

Contribution of Tourism Revenue to the Economic Growth of Iraq

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Abstract:

Iraq has a great potential to attract a large number of tourists. Iraq should be given the opportunity to extensively develop the tourism sector, and this process will help to diversify the national economy of Iraq. Iraq is one of the most important oil-exporting countries in the world, and while its oil revenues dominate the overall economic activities of the country, there has been less attention given to the development of the tourism industry. This paper attempts to analyze co- integration between tourism growth and economic growth. To achieve this goal, this study adopts the Co- integration method to estimate the levels of relationship, and the secondary data from 1980 to 2010 was used. The empirical result shows that political and security instability had negative effects on the tourism revenue and economic growth. This study also found that tourism revenue had a positive effect on gross domestic product (GDP), but it had a smaller positive effect, compared to tourism investment. Government should support the 2015 strategic plan, which will help to increase tourism revenue by increasing the number of tourist arrivals, and encourage tourists to stay longer. Therefore, tourism policies in Iraq should try to increase tourism revenue by improving and providing necessary services to satisfy inbound tourists.

Keywords: Tourism Revenue, Tourism Investment, Economic Growth, Economic Analysis, Co-integration Method, Iraq.

First: Introduction

Tourism has an active and vital function in the economic and political openness of a country to the outside world (Tisdell, 2001). Tourism has different effects on the host country. In each case, the intensity of these effects depends on government policies, religion, and culture that prevail in the host country. Tourism revenue directly and indirectly affects the national economy, and tourism represents a major component in the composition of GDP, and an important economic activity for many countries, especially when considering foreign currency flow.

In many developed and developing countries, ample attention has been given to the role of tourism in the national economy, and the promotion of tourist activities in different areas. According to World Tourism Organization studies (WTO, 2011), the tourism industry is the key to development in many

countries, and is influential factor in the economic diversification. This activity supports government revenues, job creation, trade balance, cultural diversity, and infrastructure development, as well as increase in GDP growth (Smith, 1994). Moreover, According to the latest *UNWTO World Tourism Barometer*, international tourism receipts hit a new record in 2012, reaching an estimated US\$ 1075 billion worldwide, up 4% in real terms, from US\$ 1042 billion in 2011.

Overall, tourism is a crucially important sector to study. For many states in the developing regions, many researchers and destination managers are interested in the economic evaluation of tourism revenue, and its effect on the GDP in general. During the past two decades, this topic has been analyzed using different methods.

In addition, the positive effects of tourism transcend its own sector, reaching other economic sectors to improve economic growth, production, and income. Therefore, the scientific method, which provides a clear assessment of the national economy and the contribution of tourism revenue to GDP, is also supported in this study.

This study analyzes and measures the contribution of tourism revenue to economic growth. To achieve this goal, theoretical and selected economic model applications are used in this study. The study has five sections. Section I provides the introduction. Section II discusses the theoretical framework of the study. Section III presents the methodology of the study including data collection and data analyses. Section IV provides empirical results and discussion. Finally, Section VI has conclusions and suggestions.

Problem Statement

Iraq is located between developed and developing countries, and has a rich potential for tourism with its natural and archeological bounties. Thus, tourism could actively support economic development similar to that of various countries worldwide. However, despite the many attractions that Iraq has to offer, the Iraqi government has failed to consider tourism diversification as a necessary strategy to develop Iraq's economy, because of the lack of management, modest quality of facilities and services, low level of qualification of tourism employees, and lack of institutes to promote tourism awareness and training. (Ministry of Tourism- KRG, 2011; Economic development plan-Iraq, 2009; USAID, 2007).

Objectives of the Study

1. To determine the level and scope of contribution of tourism revenue to the economic growth of Iraq.
2. To determine the level and scope of co-integration between tourism revenue, tourism investment and economic growth of Iraq.

Research Question

To explain the contribution of the tourism revenue to the economic growth of Iraq, this study formulated two questions as follows.

1. Why the contribution of tourism revenue and tourism investment is small?
2. What are the major factors that affect Gross Domestic Product (GDP)?

Research Hypotheses

The following hypotheses have been empirically tested:

Main hypotheses

H_0 : The tourism revenue has not been able to achieve economic growth in Iraq.

H_a : The tourism revenue has been able to achieve economic growth in Iraq.

Subset hypotheses

H_0 : The tourism investment has not been able to achieve economic growth in Iraq.

H_a : The tourism investment has been able to achieve economic growth.

Significance of the Study

The importance of the study highlights the following:

1. Research on tourism revenue and tourism investment in Iraq is scarce.
2. Research on tourism in Iraq reveals strategies and solutions to overcome the obstacles confronting the tourism sector.

Scope of the Study

The scope of the study is as follows:

1. This study focuses on the tourism sector in Iraq.
2. This study adopts secondary data for the period (1980 to 2010).

Contribution of the Study

To the best knowledge of the researcher, few literatures presently focus on the contribution of tourism expansion (using tourism revenue and tourism investment tighter) to the economic growth of Iraq. Thus, this study uses a co-integration between tourism expansion and economic growth for Iraq, by

using tourism revenue, tourism investment, real effective exchange rate and GDP.

Second: Theoretical Framework

In spite of acts of terror and regional instability, tourism remains an important source for economic growth, that is, amid shocks from terrorism, war, crises, and regional instability, visits by tourists remain a trend-reverting series. Additionally, the results imply that policy makers and destination management should not neglect the significance of the tourism sector on the premise that detrimental shocks will have permanent effects, and they should provide successful application that will allow the profitable use of all respectable resources of tourist destinations, which is the basic condition for tourism development in the future (Aly & Strazicich, 2000; Vukovic et al., 2007).

According to the United Nations World Tourism Organization (UNWTO), tourism is the world's second-largest economic activity in terms of creating the employment and foreign earnings, being exceeded only by the oil industry and its derivatives. Considering the rapid increase in international tourism demand over the last few decades, accurate predictions of the future trends of tourism growth are of particular importance to both developed and developing countries ,as well as for both tourism policymakers and tourism business practitioners (Carey, 1989 ; Song et al., 2011).

The role of tourism growth has received a substantial attention from economists. Tourism growth has an important function in the standard measurement of economic growth. It is the most important factor in the success of nations, and should be the central objective of every developed and developing country's government policy.

The tourism industry is being applied as a key economic growth tool of the 21st century. The contributions of tourism are generally understood at the macro and micro levels. At the macro level, tourism is expected to accelerate economic growth, through foreign earnings, an increase in state revenue, and infrastructure development in the area as well as by attracting outside investors; meanwhile, at the micro level, tourism is expected to contribute to economic growth as it improves the standard of living in the areas by providing increased job opportunities, increasing business activities, improving the income of the residents, and enhancing the balance of regional development. These benefits arise because tourism can add to economic

growth, and act as a time-saving device for the domestic population. (Lea, 1993; Dieke, 2000). The economic contribution, that tourism provides during the past 30 years, increased growth of the domestic product (GDP)(Sirakaya & Choi, 2001; Weaver, 2006).

Culpan (1987) concluded that the amount of money spent was more important in international tourism. Tourism expenditure is the largest and most important contribution to tourism revenue, and exerts direct and secondary effects on the national economy. The effect of tourism revenue on economic growth has been proven empirically by numerous researchers (Gibbons & Fish, 1988; Stynes, 1999; Hashim, 2005).

An extensive body of literature has determined the mechanisms that explain growth. Explaining the growth rate of output over a period of time usually employs either of two complementary approaches, namely, (i) growth theory, which deals with the interaction among productivity growth, savings, and investment in the process of growth (as explained by Adam Smith and Solow), and (ii) growth accounting, which attempts to quantify the contribution of different sectors of output growth (Balaguer & Cantavella-Jorda, 2002).

The current study focuses on the growth accounting approach to examine the tourism revenue effect on economic growth. Thus, economic growth is the outcome of a complicated interaction among all sectors, specifically the agricultural, industrial, and tourism sectors. Hence, the present study focuses on the macro level, and examines how the tourism sector affects economic growth.

Additionally, Tourism investment is an important macroeconomic policy variable that indicates a country's international competitiveness. With the growing openness of trade throughout the world, substantial attention has been given to the tourism investment channel, and its effects on economic growth. Hashim (2005) identified the economic role of tourism activities in Iraq. He examined tourism investment and real GDP for the period of 1990 to 2000, by using the statistic tools and economic analysis approach and concluded that tourism investment is the key contributor to economic growth.

Third: Methodology and Data collection

This section describes the co-integration method by using ARDL technique, which overcomes the regression problem, and is capable of identifying co-integration between tourism revenue and its effect on economic growth. The ARDL* approach is a dynamic econometric modeling technique that is based on OLS estimation. This approach involves a general faction that contains both the current and lagged values of the variables. The ARDL approach is one of the most widely used methods in the analyses of tourism growth. Numerous empirical tourism studies have applied this method (Salleh et al., 2007, 2009; Bashagi & Muchapondwa, 2009; Habibi & Rahim, 2009). Thus, an ARDL analysis is used in this study to address the research questions and it is applicable to study available data, and is suitable to achieve study objectives.

As mentioned, explaining the growth rate of output over time is usually referred to as growth accounting approach, which attempts to quantify the contribution of different determinants of economic growth. In addition, GDP is one of the most commonly-used macroeconomic indicators for measuring economic growth (Stynes, 1999; Slocum, 2006; Chen & Wei, 2009; Georgantopoulos, 2012). Meanwhile, tourism expenditure is one of the most popular measures for tourism growth (Gibbons & Fish, 1988; Morley, 1992; Crouch, 1992; Stynes, 1999). Many authors have suggested the inclusion of tourism investment and real exchange rate in the analysis of tourism revenue and economic growth in order to deal with potential overlooked variable problems.

The econometric model identifies functional relationships of economic growth and its determinants, using multiple regression analysis. The model includes dependent and independent variables, lagged variables, and dummy variables for specific events. However, each of these variables must be estimated; therefore, the accuracy of the estimation depends on the reality and precision of each data sample (Witt & Witt, 1995).

The ARDL (Autoregressive distributed lag) is a dynamic econometric modeling technique that was first proposed by Hendry (1986) and was developed later by Pesaran and Shin (1999) based on OLS estimation and the inversion of the ECM. The ARDL approach can overcome the limitations associated with the OLS and VEC approaches and involves a general faction that contains both the current and lagged values of the variables. Thus, it enables the identification of change in tourism demand over time, particularly the structural change in the short-run and long-run.

Current study combines between the tourism revenue and tourism investment to identify which revenue and investment affects economic growth, and to determine the strong relationship between tourism revenue, tourism investment and economic growth in Iraq from 1980 to 2010.

Based on previous studies (Balaguer & Cantavella-Jorda, 2002; Brida et al., 2010; Kasimati, 2011; Schubert et al., 2011; Isik, 2012) the economic growth model for Iraq which is related to tourism activities can be written as follows:

$$RGDP_t = f (TR_t, TI_t, REER_t) \dots\dots\dots (1)$$

Where:

$RGDP_t$ = real Gross Domestic Product in Iraq in year t;

TR_t = tourism revenue in Iraq in year t;

TI_t = tourism investment in Iraq in year t; and

$REER_t$ = real effective exchange rate between Iraqi dinar and US dollar in year t;

An ARDL as economic model representation of Equation (1) is formulated as follows.

$$\Delta \ln GDP_t = \alpha_0 + \sum_{i=1}^m \alpha_1 \Delta \ln TR_{t-i} + \sum_{i=0}^m \alpha_2 \Delta \ln TI_{t-i} + \sum_{i=0}^m \alpha_3 \Delta \ln REER_t + U_i \dots\dots\dots (2)$$

In sum, in this study the following steps of Co-integration method are performed to estimate the economic growth models for Iraq:

1. Stationary test

Stationarity is an assumption about variables in the classical regression model. The typical regression model assumes that variance of time series should tend to converge at a fixed finite constant in large samples. The stationary test results are reported in the tables below.

Table 1: Result of Unit root test for variables in economic growth model

(DF,ADF,PP and KPSS at Level)								Variables
KPSS		PP		ADF		DF		
Intercept with Trend	Intercept t	Intercept with Trend	Intercept t	Intercept with Trend	Intercept	Intercept with Trend	Intercept	
0.1778	0.3021	-2.1108	-1.8146	-2.2106	-1.7849	-2.1377	-1.8025***	ln GDP
0.1754	0.1922	- 0.9564	-1.6312	-1.0327	-1.4949	-1.0835	-1.1712	lnTR
0.1231	0.5965	-1.3189	-1.2837	-1.7870	-1.6115	-2.0378	-0.8152	lnTI
0.1460	0.1544	-1.4304	-1.5377	-1.3102	-1.4055	-1.4420	-1.4543	IREER
(DF,ADF,PP and KPSS at First Difference)								
KPSS		PP		ADF		DF		Variables
Intercept with Trend	Intercept	Intercept with Trend	Intercept	Intercept with Trend	Intercept	Intercept with Trend	Intercept	
0.2056*	0.2199*	-5.6584*	- 5.2520*	-5.5764*	-5.5044*	-5.6392*	-4.7915*	
0.2765*	0.5628*	-5.9061*	- 5.0879*	-5.6011*	-5.0830*	-5.5235*	-3.9200*	lnTR
0.0877*	0.2082*	-4.0295**	- 3.9357*	-4.0810**	-3.9724*	-4.0558*	-3.8035*	lnTI
0.0898*	0.1485*	-5.1969**	- 5.1917*	-5.1969**	-5.1921*	-5.3348*	-5.2298*	lnREER
(*), (**), (***) denotes Significant at 1%, 5% and 10% respectively.								

From table (1), all variables are stationary in the first difference at the 5% significance level. The co-integration procedure is performed after validating the relevance in the first order I (I) of the co-integration concept.

2. Co-integration Analysis

Additionally, several methods can be applied to conduct the co-integration test. The most commonly used methods include the residual-based Engle-Granger (1987) test and the maximum-likelihood-based Johansen (1991, 1995) and Johansen-Juselius (1990) tests. The problems associated with these methods include the requirement that all variables should be of the same order of integration to hold the co-integration. In view of this problem, Pesaran and Shin (1995) and Pesaran et al. (2001) introduced a new method for testing co-integration. It is one of the most popular dynamic analyses in the field of tourism; if all variables are not of the same order of integration, then the ARDL approach should be used because it can be applied regardless

of whether the regresses are integrated of order zero or one [i.e., I (0) and/or I (1)].

Testing for co-integration intends to (i) determine a genuine long-run relationship between a set of time series data and (ii) estimate the long-run coefficient of the co-integrated series as suggested by economic theory.

Thus, F^* -test is employed to perform the ARDL co-integration test to identify the long-run relationship between variables by testing the hypotheses, as follows:

$$H_0: \beta_1 = \beta_2 = \beta_3 = \beta_4 = 0 \quad (\text{no co-integration})$$

$$H_a: \beta_1 \neq \beta_2 \neq \beta_3 \neq \beta_4 \neq 0 \quad (\text{co-integration})$$

This can also be denoted as follows:

FGDP (GDP | TR, TI, REER)

If these variables are co-integrated, then a stable long-run or equilibrium linear relationship among them exists. For instance, if economic growth and its determinant factors for Iraq are not co-integrated, then the tourism growth would drift above or below the tourism revenue, tourism investment and real effective exchange rate of Iraq in the long run. The empirical co-integration test results are shown in Table 2.

Table 2: Co-integration Analysis for economic growth model

Table 2: Co-Integration Analysis for Economic Growth Model				
F- statistic	Critical value		Level of significance	Number of lags
	Lower	Upper		
3.61	3.256	4.254	5%	Lag 1
6.81				Lag 2
6.28				Lag 3
3.33				Lag 4
(*), (**), (***) denotes Significance at 1%, 5% and 10% respectively.				
Note: In the economic growth model the number of independent variables (K) is three, and the number of observations (N) is 31.				

Table 2 shows more than two instances of co-integration between the economic growth model and their determinants, and they emphasize the relevance of the long-run concept. The F-statistic (6.81) is greater than the

* For a small sample size (i.e., from 30 to 80 observations) the F-statistics are compared with the critical bounds suggested by Pesaran et al. (2001) and Narayan (2004, 2005), which are tabulated as two sets of appropriate critical values. One set assumes that all variables are I (1) and another assumes that all of them are I (0). Through this step, a band covers all possible classifications of the variables into I (1) and I (0), even those that are fractionally integrated. If the calculated F-statistic lies above the upper level of the band, the null is rejected and thus indicates co-integration. Otherwise, the null cannot be rejected, thus indicating the absence of co-integration. However, if the statistic falls within the band, the result is inconclusive.

upper bound critical value (4.25) at the 5% significance level, thus indicating the presence of co-integration between economic growth and its determinants. Therefore, the null hypothesis is rejected. The empirical co-integration test results enable the examination of long- and short-run relationships in economic growth model. The empirical co-integration coefficient estimations are shown in Table 3.

Table 3: Co- integration Estimates for economic growth model

Standard Error	T-Ratio	p. value	Coefficient	Regressors
2.7717	1.3828	[0.209]	3.8327	Constant
0.0886	3.1599	[0.016]	0.2800	Tourism Revenue
0.1233	2.4407	[0.045]	0.3010	Tourism Investment
0.1238	1.1824	[0.276]	0.1464	Real Effective Exchange Rate
(*), (**), (***) denotes Significance at 1%, 5% and 10% respectively.				

Table 3 shows that an increase with a one percent in tourism revenue will increase the Iraqi GDP by 0.28%, and a one percent increase in tourism investment increases the GDP of Iraq by 0.30%*. These results also demonstrate that the GDP contribution of tourism investment is greater than that of tourism revenue, and consistent with our expectation.

Therefore, despite the failure of the Iraqi government to make the correct decisions to increase investments in the tourism sector, and the limited share of tourism investment to total investment from 1980 to 2010, the effect of tourism investment on economic growth is greater than that of tourism revenue. This finding may also be attributed to the multiplier effect in which investment is greater than revenue (Ishikawa & Fukushige, 2007).

Fourth: Diagnostic Checking

After estimating coefficients for economic growth model, the diagnostic checking is conducted using Microfit 4.1. The purpose of diagnostic checking is to check the adequacy of the co-integration method. This procedure is based on both theory and statistics. In present study, diagnostic test is applied to ensure the accurate estimation of the economic growth model for Iraq .

*These increments demonstrate the only direct effect of tourism revenue and tourism investment on the GDP. The other variables excluded from the economic growth model may produce a significant effect on GDP.

To ensure the appropriateness of the models, this study used several diagnostic tests, including the tests for serial correction, heteroscedasticity, normality, function form, and structure break. The F-statistics and critical values are reported in Table 4.

Table 4: Diagnostic tests for economic growth model

Diagnostic Test			
Decision	F version	LM version	Test statistics:
Accept H_0	$F(1, 20) = 0.0614 [0.807]$	$CHSQ(1) = 0.0857 [0.770]$	LM test (1)
Accept H_0	$F(1, 26) = 0.0575 [0.812]$	$CHSQ(1) = 0.0618 [0.804]$	ARCH test
Accept H_0	$F(1, 20) = 2.4199 [0.135]$	$CHSQ(1) = 3.0222 [0.082]$	Ramsey RESET test
Accept H_0	Not applicable	$CHSQ(2) = 4.7965 [0.091]$	Jarque-Bera
Accept H_0	Structure break Stable	Structure break Stable	CUSUM test
Accept H_0	Structure break Stable	Structure break Stable	CUSUMQ test
3.95 [0.014]	F- statistic	0.83	R-Squared
0.18	S.E for Model	0.62	Adjusted R^2
1.86	DW-statistic	31	Number of observation
Notes: t-value in the parentheses (....) and p-value for diagnostic test in parentheses (*), (**), (***) denotes Significant at 1%, 5% and 10% respectively.			

The table above shows that the Lagrange multiplier (LM) and the F-statistic are less than the critical value. The null hypothesis (H_0 ; the econometrics model does not exist) is accepted across economic growth model. As shown in Table 4, there is no evidence of autocorrelation presented in this table. The ARCH tests suggest that the errors are homoscedastic and independent of the repressors. The model passes the normality tests. Therefore, the ARDL model is correctly specified. Furthermore, table 4 also shows the value of S.E regression, given its minimal value, is small. The R^2 and adjusted R^2 show that model is the most appropriate.

The above discussion related to the diagnostic test, and for stability test, the figures show that the statistic plots of CUSUM and CUSUMSQ are within the critical range. Therefore, No evidence of any significant structural instability is observed. The model can be used for policy decision making. The stability tests are presented as follows:

Figure 1: Cumulative sum of Recursive Residuals, Economic growth for Iraq

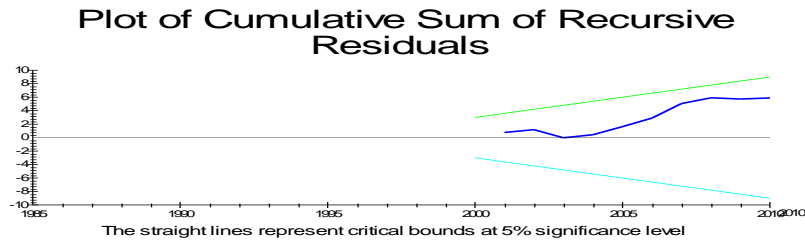
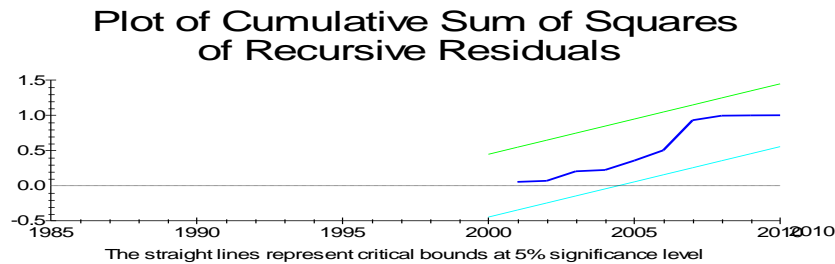


Figure 2: Cumulative Sum of Squares of Recursive Residuals, Economic growth for Iraq



Fifth: Conclusions and Suggestions

Conclusions

The main important conclusions can be selected as follows:

1. The presence of considerable oil resources has made Iraq a unilateral economy. The over dependence of the Iraqi economy on the oil sector tends to have a negative effect on the development of tourism sector.
2. The empirical result shows that the level of contribution of tourism revenue has a significant effect on economic growth; however, the effects of tourism investment to GDP are greater than that of tourism revenue.
3. In the end, this study shows the tourism sector has a positive effect on Iraqi economy; despite these contributions, they were not commensurate with the tourism potential of Iraq as result of economic blockade, war and political instability.

Suggestions

The main important suggestions can be selected as follows:

1. This study's recommendation is to diversify the Iraqi economy by pay more attention to tourism sector, because of the increased instability and volatility in global oil prices.
2. The Iraqi economy should be diversified by increasing the GDP contribution of tourism, by increasing level of tourism revenue and tourism investment.
3. The Iraqi economy should be diversified by increasing the GDP contribution of tourism, by improving security stability and by enhancing tourism services.

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