

EFFECTS OF TOURISM SECTOR ON THE EMPLOYMENT IN TURKEY: AN ECONOMETRIC APPLICATION

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Abstract

It appears that tourism in Turkey, which is a tourism country, developed rapidly especially after 1980 and struggled to gain competitive advantage in international tourism sector. In this context, the aim of this study is to test whether there is a long-term relationship between tourism and employment, and to display the possible contribution of the sector to employment.

In this paper, annual time series data regarding tourism revenues of 1980-2006 period are examined using Engle-Granger causality test, Johansen co-integration approach and error correction modeling. . The empirical findings obtained as a result of VAR indicates that tourism has a positive effect on employment while the co-integration test indicates that there is a long-term correlation between the two variables.

Keywords: Tourism and Employment, Causality, Co-Integration, Error Correction Model.

Introduction

Employment is one of the most important issues in a country such as Turkey where unemployment increases day by day. Since tourism sector is labor augmented sector, it is relatively more effective in creating jobs than other sector. Consumption expenditures of tourists provide direct or indirect employment opportunities in this sector. Consequently tourism affects total employment in a country via the general employment effects on the economy.

In this context, the aim of this study is to test whether there is a long-term relationship between tourism and employment, and to display the possible contribution of the sector to employment. In the first section of this study, impact of tourism on employment will be explained by considering various types and characteristics of tourism employment. After, this paper investigates the causal relationship between tourism revenues and employment in Turkey for the period from 1980 to 2007. We utilize co-integration analysis and vector

error correction model in estimating the causality relationship between tourism revenues and employment. Unit root test results, after logarithmic transformation, indicate that each of series is non-stationary when the variables are defined in levels and that each of series is stationary when the variables are defined in first differences. Co-integration test results indicate that there exists a long-run equilibrium relationship between tourism revenues and employment. It is concluded that there is only one co-integration vector in the data. Since the series are found to be co-integrated, we use vector error correction model to test the existence of causality.

The empirical result show that there is unidirectional causality between tourism revenues and employment, tourism has a positive effect on employment while the co-integration test indicates that there is a long-term correlation between the two variables. This unidirectional causality occurs from tourism revenues to employment. Moreover co-integration equation indicates that tourism revenues stimulate employment. This result shows that tourism revenues promotion policies contribute to employment in Turkey.

1. The Relation Between Tourism And Employment

The service factor is very important in tourism sector which is also known as hospitality sector. Tourism facilities benefit from manpower greatly both in producing products and in presenting them. Tourism, due to its labor intensive production by nature, is a sector creating a great deal of employment facilities. Any spending by a tourist allow this sector directly and allow other sectors which supply input to tourism sector indirectly to create employment facility. Due to limited use of mechanization and automation in tourism, technological developments in this sector decrease the need for personnel minimally.

Development in tourism has created a lot of job opportunities both in industrialized and developing countries (mainly qualified and unqualified). Tourism sector is directly connected with various industries such as accommodation, transport, entertainment, travel agents, management, finance and health. Besides, tourism construction industry provides sources for other industries such as agriculture and manufacture indirectly. Therefore it is difficult to assess the influence of tourism on employment (Vellas and Becherel, 1995:218).

Tourism creates three types of employment in regional and national economies (Mathieson and Wall:77).

1. Direct Employment: It refers to the type of employment provided in tourism facilities such as accommodation, food, drink, transport, travel agents which exist in tourism sector and meet touristic needs directly.

2. Indirect Employment: It covers the employment in other sectors which do not serve for touristic consumers directly but get income from expenditure done in touristic relations, namely the other sectors which provide input for tourism sector. For example, the workers to be employed in construction work of an additional unit to enlarge capacity of an accommodation facility, or the employees working in a manufacturing facility, which

produces the stuff to be put up for sale in this facility, can be included in indirect employment.

3. Induced Employment: It refers to the additional employment in economy arising from re-spending of the income which has been gained through direct and indirect employment methods. The individuals, whose income and standard of living have raised as a result of their tourism activities, create new employment opportunities spending this acquired income in other sectors of the economy. Multiplier effect of tourism plays an important role in the emergence of induced employment.

According to the estimates by TÜRSAB R&D department, direct employment in tourism industry of Turkey exceeded 1 million 200 thousand people by the end of 2003. Along with the indirect employment created by tourism industry, total employment in the industry has crossed the line of 3 million (TURSAB, 2005).

It is impossible to determine the influence of tourism on employment exactly and certainly. The reason behind this is explained as follows (Burkart and Medlik, 1992: 63).

- Most of the people employed in touristic places can hardly be distinguished from those who are employed for same or similar positions irrelevant to tourism. For instance, in official statistics, accommodation facilities are associated with restaurants and other food facilities, and the employment in different types of transport is presented without referring to their relation to tourism.

- Tourism service is offered to tourists in many small sized units almost all over the world. So, the ratio of those who work in their own business reach at an important level in total workforce. Therefore, employment statistics for tourism sector is regarded that they do not reflect the real situation at all.

- The activities in tourism sector intensify in certain months and the number of people employed in tourism facilities differs importantly each year.

Employment effect increases depending upon development in tourism and intensity in demand for tourism. The employment in a region or a country increases as much as tourism demand for that region or country. Tourism creates employment as much as the income (Holloway, 1994: 247).

Tourism may create employment facilities not only in tourist receiving countries or regions but also in tourist sending countries or regions in different ratios because various service units are needed in sender countries to perform some facilities done before travel. Post, telephone, cargo and insurance operations can be presented as examples of this.

If we compare employment rates, created by tourism, based on tourist sender country and tourist receiver country, it is possible to claim in general that the employment rate in tourist receiver country is higher.

The high employment rate in this sector is depended upon four main reasons (Içöz and Kozak, 2002:234).

1. Labor intensity
2. Existence of many low-paying jobs
3. Existence of many part-time and temporary jobs
4. Seasonal intensity

Due to tourism's being a seasonal area of activity, its being influenced rapidly by negative developments in economy and politics, and depending upon facilities' wish to employ staff with lower wages, such issues as unemployment, high transfer rates of workforce, lack of social security and low wages confront us as the main problems of people employed in this sector (Yağcı, 2001:201).

In terms of employment, main features of tourism can be itemized as follows;

1. Since tourism has a seasonal characteristic, it allows underemployment conditions turning employment into a seasonal one.
2. Tourism sector's employment effect is usually a hidden one since this sector transfers labor from other sectors and most of the people employed in this sector are uninsured.
3. Due to the fact that qualified personnel is employed permanently and unqualified ones are employed temporarily in this sector, this leads to low working efficiency and so it weakens regional economic development (Çakır, 2002:201).
4. Although full employment is nearly achieved in the tourism season, the decrease in employment out of season creates social costs socially. In order to eliminate this, it is necessary to employ interns or similar staffs who have free time in intense periods (İçöz: 108).
5. The number of women staff is higher in tourism sector as compared to those employed in other sectors.
6. Since the capital amount which required for creating business volume for one person is less than other sectors, it provides employment opportunity for more people with the same investment amount (Kozak, Akoğlu and Kozak, 1997:67)

“Besides, the direct transition from an agricultural, economic and social structure in an underdeveloped or a developing country to a country of tourism or a society of services without any industrial experience causes a retarding effect on economic growth in the long term, because labor productivity is usually low in tourism sector. Added value is low, labor turnover speed is high and problems about seasonal unemployment are great. As tourism sector does not require high qualified staff and does not bring its employees in admissible skills for other sectors, it does not contribute to economic growth in the long run”(Çakır, 2002:200).

In conclusion, while assessing the effects of tourism on employment, it is compulsory to consider sources, economic development, political and social structure of each country, which are peculiar to itself (Barutçugil, 1989:25), and while evaluating business skills it

is necessary to analyze them quantitatively and qualitatively (Vellas and Becherel, 1995: 218).

2. A Var Model Test For Turkey

2.1.Data

This study made for the determination of the causality relationship between tourism and employment covers the period between 1980&2007. The starting point of the study is considered as 1980. There are various reasons of choosing 1980 as the starting point such as; the significant progress in the tourism sector particularly after 1980 having a leading role in national development and adaptation of an export oriented industrialization strategy instead of import substitution policies after 24th January 1980 decisions. Thus, tourism sector is accepted as an easy, efficient, profitable and relatively cheap way of actualizing export oriented industrialization that is deemed as the cornerstone of the free market economy in Turkey. (Tosun, 2001).

The incentives and financial support to the sector by the “The Law of Tourism Encouragement” issued in 1982 numbered 2634 has undoubtedly a vital role in the rapid progress of tourism in Turkish economy. (Tosun, 1999:220; Seckelmann, 2002: 85-92). Annual data was used in the analysis. The employment data were provided from Turkish Statistical Institute (1987=100) and the tourism revenues data was provided from State Planning Organization (DPT). The natural logarithmic values of these variables were used in the model. Accordingly natural logarithm of LEMP employment is the natural logarithm of LTUR tourism revenues.

2.2. Unit Root Test

If we talk about a relation between two time series and if there is a statistically significant relationship between them we need to determine the level of stationarity of the series by unit root test to clarify whether the relationship is real or dummy. If it is stationary in both of the series at the same level then we can say that this relationship is a real and the regression is also real. The stationarity of economic time series can be determined by the tests developed by Dickey and Fuller (1979, 1981) and has a wide range of application. The stationarity test is testing whether the series include a unit root or not. ADF (Augmented Dickey-Fuller Test) was used to determine whether the data in this study includes unit root test or not.

Akaike (AIC) and Schwarz (SC) information criteria is used for the determination of optimal lagging number that won't lead to the auto-correlation of the independent variable in the unit root test based on augmented Dickey-Fuller (ADF) method. When the

AIC and SC information criteria yields different results Akaike (AIC) information criterion was taken into consideration. The results of the unit roots tests were given accordingly in table 1.

Table 1. Results of ADF (Augmented Dickey-Fuller) Unit Root Test

Results of Unit Root Analysis (D^0)

Variables	ADF Test Statistics	Lagging Length	0,01 Critical Value	0,05 Critical Value	0,10 Critical Value
ltur	-1,323	0	-3,699	-2,976	-2,627
lemp	-1,556	0	-3,699	-2,976	-2,627

Results of Unit Root Analysis (D^1)

Variables	ADF Test Statistics	Lagging Length	0,01 Critical Value	0,05 Critical Value	0,10 Critical Value
ltur	-6,104	0	-3,711	-2,981	-2,629
lemp	-5,030	0	-3,711	-2,981	-2,629

According to the ADF test result LTUR and LEMP variables are first order difference stationary, $I(1)$ series.

The step after examining the time series properties of the variables is the examination of the long term relationship between the aforementioned variables if there is. The existence of long term relationship between the variables in this study was researched by Johansen Co-integration method. Co-integration aims to model and estimate the long term equilibrium relationship between two non-stationary time series. Existence of co integration between the variables means that there is a “real long term relation” between the variables.

Johansen (1988) and Johansen and Juselius (1990) used maximum eigen value and trace statistics to test whether there is a long term relationship between the variables. The lagging number has a crucial role in VAR established during the search of long term relation between the variables by Johansen co-integration test.

In the study, common lagging period should be determined before determining the co integration relation between the variables in the long run.

There are many criteria that have been developed for the determination of the lagging length (e.g. AIC, Schwarz criterion, HQ criterion, Possibility Ratio test). But since the number of data is scant in the applied studies the answer of the question; “which of this criterion is more unbiased in small samples” gained importance and in the study made by Lutkepolh (1985) under the framework of the Monte Carlo Simulation it was revealed that Schwarz critical values more unbiased relative to other criterion.

That is why it was decided to determine the lagging length of the variables present in the mode and to use Schwarz critical values in this determination process. When annual data is used as in this study it is recommended to start the analysis for the determination of lagging length by Charemza-Deadman (1992). According to the SC criterion the appropriate lagging time was determined as two.

After deciding to work with the first differences of the series it was tested whether there is long term co integration between the series. The results of the co integration test are in Table 2. According to the maximum eigen value and trace statistics there is a long term relationship between each indicator of tourism revenues and employment. In other words each couple of variables is co integrated.

Table 2. Johansen Co integration Test Results

Unrestricted Cointegration Rank Test (Trace)				
Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
r=0	1.000000	900.8961	15.49471	0.0001
r≤1	0.328106	9.941354	3.841466	0.0016

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)				
Hypothesized		Max-Eigen	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
r=0	1.000000	890.9547	14.26460	0.0001
r≤1	0.328106	9.941354	3.841466	0.0016

r: number of co integrated vectors

Maximum eigen value test statistics is equal to 890.95 and is above 14.26 by 5 % critical value. Thus the basic hypothesis that there is no co integration between the variables (r=0) was rejected. Trace test statistics is also inclined to reject the resulting basic hypothesis (r=0) since it is above 5 % critical value. Thus there is a long term relationship between tourism revenues and employment. The step after the determination of the long term relationship between the variables is to apply VECM error correction test including explicitly the error correcting term obtained after the co integration regressions.

After applying the error correction test Granger causality test (Granger, 1969) was applied and the results in the Table 3 were obtained.

Table 3. Results of Granger Causality Test

Dependent variable: D(LEMP)			
Excluded	Chi-sq	df	Prob.
D(LTUR)	1.708854	2	0.4255
All	1.708854	2	0.4255
Dependent variable: D(LTUR)			
Excluded	Chi-sq	df	Prob.
D(LEMP)	8.667800	2	0.0131
All	8.667800	2	0.0131

The results of the econometrical analysis indicate that there is a causality relationship between tourism revenues and employment.

Briefly, the following results were obtained as a result of the Granger Causality test applied by using tourism revenues and employment of Turkey. The increase in tourism revenues is a factor that increases employment.

3. Conclusion

Tourism, a service sector, has shown a very development throughout the 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 employment.

This study made for the determination of the causality relationship between tourism and employment covers the period between 1980&2007. Annual time series data are examinet using Engle_Granger causality test, Johansen co-integration approach and error correction modeling. The empirical findings obtained have shown that tourism has had a positive effect on employment, and the cointegration test has proved that there is a mutual relationship between the two variables in the long term.

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