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Religious Tourism and Economic Growth in Saudi Arabia

Abstract

Key studies have identified the need to diversify the Kingdom of Saudi Arabia economy beyond its heavily oil-based status if it is to attain long-term sustainable growth. Tourism, in particular religious tourism, has been recognised as one key non-tradable sector that could promote this growth. This paper applies a time series approach to examine the impact of the tourism industry on the economic prosperity of the Kingdom between 1970 and 2011. The results show that tourism only plays a minor role in improving economic growth when the economy as a whole is taken into consideration. However, when isolating the non-oil sectors, the impact of tourism could be seen to have a greater influence on economic growth. Tourism is therefore potentially important for any future diversification of the economy from growth.

***Keywords**:* Co-integration; Economic growth; Religious Tourism; Saudi Arabia.

1. Introduction

A significant number of oil-rich countries, including Saudi Arabia, rely heavily on oil exports; however, natural resources like oil and gas are in fact exhaustible and thus lead to future economic instability as far as external markets are concerned. In contrast, variables in the non-oil sectors chiefly rely on internal factors and can therefore be easily managed and controlled. Tourism, for instance, in Saudi Arabia, is an inexhaustible supplier of prosperity, given that it includes the Hajj and Umrah (Islamic pilgrimages) into the country's holy regions. On the other hand, oil incomes can encourage prosperity, particularly in the natural resources sector, despite the fact that, by raising the prices of local goods, they lead to inflation (Farzanegan and Markward, 2009). Conversely, the tourism sector attracts foreign investment, provides employment opportunities and promotes foreign currencies (Schubert et al., 2011 and Katircioglu, 2009).

Moreover, the labour force in the field of oil and its derivatives barely reach 2% of the national workforce in many petroleum-exporting countries (see for instance, the National Bureau of Statistics (2014) from the UAE and the Central Department of Statistics & Information for Saudi Arabia). This is true of Saudi Arabia, where the International Monetary

Fund (2012) reported that workers in the oil sector in Saudi Arabia in 1989, 1999 and 2009 represented approximately 1.1%, 1.6% and 1.1% of the total labour force respectively. Interestingly, according to the World Tourism Organization (2012), the number of tourists traveling to Saudi Arabia (international and religious) reached record levels in 2011: more than 17 million tourists visited the country at that time – well above Egypt's and Dubai's figures (8 million and 10 million respectively).

Therefore, the key purpose of this paper is to consider the role of tourism (non-oil sector) on the economic growth of Saudi Arabia and offer new insights. In an attempt to discuss all aspects of these two fields, the paper is organized into four main sections: the theoretical framework, the method of study, the empirical results and the conclusion drawn therefrom.

2. Theoretical framework

As highlighted by several studies pioneering the field of tourism and economic growth (see for example, Schubert et al., (2011); Katircioglu (2009); Dritsakis (2004); Durbarry (2004); and Dwyer et al., (2004)), attention to tourism leads to enhanced growth. This occurs through several channels: attracting foreign investment, providing employment opportunities for citizens, increasing profits from taxes, attracting foreign currencies in addition to income and both household and government revenues. McKinnon (1964) suggests that the impact of tourism on economic growth derives its strength from the foreign currency earnings from international tourism; these earnings are used to import goods and services, and this has undoubtedly lead to economic growth.

Most studies that address the tourism-led growth hypothesis (TLG) have been based mainly on the export-led growth hypothesis (ELG) (see Cortes-Jimenez & Pulina, 2010; Jayathilake, 2013; and Balaguer & Cantavella-Jordà, 2001). This hypothesis relies on the premise of moving consumers rather goods (non-traded goods) and consequently considers tourism to be a future strategy for economic expansion. Thus, the TLG hypothesis remains neglected compared to export-led growth, and hence could be seen as a novel target for investigation (Kim et al., (2006) and Cortes-Jimenez & Pulina, (2010).

The majority of high-tourism nations, whether low income or high income, focus on economic policies that encourage tourism as a potential source of economic expansion. Recent prominent tourism-related studies include: Balaguer & Cantavella-Jordà, (2002) from Spain; Dritsakis, (2004) from Greece; Durbarry, (2004) from the Island of Mauritania; Oh, (2005) from Korea; Kim et al., (2006) from Taiwan; Lee & Chang, (2008) from Taiwan; Kaplan & Çelik, (2008) from Turkey; Katircioglu, (2009) from Turkey; Chen & Chiou-Wei, (2009) from Taiwan; Narayan et al., (2010) for 4 Pacific islands; and Seetanah, (2011) for 19 separate islands).

The first study using time-series analysis that appeared in Spain was by Balaguer & Cantavella-Jordà, (2002). It analysed the relationship and tourism-led-growth (TLG) hypothesis by applying unit root properties and the Johansen's approach for the period 1975-1997. The authors used several variables, where economic growth (GDP) was the dependent variable, while tourism receipts and exchange rate expressed as the independent variables. They concluded that tourism did indeed have a supportive influence on economic growth. The same methodology and variables were used in Greece by Dritsakis, (2004) between 1960 and 2000. The results showed that international tourism plays important roles in the growth and development of the Greek economy, and unearthed the presence of bilateral causality between economic growth and international tourism.

In the Island of Mauritania, Durbarry (2004) examined the relationship between international tourism and economic growth. The study used tourism receipts, physical capital, human capital, sugar exports and manufactured exports as independent variables. The study used a co-integration analysis of Johansen together with the Granger causality test based on an error correction model (ECM) to analyse the relationship between international tourism and economic growth during the period 1952-1999. The author discovered that the international tourism sector caused economic growth and played a particularly important role in boosting such growth. A similar study by Kim et al. (2006), which likewise applied the Johansen approach for co-integration to study the relationship between the long-term variables and the Granger test of causality, was conducted in Taiwan. It used two different time periods: annual (1956-2002) and quarterly (1971-2003), and concluded that there is a bidirectional causal relationship between international tourism and economic growth (GDP) in Taiwan's economy.

In the case of Korea and Taiwan, Chen & Chiou-Wei (2009) examined the causal relationship between tourism and economic growth for the period 1997-2007. Results showed that Taiwan's tourism led to an increase in the degree of economic growth (unidirectional causality), whereas a bidirectional relationship existed for the Korean state.

Kaplan & Çelik (2008) analysed the influence of tourism on economic growth in Turkey. This study used a time series approach forthe period 1963-2006, and used tourism receipts and exchange rate as explanatory variables. The results of the study showed that tourism affects economic growth positively and significantly.

In another Turkish study with different results conducted by Katircioglu (2009) the same variables were used during roughly the same period time, using Johansen approach for the period 1960-2006. The results showed there to be no relationship between international tourism and economic growth; this is contrary to the views of most empirical studies. This disparity was perhaps due to the different methodologies used or uncertainty in the methods of analysis employed, and highlighted the need for additional work on the nature of the relationship between the main variables in Turkey's tourism sector and economic growth.

Some studies, however, have taken a different approach by using panel data. In their paper, Lee & Chang (2008) examined the relationship between tourism and economic growth based on panel data for a sample of 55 nations (OECD, non-OECD, Asia, sub-Sahara Africa and Latin America), using the gross domestic product (GDP) as a dependent variable. Explanatory variables included: tourism receipts, exchange rate and tourist arrivals between 1990 and 2002. The results were mixed; however, it can generally be said that tourism affected economic growth in the long term. They also highlighted the fact that tourism affected the gross domestic product (GDP) in non-Organization for Economic Cooperation countries (non-OECD) more than in OECD countries. A similar methodology by Seetanah (2011) examined the relationship between tourism-based economic growth and the tourism-led growth (TLG) hypothesis in 19 islands over the period 1995-2007. Growth was reflected by increases in GDP, which was used as a dependent variable, with the explanatory variables of tourism arrivals, tourism receipts, openness, freedom index, human capital and physical capital. The authors discovered that the effect of tourism on economic growth was strong and significant in the long run. This result confirms similar results of a study by Narayan et al. (2010) on 4 Pacific islands over the period 1980-2005, in which it was found that there was a positive, strong, long-term relationship between tourism and economic growth. However, the

study found that natural disasters, political instability and the dependence on food imports constrained growth in the tourism sector.

The relationship between tourism and economic growth has continued to generate a series of debates among researchers. Although international tourism plays a role in boosting growth as mentioned above, they are not positive for a few studies. Oh (2005), for example, studied the relationship between tourism and economic growth in the South Korean economy from 1975-2001.The study wholeheartedly disagreed with the hypothesis of tourism-led-growth. Oh (2005) did not find consistent evidence that tourism would increase growth in South Korea. Hence, there was no evidence of the validity of the tourism-led growth hypothesis in this country.

These findings in the Korean economy are in contrast to the results of Chen & Chiou-Wei (2009) study. The surprising differences between these two could be due to the differences in the periods of analysis or the additional variable of exchange rate in the study by Chen & Chiou-Wei.

Most of the above studies reflect the fact that tourism has a positive long-run relationship to economic growth, which justifies the insertion of the tourism sector in the growth models. Therefore, this paper aims to examine the role of the tourism sector in the economic growth of Saudi Arabia, based on the hypothesis that expansion of tourism is a valid future strategy in the country's economic expansion.

In order to study the relationship between the tourism sector and economic growth in oil export-reliant countries like Saudi Arabia, this study, in addition to the tourism sector, uses exports and government spending. The latter is used due to the fact that all oil revenues in most oil-exporting countries (particularly Saudi Arabia) contribute to governmental budgets and hence inject these returns into the economy through government spending.

3. Material and methods

The present paper uses three key variables: exports, tourism and government spending. The latter will be included in the extended production function due to its relevance to revenues from oil exports (see for example, Anaman (2004) and Safdari et al. (2011)). In general, the relationship between exports, tourism and government spending on economic

growth (see Al-Yousif (1997) and Cortes-Jimenez & Pulina (2010)) can be illustrated in the extended production function as:

$$Y = F\,[(K, L); X, G, T] \qquad (1)$$

where *Y* is real *GDP*, *X* is exports, *T* is tourism, *G* is government spending and *K* & *L* are capital and labour respectively. In order to achieve the objectives of the study the model is expanded (1), as follows:

- Exports (X) is separated into total exports (X_T) and non-oil exports (X_N).
- Capital (K) is replaced with total investment or gross fixed capital formation due to the lack of data on capital.
- Investment (I) is separated into public investment (PG) and private investment (PI) in the non-oil sector.

To achieve its objectives, this study examines two models: the whole economy (equation (2)) and the non-oil sector (equation (3)). Hence, these take an extended production function compatible with the neoclassical growth theory:

Model (I): Main model

$$lnY_1 = \alpha + \beta_1 lnL + \beta_2 lnK + \beta_3 lnX_T + \beta_4 lnG + \beta_5 lnT + \varepsilon \qquad (2)$$

Model (II): Non-oil sector

$$lnY_2 = \alpha + \beta_1 lnL_N + \beta_2 lnPG + \beta_3 lnPI + \beta_4 lnX_N + \beta_5 lnT + \varepsilon \qquad (3)$$

where Y_1 is total GDP, Y_2 is GDP in non-oil sector; X_T, X_N, *G* and *T* are total exports, non-oil exports, government spending and tourism respectively. PI and PG are investment both private & public, in addition to capital (K) and labour (L). A time-series econometric approach was applied to determine the short and long-term relationship between economic growth and the various determinants under study. Data analysis methods are similar to those used by Awokuse (2007) and Katircioglu (2009). The study starts with the concept of time series stationarity, followed by main stationary tests, as represented in the Augmented

Dickey-Fuller (ADF) (Dickey & Fuller, (1979) and Phillips & Perron (PP) tests. These are followed by co-integration tests based on the Johansen test (Johansen & Juselius, (1990), to discover the relationship between the variables and economic growth in the long-term, as well as the Error Correction Model (ECM) to assess the relationship between selected variables and economic growth in the short-term, with a focus on tourism.

4. Empirical analysis and results

Data was obtained from the International Monetary Fund database (IMF), The World Tourism Organisation (WTO) and the Saudi Commission for Tourism and Antiquities (SCTA). Selected variables in the model were calculated in real terms, using the GDP-deflator (1999 = 100). All-time series data were converted into their natural logarithms.

The results for unit root tests according to Augmented Dickey-Fuller (ADF) (see Table 1) show that all variables are integrated in the first difference (I). This implies the possibility of holding co-integration.

The results in Table 2 show the test for co-integration according to the Johansen test to discover the relationship between the key variables and economic growth in the long-term, using lag-length according to the Akaike Information Criterion (AIC). The results suggest that there is co-integrating vector between economic growth (GDP) and other variables in both models - hence the existence of a long-term relationship between economic variables - The equation for the co-integration between the dependent variable and the independent variables are presented in the second part in Table 2. This table shows the superiority of exports in the process of economic growth, and the inferiority of tourism in supporting this growth in the whole economy. Conversely, in the non-oil sector, the latter proved to be among the most important factors. Private investment was also shown as a strong effect on economic growth in non-oil sectors; this influence is followed by tourism sector. The results also shows that that non-oil exports are less important; meaning that the present growth rates of non-oil exports in the Saudi economy are not economically viable compared to tourism sector.

Per the Error Correction Model (ECM), tourism in both models appears to be affecting the short and long-term growth differently (see Table 3).

Table 1

Unit root test ADF

Variable Definition	Symbols	Level		First Difference	
		ADF	PP	ADF	PP
Economic growth	GDP	-2.770	-3.880**	-4.518**	-2.431
Economic growth in non-oil sector	GDP_N	-0.818	-4.509**	-5.871**	-2.400
Total exports	X_T	-2.164	-2.268	-4.037**	-3.935**
Non-oil exports	X_N	-2.089	-2.620	-6.085**	-11.079**
International tourist arrivals	T	-1.336	-1.319	-5.364**	-5.154**
Government spending	G	-2.600	-2.669	-8.122**	-8.141**
Total labour force	L	-2.120	-1.905	-9.023**	-9.023**
Employment in non-oil sector	L_N	- 1.762	- 1.609	- 4.139**	-4.112**
Capital	K	-2.962	-2.965	-4.875**	-6.847**
Private investment	PI	- 3.409	- 3.434	- 4.055**	-4.116**
Public investment	PG	- 1.966	- 2.273	- 3.766**	-3.851**

*** significance at 5% and *Significance at 10%. The lag length is based on the Schwarz Information Criterion (SIC) Critical values (with linear trend): at the 5% and 10% are 3.54 and 3.20, respectively.*

Table 2

Johansen co-integration test results

Co-integrating rank (r)	Model (I)	Model (II)	C (5%)
	Trace statistics: λ-$_{Trace}$	Trace statistics: λ-$_{Trace}$	
r=0	117.097*	195.570*	95.75366
r≤1	65.471	100.167*	69.81889
r≤2	40.573	59.795*	47.85613
r≤3	23.849	25.596	29.79707
r≤4	11.504	4.594	15.49471
r≤5	0.001	0.220	3.841466
	λ-max statistics	λ-max statistics	C (5%)
r=0	51.625*	95.402*	40.07757
r≤1	24.897	40.372*	33.87687
r≤2	16.724	34.198*	27.58434
r≤3	12.345	21.001	21.13162
r≤4	11.502	4.374	14.26460
r≤5	0.001	0.220	3.841466

Co-integration equations:

Variables:	Coefficient:	*Variables:*	Coefficient:
LL	*0.209583(4.96)*	*LL_N*	*0.165653(3.36)*
LK	*0.274168(7.71)*	*LPI*	*0.179269(3.91)*
LG	*0.116647(3.14)*	*LPG*	*0.080012(5.09)*
LX_T	*0.218725(7.72)*	*LX_N*	*0.050321(1.38)*
LT	*0.004250(0.21)*	*LT*	*0.145523(2.96)*

*The trace as well as the Max-eigenvalue tests indicates one and three co-integration eqn(s) at the 0.05 level respectively. *: Rejection of the null hypothesis of no co-integration at 0.05 level. Notes: were taken the critical values (C (5%)) according to Osterwald-lenum. In brackets are t-Statistics.*

Table 3

Error Correction Model for Saudi Arabia

Co-integration Model (I):

$$\Delta LnY = 0.01 + 0.39\Delta LnY_{-1} + 0.01\Delta LnL_{-1} - 0.08\Delta LnK_{-1} + 0.06\Delta LnG_{-1} + 0.12\Delta LnX_{-1} - 0.02\Delta LnT_{-1} - 0.49EC_{t-1}$$
(1.83) (1.84) (0.18) (-2.32) (1.29) (2.00) (-0.49) (-3.74)

$R^2=0.69$
F=9.35

Co-integration Model (II):

$$\Delta LnY = 0.07 - 0.09\Delta LnY_{-1} + 0.05\Delta LnL_{-1} + 0.16\Delta LnPI_{-1} + 0.01\Delta LnPG_{-1} - 0.02\Delta LnX_{-1} - 0.01\Delta LnT_{-1} - 0.27EC_{t-1}$$
(3.36) (-0.51) (0.29) (3.61) (0.63) (-0.75) (-2.12) (-4.78)

$R^2=0.95$
F=20.38

where: Δ refers to the differences, while ECt-1 refers to the error correction. The statistics in parenthesis are t-statistics.

5. Conclusion

The results have reflected the fact that the main determinants of economic growth of Saudi Arabia are related to the oil sectors. The analysis into the long-term relationship between selected variables in the main model found that total exports had the greatest influence on economic growth, while tourism was the least influential variable.

The general performance of tourism was below the levels forecasted by the main model, reaffirming both the domination of the oil sector and the uncertainty of the tourism sector in its ability to lead and support Saudi Arabia's economic growth. However, the latter was found to be the most important when assessed in the non-oil model. Hence, it is concluded that tourism *can* be considered to be a valid future alternative source of growth and a potential replacement for the oil sector. Oil-rich countries (particularly Saudi Arabia) should re-direct their economic policies more and more towards promoting those non-oil sectors that are the easiest to control. This study also found out that all variables are important in the growth of the Saudi Arabian economy except exports in non-oil, which do not have a strong influence on economic growth.

Overall, this study's outcomes suggest that the omission or exclusion of important variables and factors in non-oil sectors like tourism, in addition to the exclusive concentration

of experts' empirical studies on the role of exports (particularly oil and gas) and government spending as the engines of growth might be both biased and misleading. Thus, this paper has both theoretical and practical implications. Theoretically, through the inclusion of the tourism variable as a determinant of economic growth, and isolating the non-oil sector from the oil one, the study was able to detect and highlight the potential role of tourism as a future crucial factor in determining economic growth in oil rich countries.

Practically, our findings inform policy-makers in oil rich countries in general and the Saudi government in particular as to future key sectors to focus on in order to ensure continuous growth. In fact, highlighting tourism as a future engine for growth means that policy-makers should think of ways to improve the tourism sector. This could be done by key measures including, solving regional conflicts, developing suitable infrastructures, facilitating visa procedures.

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