	%1 : -4.571559 %5 : -3.690814 %10 : -3.286909

As can be seen from Table 1, both tourism revenue and growth series are integrated of order one I(1). On the other hand, they are cointegrated. So variables are used in VAR model without differencing.

Table 7: Lag Length Criteria

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-408.8804	NA	2.13e+21	54.78406	54.87846	54.78305
1	-383.6856	40.31169	1.27e+20	51.95808	52.24130	51.95506
2	-380.2811	4.539373	1.44e+20	52.03748	52.50951	52.03245
3	-375.0182	5.613757	1.35e+20	51.86909	52.52994	51.86205
4	-362.0515	10.37332*	5.06e+19*	50.67354*	51.52320*	50.66449*
5	-359.4720	1.375734	9.47e+19	50.86294	51.90141	50.85188

Table 7 shows the criteria for optimum lag length. Optimum lag length is four for all information criteria. Hence a four lag system is selected as the final model.

Table 8: VAR Estimation Results

	GROWTH	TOURISM
GROWTH(-1)	-0.370230 (0.25265) [-1.46540]	-90875831 (1.4E+08) [-0.64290]
GROWTH(-2)	0.134213 (0.20147) [ 0.66615]	57967224 (1.1E+08) [ 0.51424]
GROWTH(-3)	-0.504923 (0.18882) [-2.67413]	-16291473 (1.1E+08) [-0.15421]
GROWTH(-4)	-0.487046 (0.21233) [-2.29377]	-2.48E+08 (1.2E+08) [-2.08423]
TOURISM(-1)	5.46E-11 (5.6E-10) [ 0.09693]	0.787722 (0.31506) [ 2.50019]
TOURISM(-2)	8.95E-10 (7.1E-10) [ 1.25989]	-0.365651 (0.39752) [-0.91983]
TOURISM(-3)	1.21E-09 (8.4E-10) [ 1.44452]	1.065886 (0.46981) [ 2.26877]
TOURISM(-4)	-2.25E-09 (7.0E-10) [-3.23029]	-0.436727 (0.38991) [-1.12007]
C	5.207404 (2.47303) [ 2.10568]	2.93E+09 (1.4E+09) [ 2.11993]
R-squared	0.773677	0.982569
Adj. R-squared	0.515023	0.962648
Sum sq. resids	81.88138	2.56E+19
S.E. equation	3.420137	1.91E+09
F-statistic	2.991163	49.32272
Log likelihood	-35.76448	-358.0450
Akaike AIC	5.595560	45.88063
Schwarz SC	6.030141	46.31521
Mean dependent	3.848124	2.12E+10
S.D. dependent	4.911148	9.90E+09

Using four lags for each variables VAR model is estimated and results are presented in Table 3. According to results, we see strong evidence that lagged growth helps predict tourism revenue. In other words, results suggest that there is one way causality from growth to tourism revenue.

## 5. Conclusion

It is seen that the weight of the tourism sector in the world economy increases day by day. Tourism, on the one hand, enables the cultures to recognize each other, while countries also provide foreign exchange gains. An important part of the work done on the subject is the connection between tourism sector and economic growth. If this issue is handled for Turkey we see strong evidence that lagged growth helps predict tourism revenue. In other words, results suggest that there is one way causality from growth to tourism revenue.

The reason for the rise of tourism revenues and economic growth relation in terms of Turkey arises from the increase of tourism investments as economic growth is provided. Therefore, in order to achieve a more competitive structure of the tourism sector, the policies supporting the increase of the investments that are separated from the tourism sector by economic growth will make the relation between economic growth and tourism revenues more prominent in the long run.

## Referances

- AKTAŞ Cengiz.(2005). Obtaining The Optimum Regression Wqalition for Variables Which Affect Tourism Revenues in Turkey. Doğuş Universty Journal, 6(2), pp. 163-174.
- ÇOBAN Orhan, ÖZCAN Ceyhun Can. (2013).The Relationsship Between Economic Growth and Tourism Income of Turkey: A Casuality Analysis (1963-2010). Eskişehir Osmangazi University Journal of Economic and Administrative Science, 8(1), pp. 243-2621.
- KARA Oğuz, ÇÖMLEKÇİ İstemi, KAYA Vahdet. (2012). The Relation of Tourism Revenues and Various Macroeconomic Indicators: The Case of Turkey (1992-2011) The International Journal of Economic and Social Research, Spring 2012, Vol: 8, Year: 8, Issue: 1,8, pp. 75-100.
- KIZILGÖL Özlem, ERBAYKAL Erman. (2008). The Relationship Between Tourism Revenues and Economic Growth in Turkey: A Casuality Analysis. Süleyman Demirel University, The Journal of Faculty of Economics and Administrative Sciences, Vol:13 NoÇ2 pp. 351-360.
- ZENGİN Burhanettin. (2010). Real and Monetary Effects of Tourism Sector on Turkish Economy. Journal of Academic Inquires Volume: 5, Issie:1, pp. 102-126
- TANG Chor Foon, ABOSEDRA Salah. (2016). Does tourism expansion effectively spur economic growth in Morocco and Tunisia? Evidence from time series and panel data. Journal of Policy Research in Tourism Leisure and Events, Volume 8, 2016 - Issue 2, pp. 127-145.
- UNWTO (2016). UNWTO Tourism Highlights 2016 Edition. Word Tourism Organization.