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Ekonomik Büyüme Performansının Sürdürülebilir Kalkınma Algısı Anlamında Turizm Sektörü Üzerindeki Etkisi: Türkiye Örneği

The Effect Of Tourism Sector On The Economic Growth Performance As A Perception Of Sustainable Development: Turkey Case

Volkan ALPTEKİN*

ÖZET

Günümüzde tüm dünyada bir hizmet sektörü olarak turizm sektörü çok hızlı bir gelişme göstermektedir. turizm sektörü bakıldığında tüm dünyadaki hizmet sektörünün tek başına % 30'unu teşkil etmektedir. Turizmin ekonomilere olan net katkısını hesaplamak pek çok açıdan çok mümkün olamamaktadır. Bununla birlikte ulusal ve uluslar arası yazında üzerinde mutabakata varılan husus turizmin ekonomik büyümeye olumlu katkı yaptığıdır. Buna göre denilebilmektedir ki Türkiye ekonomisi özelinde turizm özellikle 1980 sonrası geçirdiği evrimle rekabet edebilir sektörler arasında değerlendirilebilmektedir. Bu bağlamda bu çalışmada tartışılan konu ekonomik büyüme ve turizm sektörü gelirleri arasında özellikle uzun dönemli bir ilişki olup olmadığının Vektör Oto Regresif Model ışığında test edilmesidir. Buna göre çalışmanın ampirik bulguları da göstermektedir ki; turizm gelirleri ekonomik büyüme üzerinde olumlu bir etkiye sahiptir. Öyle ki; söz konusu iki değişken arasındaki ilişkiyi ölçmeye yarayan kointegrasyon analizi de bu iki değişken arasındaki ilişkinin uzun dönemli olduğunu raporlamaktadır.

Anahtar Kelimeler: Ekonomik Büyüme, Sürdürülebilir Kalkınma, VAR Analizi.

Çalışmanın Türü: Araştırma Makalesi

ABSTRACT

Tourism, a service sector, has shown a very rapid development throughout the world. Today, tourism sector accounts for the 30% of total world services trade on its own. Net contribution of tourism to the economies of countries cannot be calculated precisely in that tourism is a coalescence of sectors, that is, it embodies a number of large and small service sectors. Nevertheless, theoretical and empirical studies on this subject, in both national and international literature, have revealed that tourism has a positive effect on economic growth. Based on this consideration, it is seen that tourism in Turkey, which is a tourism country, developed rapidly especially after 1980 and tried to gain competitive advantage in international tourism sector, consistently with the Heckscher-Ohlin theory. In this context, the aim of this study is to test whether there is a long term relationship between tourism and economic growth, and to display the likely contribution of the sector to economic growth. Time series regarding the tourism receipts of 1963- 2004 and GNP have been analyzed through VAR model. The empirical findings obtained have shown that tourism has had a positive effect on economic growth, and the cointegration test has proved that there is a mutual relationship between the two variables in the long term. Global system dominating all of the world leads to any social or economic crisis experienced in a country to be felt more or less in all over the world. Under such difficult conditions, when regarding especially in terms of the developed and developing countries, the tourism sector, whose importance grows increasingly, has a character of being a lifesaver. When the natural beauty and cultural richness possessed are marketed with the correct and rational policies, they become an indispensable income resource (Aktaş, 2005: 164).

In this respect, tourism becomes dominant as one of the fastest developing sectors in the world. Especially, rapid improvement experienced in information and transportation, beyond the expected one, has accelerated the development of tourism having economic and social dimensions. Beginning from the second half of 20th century, tourism becoming important from economic point of view, constitutes a potential revenue resource for the economies of the developing countries (Opuş, 2001: 37).

Along with the development of tourism in a country, shortage of foreign money moderates; competition power of domestic firms with their competitors abroad increases, as a consequence, their productivities; scale economies are utilized; tourism makes an effect on foreign trade balance; it creates employment; and as a whole, leading to an increase in national income, it brings fourth a positive effect on economic growth (Brohman, 1996: 49- 52). As the number of tourist coming to the country, the demand for producing goods and service in destination country also increases. In parallel with the level of increase in demand, if the country has resources to meet the increase in production, all expenditures of the tourists will remain in that country. So, tourism will make important contribution to the economic growth of country. However, if the county cannot find a power to increase the production in parallel with the increase in demand, it will be necessary to import the production factors remaining insufficient. In this case, if the foreign money profits the country provides from tourism are more than foreign money losses, tourism will positively make to the payments balance, otherwise, negatively affect the pavements balance.

Tourism, the fastest developing and growing sector of the world, is seen as an instrument of economic development, in terms of developing countries like Turkey, especially. Turkey, after 1980 transformation, realized important progresses in tourism

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sector. After 1980, while tourism turned into one of the most remarkable sub-sectors, the social, cultural, and economic effects of this development reached the significant dimensions.

When the studies carried out all over the world on the effect of tourism on economic growth are examined, in their studies, Hazari and Ng (1993) argued that tourism will reduce the economic prosperity, and that will create an adverse effect on the growth, in case that a monopole power is existent. However, the analysis of Hazari ve Sgro (1995) investigated the relationship between the variables such as tourism, capital accumulation, consumption per capita, and commercial rates, and concluded that tourism, especially in small counties, positively affected the long termed growth. Modeste (1995), in Caribbean countries, which is considered in his study, demonstrated that tourism developed the country, but this development reasoned in shrinking in agricultural sector. Balaguer ve Jorda (2002), for Spain, found a long termed and positive relationship between tourism revenues and economic growth. Dritsakı (2004) investigating the relationship between tourism revenues and economic grown for the example Greece used cointegration and causality analysis and found a strong causality relationship between the two variables of interest in the period 1960-2000. In the study carried out by Oh (2005) on Korean economy, while a short termed relationship from growth to tourism was found between tourism and economic growth, any long termed relationship could not be found between two variables. In economic model that Durbarrı (2004) formed for Mauritius, it is seen that tourism has a positive effect on the economic growth and a great contribution on the economic development of Mauritius. When the studies carried out for Turkey on the relationship between tourism and economic growth are examined, Kırbaşı-Kasman and Kasman (2004) used Granger Causality Test and concluded that tourism revenues affected the economic growth in one-direction. Also, Yıldırım and Öcal (2004) reached the similar result for long period, but could not discover any relationship for short period. Uysal et.al (2004) determined a two –ways causality between the variables of interest. Gündüz and Hatemi (2005) tested whether or not 2005 “tourism focused growth hypothesis” was valid for Turkey and concluded that this hypothesis was valid for Turkey. Yavuz (2006), in the study he carried out, could not find any causality relationship between the variables. Bahar (2006), applying VAR Analysis to the variables of tourism revenues and GNP between the years 1963 -2004, concluded that there was a reciprocal relationship between two variables in the long period and that tourism had a positive effect on economic growth. Gökovaı ve Bahar (2006), using the panel data belonging to 19 touristic countries in Mediterranean Region, carried out a study and suggested the result that tourism positively affected the economic growth. Finally, in the study carried out by Aslan (2008), the relationship between economic growth and tourism was investigated for the period 1992:1- 2007:2; and a result, it was identified that tourism supported the economic growth.

Key Words: Economic Growth, Sustainable Development, VAR Analysis.

The Type Of The Study: Research Article

1. INTRODUCTION

Global system dominating all of the world leads to any social or economic crisis experienced in a country to be felt more or less in all over the world. Under such difficult conditions, when regarding especially in terms of the developed and developing countries, the tourism sector, whose importance grows increasingly, has a character of being a lifesaver. When the natural beauty and cultural richness possessed are marketed with the correct and rational policies, they become an indispensable income resource (Aktaş, 2005: 164).

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Along with the development of tourism in a country, shortage of foreign money moderates; competition power of domestic firms with their competitors abroad increases, as a consequence, their productivities; scale economies are utilized; tourism makes an effect on foreign trade balance; it creates employment; and as a whole, leading to an increase in national income, it brings fourth a positive effect on economic growth (Brohman, 1996: 49- 52). As the number of tourist coming to the country, the demand for producing goods and service in destination country also increases. In parallel with the level of increase in demand, if the country has resources to meet the increase in production, all expenditures of the tourists will remain in that country. So, tourism will make important contribution to the economic growth of country. However, if the county cannot find a power to increase the production in parallel with the increase in demand, it will be necessary to import the production factors remaining insufficient. In this case, if the foreign money profits the country provides from tourism are more than foreign money losses, tourism will positively make to the payments balance, otherwise, negatively affect the pavements balance.

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remarkable sub-sectors, the social, cultural, and economic effects of this development reached the significant dimensions.

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In this study, for the period 1968 -2006, the relationship between tourism revenues and economic growth was aimed to be investigated. During study, Non- structural VAR Method was utilized, in order to investigate the relationship between tourism revenues, in addition, Granger Causality Test, in order to be able to identify double sided relationship. In this scope, the study consists of four sections. In the second section, the information is given about the methodology, and the third section, the obtained study findings is evaluated. And in the last section, “Conclusion and Discussion” takes place.

2. METHODOLOGY

Traditionally to test for the causal relationship between two variables, the standard Granger (1969) test has been employed in the relevant literature. This test to the question of whether X causes Y is to determine how much of the current Y can be explained by past values of Y, and then to see whether adding lagged values of X can improve the explanation. Y is said to be Granger-caused by X if X helps in the prediction of Y, or if the coefficients on the lagged Xs are statistically significant. Note that two-way causation is frequently the case: X Granger causes Y and Y Granger causes X.

Co-integration analysis has become the standard technique for the study of relationship between tourism revenue and GNP. Engle and Granger (1987) applied same technique to find this relationship. The concept of co-integration has become popular in recent years. It states that if a long-run relationship exists between two variables, then the deviations from the long-run equilibrium path should be bounded.

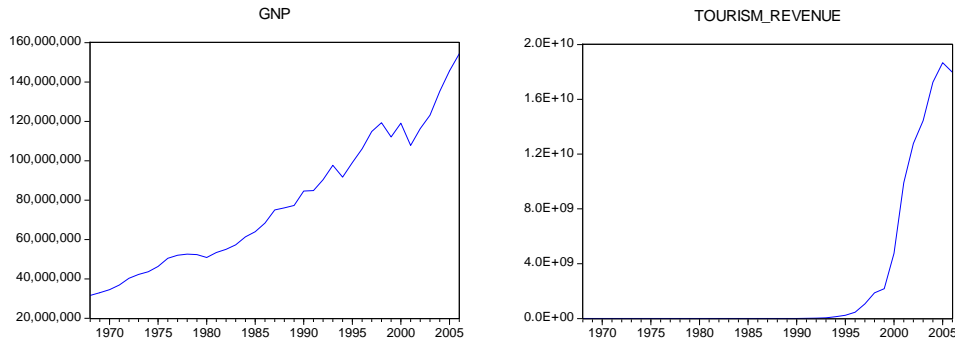
If this is the case, the variables are said to be co-integrated. For variables to be co-integrated, two conditions must be satisfied: the series for the individual variables must have the same statistical properties, and the variables must be integrated in the same order. If the series are integrated of the same order, a static regression in the levels of the variables is run and tested to see if linear combinations of the variables are themselves integrated of the same order as the individual variables.

When using time series data in this analysis, the tests of unit root are very important for determining stationary. If a series is stationary after differencing once, it is said to be integrated of order one. The Augmented Dickey Fuller (ADF) (1981) and Phillips Perron (PP) (1988) tests of stationary were used in our study. The null hypothesis of the Augmented Dickey-Fuller t-test is “the variable has a unit root” so if H_0 hypothesis is rejected the data needs to be differenced to make it stationary. Versus the alternative hypothesis of this test is “the variable has not a unit root” and the data is trend stationary and needs to be analyzed by means of using a time trend in the regression model instead of differencing the data. The Phillips Perron test’s null and alternative hypotheses are the same as the Augmented Dickey-Fuller test’s hypotheses.

3. RESULTS

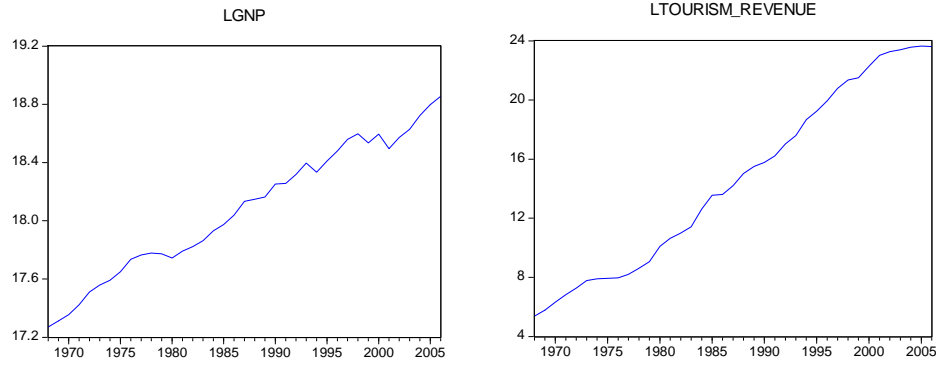
As explained earlier, the main aim of our study is to analysis the relationships between tourism revenues and GNP, using VAR Model. However, before proceeding to this analysis, it is necessary for the data, to bring into fit to analysis, through subjecting them to several tests. In this meaning, the graphics of the variable will be especially examined, then making a decision about the suitable forms, it will be tested whether or not they included unit root. The data brought into stable, after this stage, will be included in VAR Model and lastly, the long and short termed relationships between the variables will be analyzed by using Cointegration and Granger Causality Tests.

Figure 1. GNP and Tourism_Revenue (1968-2006)



In Figure 1, time course graphics belonging to the variables of GNP and Tourism Revenue are shown. It is remarkable that there is an increasing trend in both graphics.

In this stage, in order to make free the data from small fluctuations and bring them into linear state, the logarithms of series are taken and our data are provided to be brought into suitable for analyzing. The graphics of series, whose logarithms are taken, are shown in Figure 2.

Figure 2. Logs of GNP and Logs of Tourism Revenue (1968- 2006)

Before forming VAR Model, a test, which is necessary to be carried in the meaning of arranging the series, is Unit Root Test. To introduce whether or not the series satisfied the stability conditions and at what degree they are brought into stable state have a great importance in the stage of establishing the model. Therefore, in this study, using ADF and PP unit root tests, whether there is unit root is attempted to be introduced. Before all else, in Table 1, the results of unit root tests for GNP are shown.

Table 1. Results of Unit Root Tests for LGNP

ADF	ADF Test Stat.	Mac Kinnon Test Critical Values			Prob.
	-2.775847	% 1	% 5	% 10	
		-4.219126	-3.533083	-3.198312	0.2145
ADF (-1)	ADF Test Stat.	Mac Kinnon Test Critical Values			Prob.
	-6.565329	% 1	% 5	% 10	
		-3.621023	-2.943427	-2.610263	0.0000
PP	PP Test Stat.	Mac Kinnon Test Critical Values			Prob.
	-2.804194	% 1	% 5	% 10	
		-4.219126	-3.533083	-3.198312	0.2046
PP (-1)	PP Test Stat.				Prob.
	-6.565329	% 1	% 5	% 10	
		-3.621023	-2.943427	-2.610263	0.0000

Because ADF test statistic, first shown, in the levels significance 1%, 5 % and 10%, is absolutely smaller than Mac Kinnon critical values, and probability level (0.2145) is bigger than the value (0.05), H_0 hypothesis is rejected and decided that there is a problem with unit root in the series. Then, taking the first difference of the series, it is provided to be brought into stable condition.

Another unit root test used in the tests of unit root is Phillips- Perron (PP) unit root test. The null and alternative hypothesis of PP test also overlap ADF unit root test. According to the results of series associated with this test, because the value (-2.804194) of PP test statistic, in the levels significance 1%, 5% and 10% is absolutely smaller than Mac Kinnon critical values, and probability value (0.2046) is bigger than critical value (0.05), H_0 unit root VAR hypothesis was not rejected and it was decided that there is unit root in series (that the series are not stable). In this stage, the first difference of series was taken and this problem was eliminated.

Table 2. Results of Unit Root Tests for LTourism_Revenue

ADF	ADF Test Stat.	Mac Kinnon Test Critical Values			Prob.
	-1.292895	% 1	% 5	% 10	
		-4.219126	-3.533083	-3.198312	
ADF (-1)	ADF Test Stat.	Mac Kinnon Test Critical Values			Prob.
	-3.851331	% 1	% 5	% 10	
		-3.621023	-2.943427	-2.610263	
PP	PP Test Stat.	Mac Kinnon Test Critical Values			Prob.
	-1.690824	% 1	% 5	% 10	
		-4.219126	-3.533083	-3.198312	
PP (-1)	PP Test Stat.				Prob.
	-3.851331	% 1	% 5	% 10	
		-3.621023	-2.943427	-2.610263	

In Table 2, the results of unit root test pertaining to the variable “LTourism_Revenue” are summarized. According to this, because the value -1.292895 of ADF test statistic, in the levels significance 1%, 5 % and 10% is absolutely smaller than Mac Kinnon critical values, and probability value (0.8746) is bigger than critical value 0.05, H_0 hypothesis is not rejected and was decided that there is a problem with unit root in the series. Then, taking the first difference of series, it is provided them to be brought into stable state.

Another unit root test used in the examinations of unit root Phillips- Perron (PP) unit root test. The null and alternative hypothesis of PP test overlap with ADF unit root test. According to the results of series associated with this test, because PP test statistic (-1.690824) value in the levels significance 1%, 5 % and 10% is absolutely smaller than Mac Kinnon critical values, and probability value (0.7358) is bigger than critical value 0.05, H_0 unit root VAR hypothesis is not rejected and was decided that there is unit root in the series (that the series is not stable). In this stage, taking the first difference of series, it is provided to become stable.

After this stage, it is possible to proceed to VAR Analysis;

When regarding to the variables to be included in the model, it is seen that all of them are stable from the same degree i.e. from first degree in such a way that this enables to be made cointegration analysis as well as VAR analysis. While establishing VAR Model, the most important condition is to estimate correct VAR lag length determined by information criteria. However, due to the fact that the variables to be included in the model are cointegrated from the same degree, the levels of these variables are used in VAR analysis. Related to this, VAR lag length is presented in Table 3.

Table 3. VAR Lag Order Selection by the Criterion

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-70.01870	NA	0.187367	4.001039	4.089012	4.031744
1	54.81520	228.8622*	0.000228	-2.711956	-2.448036*	-2.619841*
2	58.93279	7.091395	0.000227*	-2.718488*	-2.278622	-2.564963
3	60.73473	2.903124	0.000258	-2.596374	-1.980561	-2.381439

As clearly seen from Table 3, FPE (Final Prediction Error) and AIC (Akaike) information criteria points out 2 lags. Therefore, VAR lag length is determined as (2) and then, whether or not VAR Model is stable is examined by the following tests.

Table 4. Roots of Characteristic Polynomial

Root	Modulus
0.995326	0.995326
0.564646 - 0.226200i	0.608269
0.564646 + 0.226200i	0.608269
-0.085871	0.085871

As seen in Table 4, the value of any module is not out of reference range. This situation shows that the VAR model established is stable.

Table 5. VAR Residual Heteroskedasticity Tests: No Cross Terms (only levels and squares)

Joint test:		
Chi-sq	df	Prob.
19.25950	24	0.7380

As seen from Table 5 in which the changing variance problem was tested, null hypothesis that there is no changing variance was not rejected. That is, there is no problem with the changing variance in the model.

Table 6. VAR Residual Normality Tests

Component	Jarque-Bera	Df	Prob.
1	7.427275	2	0.0244
2	1.821522	2	0.4022
Joint	9.248797	4	0.0552

The null and alternative hypotheses of productivity test are constituted in such a way: H_0 : u_i 's are normal distributed. H_1 : u_i 's are not normal distributed. According to this, in the significance levels of 1% and 5%, null hypothesis is not rejected and it is accepted that error terms have a normal distribution.

Table 7. VAR Residual Serial Correlation LM Tests

Lags	LM-Stat	Prob
1	0.081871	0.9992
2	3.608649	0.4616
3	1.153957	0.8856
4	7.047147	0.1334
5	2.028043	0.7306
6	5.144834	0.2728
7	9.178508	0.0568
8	3.030606	0.5527
9	1.097593	0.8947
10	0.742905	0.9459
11	2.058420	0.7250
12	1.017434	0.9071

Probs from chi-square with 4 df.

When the probability values in LM test shown in Table 7, null hypothesis that there is no serial correlation in the series is not rejected. After completing the analysis that VAR Model is structurally consistent, it is necessary to proceed to cointegration analysis.

Table 8. Cointegration Test Results **λ Trace Statistics**

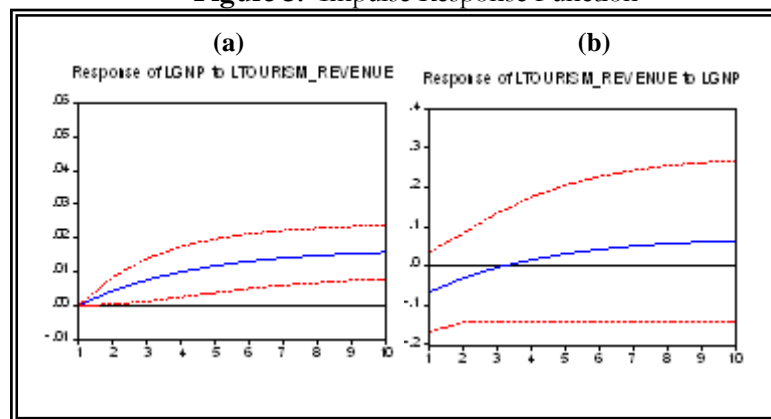
Null hypothesis	Alternative Hypothesis	Eigenvalue	Trace Statistic	5 Percent Critical Value	1 Percent Critical Value
$r = 0$	$r \geq 1$	0.292719	15.00509	25.32	30.45
$r \leq 1$	$r = 2$	0.068054	2.537308	12.25	16.26

 λ Max Statistics

Null hypothesis	Alternative Hypothesis	Eigenvalue	Max-Eigen Statistic	5 Percent Critical Value	1 Percent Critical Value
$r = 0$	$r \geq 1$	0.292719	12.46778	18.96	23.65
$r \leq 1$	$r = 2$	0.068054	2.537308	12.25	16.26

Trace test indicates no cointegration at both 5% and 1% levels and Max-eigenvalue test indicates no cointegration at both 5% and 1% levels. There is no relationship between these variables for long term. Between these two variables, which is tested that there is no long termed relationship between them, the answer of the question whether or not a short termed relationship will be given via Granger causality test.

After prediction of VAR Model, the difficulty to be able interpreted the coefficients taking place in the model, It makes obligatory to examine the action –reaction (impulse response) analysis, which enables to be measured the responses of the variables, in the faces of shocks to be given to the equation system as a second step,

Figure 3. Impulse Response Function

In Figure 3, the responses, which two variables will give to each other, in the face of one units of shock applied were attempted to be measured. According to Figure 3(a), one unit of variation to occur in the tourism revenues is resulted in the increase emerging in economic growth and this variation lasts, increasing in time. In Figure 3(b) shows, in short termed way, how one unit of variation to occur in economic growth will affect the tourism values. Here, a positive response is observed. Although the response given by tourism revenues to the variation in economic growth increases until the first three years, it proceeded in negative values and kept its positive value after three years.

After interpreting impulse reaction analysis, Variance decomposition Analysis, from which is expected to give results to support each other, is proceeded, Variance decomposition is considered as a remarkable analysis in terms of its expressing which variable, used in model, explained much more the developments emerging in a variable.

Table 9. Cointegration Test Results Variance Decomposition of LGNP

Period	S.E.	LGNP	LTOURISM_REVENUE
1	0.043414	100.0000	0.000000
2	0.055236	99.39029	0.609710
3	0.061824	98.02855	1.971450
4	0.066165	96.02396	3.976038
5	0.069402	93.53236	6.467637
6	0.072062	90.71946	9.280540
7	0.074407	87.73433	12.26567
8	0.076567	84.69631	15.30369
9	0.078613	81.69244	18.30756
10	0.080580	78.78107	21.21893

It is possible to interpret the results in Table 9 in such a way: In model, The developments in LGNP is most explained by the model itself at the beginning. In the following period, tourism revenues has a power to account for LGNP, but this power to account for remained in 20s%.

Table 10. Cointegration Test Results Variance Decomposition of LTOURISM_REVENUE

Period	S.E.	LGNP	LTOURISM_REVENUE
1	0.316721	4.403635	95.59636
2	0.432307	2.866226	97.13377
3	0.514937	2.025806	97.97419
4	0.581625	1.664966	98.33503
5	0.638856	1.616913	98.38309
6	0.689798	1.761969	98.23803
7	0.736214	2.018271	97.98173
8	0.779183	2.331881	97.66812
9	0.819406	2.668443	97.33156
10	0.857367	3.006857	96.99314

In Table 10, variance decomposition results of tourism revenues are reported. According to the test results, tourism revenues are mostly accounted for by tourism itself.

Granger Causality test, another analysis, in which the short termed affects of tourism revenues on the growth are examined, constitutes the last stage of our analysis.

Table 11. VAR Granger Causality/Block Exogeneity Wald Tests

Dependent variable: LGNP			
Excluded	Chi-sq	df	Prob.
LTOURISM_REVENUE	4.744713	1	0.0294
All	4.744713	1	0.0294
Dependent variable: LTOURISM_REVENUE			
Excluded	Chi-sq	df	Prob.
LGNP	1.325325	1	0.2496
All	1.325325	1	0.2496

Granger causality test reports that in all significance levels, there is not any short termed relationship between tourism revenues and economic growth.

4. CONCLUSION

Tourism sector plays important role with its contribution to national income as well as foreign money income it provided, and its attribute to eliminate foreign trade deficits and improve payments balance in terms of the economy of countries. In addition, due to its relation to building, furniture, souvenir, transportation, and communication, it creates similar positive affects on these areas. Beside this, with its character to create new employment, tourism has a position of being an important sector in terms of the countries, in which unemployment rate is high. Besides that economic benefit it provided, enabling the cultural exchange between the countries, it brings several advantages in the social and political meaning.

In our country, tourism sector develops in the years continuously. In this development, the importance given by our country to presentation services and package programs prepared by travel agency addressing to middle income group have a great affect. Among the other factors in developing of tourism in our country are the increase in the number of trained personnel, and the diversity of accommodating facilities, from luxury hotels and holiday villages to camping areas. With the counted reasons, this sector, whose development is rapidly continuing, is expected to make important contributions to the economy of country.

In a study carried out to test whether or not there is both a short termed and long termed relationship between tourism and economic growth and introduce the contribution of this sector to economic growth, the findings obtained, in contrast to the studies taking places about Turkey in the literature, shows that there is neither the short termed relationship nor long termed one between the two variables of interest. When considered the progresses made by Turkish Economy, this result realized out of our economic expectation, due to the fact that tourism revenues are both in increase trend in the recent years, and growing of its share in GNP increasingly.

However, in parallel with the result of study, it is possible to say about constraints the following points: In this study, in order to investigate the effect of tourism on economic growth, with tourism revenues, adding the extra factors to the model under consideration, it will be suitable to test it. In this context, the other several variables, which are considered to affect the growth, can either also be included in the model in the next studies or a different model can be used. So, the doubts to emerge on the economic meaning of the results obtained in this study under consideration can be eliminated.

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