

ECONOMIC SIGNIFICANCE OF TOURISM IN THE ECONOMIC GROWTH OF TURKEY

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Abstract. Tourism, since Second World War has shown significant progress and its contribution to economic development. It will be considered that tourism sector will be a major sector in the globalization of economic development process.

In Turkey tourism sector has shown great progress since 1980. The contribution of foreign currency helped to reduce foreign debt and unemployment even if the country was having economic problems.

In this study, firstly the significance of tourism and the contribution of this sector to economic development are studied. Secondly, an econometric model concerning the relationship between tourism and economic development are constructed. The accuracy of this model is tested by statistical method.

Keywords: Tourism, Turkish Economy, Economic Growth, Regressions with ARIMA models.

Introduction

The argument that tourism will be the dominant sector of future 10 years in effective communication environment with fast communication and in the globalization process in which borders and distances have lost their importance is accepted without controversy (Köletavitoğlu, 1998, 46). Tourism has long been recognized as a growth industry and current expectations of an annual increase of about 4% in international tourist arrivals and spending suggests that, by 2020, international tourism will be generating up to US\$ 2 trillion a year (Sharpley, 2002:1). Such benefits include foreign exchange earnings, employment creation, economic diversification and growth and a variety of other factors, widely discussed in the tourism literature, that collectively justify tourism's alleged role as a vehicle of development.

The issue that should be discussed is the way the realization of sustainable tourism growth being the second biggest sector after petro-chemistry industry in West and also the way transferring the elements such as history, nature, folklore, environment and culture which are indispensable for tourism (*sine qua non*) being protected to the next generations.

WTO (World Tourism Organization), adopted a set of principles for the purpose of reducing negative effects of tourism on society and environment, ensuring sustainable development of world tourism at the date 1 October 1999 in Santiago-Chile where it realized its 13th General Meeting. It was stated that, when tourism, viewed as an activity in relation with relaxation, sport and culture in general according to a principle, is realized as a component of individual and collective organization, it will be

an opportunity in terms of instructing oneself and learning the intersociety/intercultural differences, and that it should benefit from the economical, social and cultural benefits of tourism activities of every country, especially that it should benefit from direct and indirect employment generated by tourism in the sustainable growth perspective were stated (WTO).

Recently, in particular developing countries have started to emphasize the importance of tourism due to economic influences generated by it for the solutions of economic problems and bottlenecks they faced.

Extant international tourism activities since 1990 have shown a %4 increase. Due to increasingly growing tourism sector in parallel with the revenue increase of individuals and economic growth of countries, tourism is characterized as “blue gold”. Seven hundred million people attended touristic trips in 2000. It is estimated that this figure will increase to 1 billion in 2010 and 1 billion-600 million in 2020 (WTO, 1996:3-4).

Tourism in Turkey

Foreign trade equilibrium keeps showing deficit as most of the raw materials, intermediate goods and investment goods is compulsory to be imported in order to be able to make necessary investments on the development process of Turkey. To overcome the exchange bottleneck originating from this situation, increasing the export or improving of other foreign exchange earning sources are requirements, because decrease of import will likely affect negatively investments and employment by producing stagnancy on market (Bulut, , 71-86). Tourism gains importance in this context since it affects balance of current accounts at this stage.

Due to insufficient capital, high unemployment ratio, high internal and foreign debts, Turkey, therefore, have to lend money from foreign capital markets at high interests. Taking this situation into consideration, tourism sector offers big importance in terms of attracting foreign capital investments to the country, providing education opportunities, increasing foreign demand, removing qualified labor force deficiencies, attracting foreign exchange to the country, and providing employment (Çımat ve Bahar, 2003, 14).

In spite of individual and social voluntary generosity of young population and historical and cultural wealthiest, strategic point, climate, natural environment of Turkey which is accepted as an open air museum all over the world, tourism couldn't reach the place it deserved till 1980's (Köletavitoğlu, 1998, 46).

The structural change of tourism sector in Turkey has started to accelerate, beginning in 1980s. This alteration was in a manner that operation styles and conditions of the sector has started to cohere to international standards. The importance and contribution of the sector on Turkish economy have increased gradually year-to-year together with the change in tourism. However, whereas foreign travel income constitutes 4.5-5 % of national income in Mediterranean countries, this rate in Turkey is approximately 3%. 1983 is regarded as the beginning of refreshment period for Turkish tourism. From 1983 to nowadays, tourism in our country has shown remarkable increases in terms of both number of tourists visited and tourism income. In the period from 1983 to 2005, number of tourists increased from 1.6 million people to 21.122 million people with the annual increases of averagely %20 yearly, and tourism income from 411 million \$ to 13.929 million \$ (Türsab, 2006).Issues mentioned above and the

change and development which Turkey generated in tourism sector after 1980 can be seen in Table-1.

Table no. 1. Distribution of Tourist Arrivals and Tourism Revenues by Years

Years	Tourist Arrivals	Annual Change (%)	Tourism Revenues	Annual Change (%)
	(000)		(Milyon\$)	
1980	1 288	-15,4	326	16,4
1981	1 405	9,1	381	16,9
1982	1 391	-1	370	-2,9
1983	1625	16,8	411	11,1
1984	2 117	30,3	840	104,4
1985	2 614	23,5	1 482	76,4
1986	2 391	-8,5	1 215	-18
1987	2 855	19,4	1 721	41,6
1988	4 172	46,1	2 355	36,8
1989	4 459	6,9	2 556	8,5
1990	5 389	20,9	2 705	5,8
1991	5 517	2,4	2654	-1,9
1992	7 076	28,3	3 639	37,1
1993	6 500	-8,1	3 959	8,8
1994	6 670	2,6	4 321	9,1
1995	7 726	15,8	4 957	14,7
1996	8 614	11,5	5 650	13,9
1997	9 689	13	7 008	23,9
1998	9 752	0,6	7177	2,4
1999	7 487	-23,2	5 203	-33,4
2000	10 428	39,3	7 636	46,8
2001	11 618	11,4	8 090	5,9
2002	13 256	14,1	8 43	4,7
2003	14 030	5,8	9 677	14,1
2004	17 517	24,9	12 125	25,3
2005	21 124	20,6	13 929	14,9

Source: *Türsab and TYD*

Earthquake disaster in Turkey, stagnancy period of world capitalism, Asia Crisis, dumping at remarkable rates on prices by the countries such as Spain, Greece and Portugal, and Turkey's inability of transition from seasonal tourism concept to 12-month-tourism concept played important role in the sharp decrease in tourism incomes during 1999 (Demirtaş, 2000,4).

Table no. 2. "TOP 10" in the World Tourism (1990-1999)

Country	Tourist Arrivals (million)						Ranks in the World	
	1990	1995	1996	1997	1998	1999	1990	1999
France	52.5	60.1	62.4	66.8	70.0	71.4	1	1
Spain	34.1	39.3	40.5	43.4	47.7	51.9	4	2
USA	39.4	43.3	46.3	48.9	46.3	46.9	2	3
Italy	26.7	31.0	32.8	34.0	34.8	35.8	4	4
China	10.5	23.3	22.7	23.7	25.0	27.0	12	5
U.Kingdom	18.0	24.0	25.2	26.0	25.7	25.7	7	6
Mexico	17.2	20.0	21.4	22.7	19.8	20.2	8	7
Canada	15.2	16.8	17.3	17.5	18.8	19.5	10	8
Poland	3.4	19.2	19.4	19.5	11.9	11.6	28	9
Austria	19	17.1	17.0	16.5	17.3	17.6	6	10
Greece	8.8	10.1	9.2	10.1	10.9	11.4	13	16
Turkey	5.3	6.6	8.6	9.7	9.7	7.5	24	21

Source: *WTO*

Table-2 shows the number of tourists and rankings from 1990 to today of first 10 countries in terms of international tourist arrivals in Turkey and Greece, our most important rival in tourism. One can observe the significant superiority of France, Spain, USA and Italy when examines the Table 2. On the other hand, China and Poland have shown a remarkable development.

Table no. 3. "TOP 10" in the World Tourism (2004)

Country	Tourist Arrivals (million)	Ranks in the World
France	75.1	1
Spain	53.6	2
USA	46.1	3
China	41.8	4
Italy	37.1	5
United Kingdom	27.7	6
Hong Kong	21.8	7
Mexico	20.6	8
Germany	20.1	9
Austria	19.4	10
Turkey	17.5	13

Source: *WTO*

An important attack of Turkey as well as China, Hong Kong and Germany in world rankings in 2004 can be seen in Table-3.

According to a report issued by World Tourism Organization (WTO), whereas the Mediterranean Region including Spain, Italy, Turkey and Greece is expected to

allure 332 million tourists in 2020 (WTO, 1996:25-26), Turkey won't be able to be among the first 10 countries taking biggest share from world tourism.

Turkey should try to take the place in world tourism it deserved by trying to ensure efficiency in sector by searching for new sources by determining the factors affecting tourism activities, the development of competitive power and competitive atmosphere, protection of consumer rights actively and informing consumers correctly, saving and development of natural and cultural environment, making working conditions of the sector more qualified (Türsab).

In addition to verbal expression, we should quantify the casual relationship between GNP and tourism revenue (TR) time series by regression models with ARIMA.

In order to analysis the relationship between GNP and Tourism Revenue (TR) we need to construct a regression models. Before doing that, these series should be check statistically. If we check these series individually, we will get statistical results given below.

If we plot GNP series at different lag level, we will get autocorrelation and partial autocorrelation

LAG	1	2	3	4	5	6	7	8	9	1
AC	0.8	0.64	0.52	0.46	0.47	0.42	0.39	0.31	0.24	0.18
PAC	0.8	0.01	0.03	0.1	0.19	-0.12	0.07	-0.1	-0.02	-0.07

According to computed AC and PAC values indicates that this series is not stationary. As we know that in order to apply statistical model stationary is needed. That is why, before applying econometric model this GNP time series needs to be transformed to stationary series. When we take first difference of this series, stationary is achieved. If we do same process for TR time series,

LAG	1	2	3	4	5	6	7	8	9	1
AC	0.84	0.72	0.64	0.57	0.49	0.41	0.39	0.31	0.22	0.15
PAC	0.83	0.09	0.09	0.07	-0.04	-0.03	0.13	-0.19	-0.08	-0.03

TR time series also shows non stationary as we mentioned before that stationary should be achieved. In other words if a series shows no indication of pattern accounted for.

Apart from checking series by AC and PAC function unit root test is used for identification of whether or not this series stationary. According to the calculated the t-value for each series unit root exists in both of the series.

GNP and TR time series are not co integrated under the hypothesis that the series are not co integrated and there exist unit root in the residual, the expected value of the t-statistics is zero. As in the ADF procedure, the hypothesis of a unit root is rejected, if the t-statistics lies to the left of the relevant Mac Kinnon critical value. In our model the calculated the t-statistics lies to the left of the relevant Mac Kinnon critical value, thus we reject the hypothesis that GNP and TR time series are co integrated.

If we relate these two series by taking GNP dependent variable, TR independent variable and applying regression analysis the coefficient of the estimated regression equation, the estimated coefficients are given below.

Parameter	Estimate	Standard Error	P Value
Intercept (β_0)	51980,3	5851	0.001
Slope (β_1)	20.58	1.17	0.001

All parameters that we have estimated are significant but we have faced serious problem of autocorrelation. If we plot autocorrelation function, there is a statistically significant autocorrelation which means the residual which come from the estimated the regression is not white noise. The autocorrelation function at different lags which comes from the estimated regression equation is calculated as follows:

LAG	1	2	3	4	5	6	7	8	9	10
AC	0.606	0.260	0.12	-0.35	-0.91	-0.073	-0.103	-0.212	-0.183	-0.219

As we examined autocorrelation function, significant autocorrelation is obtained statistically. One of the key assumptions is that error was not correlated series that is, it was white noise.

There are main problems with applying ordinary squares estimation to a regression problem with auto correlated errors (Makridakis, Wheelwright and Hyndman, 1998, 391):

1. The resulting estimates are no longer the best way to compute the coefficients as they do not take account of the time-relationship in the data.
2. The standard errors of the coefficients are incorrect when there are autocorrelations in the errors. They are most likely too small. This also invalidates the t-tests and F-test and prediction intervals.

We should construct a model which takes residual into consideration and make residual white noise. If we add an ARIMA (p, d, q) models for auto correlated error terms and get regression with ARIMA models. The plot of the autocorrelation function is check a suitable model for residual is ARIMA (1, 0, 1). Because autocorrelation function tails off to zero exponentially. The process is assumed to be MA (1). After fitting residual with the model, white noise in the residual is obtained.

The constructed model is given below.

$$GNP_t = \beta_0 + \beta_1 TR_t + N_t \text{ where } (1 - \Phi_1 B) N_t = (1 - \Theta_1 B) e_t$$

We refer to N_t as the errors and e_t is the residual.

The parameter estimating is given below with statistics to test their significance.

Parameter	Estimate	Standard Error	P Value
AR Φ_1	0,407	0,151	0,01
MA Θ_1	0,387	0,186	0,04
Intercept β_0	51980	5851	0,001
Slope β_1	20,58	1,17	0,001

From the estimated regression equation with ARIMA (1, 0, 1), the residual shows white noise process due to fact that there is no significant autocorrelation exist in the residual. Autocorrelation obtained from the residual is calculated as follows:

LAG	1	2	3	4	5	6	7	8	9	0	10
AC	-0.052	-0.045	0.088	-0.100	-0.152	-0.034	0.121	-0.251	0.062	-0.078	

Forecasting:

One of the main aims of the constructing economic model is to have forecast values for the variable in the model. In order to predict a regression model with ARIMA errors we need to forecast the regression part of the model and the ARIMA part of the model and combine the results.

$$\hat{Y}_{t+h} = \beta_0 + \beta_1 \hat{X}_{1,t+h} + \hat{N}_{t+h}$$

In order to get forecast of the GNP value, we need to know the explanatory variable.

Conclusion

Tourism is a sector sustaining its viability by depending on nature, climate, culture and history at first degree. It is not possible to mention about a rational tourism event in an environment in which natural resources, cultural and historical substructures are destroyed. In this respect, the concept of “sustainability” has an important role on the part of tourism sector. Even if it is regarded as a growth in economic context that tourism grows by destroying natural, cultural and historical resources which are the biggest capital of tourism, it is considered as a “non-sustainable tourism”, not as “sustainable tourism” (Birkan).

However, although Turkey has shown high performance in tourism during last few years and its’ high touristic offer potential, its’ share in tourism market of World, in general, and Mediterranean Region, in particular, is relatively small (Çımat ve Bahar, 2003, 15). Thus, the purpose of Turkish tourism, which established one of the focal points of world tourism, should be to increase its share in world tourism market which increasingly grows.

In this paper we examined whether there is a long run, stable, equilibrium relationships between GNP and TR time series. Results that we get suggest that the variables are not stationary. Although the most economic time series show co integration, co integration is not identified between GNP and TR time series. According to our model tourism revenue plays great deal in the determination of the GNP. Thus, the attention must be paid to and new policies concerning tourism sector need to be established to encourage this sector.

REFERENCES

1. Birkan, İ., www.turizmdebusabah.com [2.07.2006]
2. Bulut, E., “Türk Turizminin Dünya'daki Yeri Ve Dış Ödemeler Bilançosuna Etkisi”, *Gazi Üniversitesi İİBF Dergisi*, 2000, Cilt:2, Sayı:3, pp.71-86.
3. Çımat, A ve “Turizm Sektörünün Türkiye Ekonomisi İçindeki Yeri ve

- B.Ozan, *Önemi Üzerine Bir Değerlendirme*”, Akdeniz İİBF Dergisi, 2003, Sayı:6, pp.1-18.
4. Demirtaş,E., *Türkiye ve Bazı Avrupa Birliği Ülkelerinde Turizm Yatırımlarına Verilen Teşvikler*, İzmir Ticaret Odası Yayını, Yayın No:80, İzmir, 2000.
5. Köletavitoğlu, T., *“Turizmin Dünyü-Bugünü-Yarını”*, Görüş Dergisi, Ağustos 1998,pp. 46-54.
6. Makridakis, S, S. C. *Forecasting Methods and Applications*, , John Wiley&Sons Inc., USA, 1983.
7. Wheelwright and Victor, E. M. *Aspects of Tourism, 5 : Tourism and Development : Concepts and Issues*,.: Channel View Publications, 2002.
8. Sharpley, R.(Ed.), *www.tursab.org.tr/content/turkish/home/ab/abturizm.asp*, 2006, [2.07.2006]
9. TYD, *www.ttyd.org.tr/english/engmain.htm*, 2006,[10.07.2006]
10. WTO, *Executive Summary, Tourism 2020 Vision, A New Forecast From The WTO*, Madrid, 1996.
11. WTO. *www.world-tourism.org/code_ethics/pdf/languages/Turkey.pdf* [2.07.2006]