The Relationship between Tourism Receipts, Real Effective Exchange Rate and Economic Growth in Algeria During the Period (1995-2017)

Bilal LOUAIL

Faculty of Economic, Commercial and Management Sciences, University of M'Hamed BOUGARA Boumerdes, (Algeria)

Abstract

This study aims to make contributions in the field of tourism and economic growth for the development of the Algerian economy. It is focused on the relationship between the real exchange rate GDP and the international tourism receipts. The ARDL model adopted during 1995-2017. The study concluded that the relationship between the real exchange rate and the revenues of international tourism and economic growth in Algeria is a causal one-way relationship. Namely, the revenues of global tourism and economic growth affect the foreign exchange rate in the short and long term. Through its findings, decision-makers in Algeria can benefit from them in developing the tourism sector. This study also presents a new proposition, which is to study the impact of the three variables of the Algerian economy in a recent period.

Keywords:

Tourism Receipts, Real Exchange Rate, Economic Growth in Algeria, ARDL Model.

Introduction

The tourism sector is of great importance, not less than other economic sectors. It may occupy the first place among other sectors in some countries, including Arab countries such as Tunisia, Lebanon and other foreign countries such as Spain and France, and although there are some components of this sector in Algeria, but did not receive attention as other sectors The other is in the national economy, though it is also not receiving attention. Algeria has archaeological and historical tourist sites; it also enjoys stunning views, different weather, and contains the sea, mountains and desert, not to mention feverish tourism, which could be an area for this investment if the decision-making by the decision-makers in the national government well This sector. Despite the availability of all tourism potentials in Algeria, this sector still suffers from several problems, which the decision-makers have been unable to solve, so we have a problem in our minds:

Is there a relationship between tourism revenues, real exchange rate and economic growth in Algeria during the period (1995-2017)?

The importance of the study stems from the importance of the tourism sector in Algeria, through its development to become an engine of the economy, in addition to its importance in creating wealth and contribute to reduce unemployment rates and increase economic growth rate and high level of employment, and develop the production base and reduce the burden on the balance of payments through the movement of capital Funds and individuals.

Decision-makers in Algeria can also benefit from the tourism sector, thus promoting the economy by diversifying it and eliminating dependency on the hydrocarbons sector.

This article divided into **First:** Introduction, **Second:** Previous studies, **Third:** Method and database, Fourth: Study results and discussion, and **finally** Conclusion, where prospects for research and recommendations that decision-makers in Algeria can benefit from us have developed.

Literature review and hypotheses

Literature review

Previous studies on tourism receipts and economic growth have each had a different area of interest and a different focal point.

Single-country studies

There are several studies dealing with the subject of tourism and linked to several variables, including the study Ohlan, R. (2017) entitled the relationship between tourism and financial development and economic growth in India during the period 1960-2014 and the results indicate an association between the three variables in the short and long term, and the existence One-way causal relationship between study variables. A study by Kumar, R. R., & Stauvermann, P. J. (2016) titled Data Set for Analysis of Tourism and Economic Growth: A Sri Lanka Study from 1978-2014 concluded that there is a causal relationship between tourism demand and economic growth in Sri Lanka. The Liu, M. (2016) study entitled Dynamic relationship between international tourism, economic growth and energy consumption in Taiwan during the period 1965-2010 concluded that there is no inter-causal relationship between economic growth and international tourism, and a causal relationship between economic growth and energy consumption in both directions, while Between international tourism and energy consumption there was a two-way causal relationship. While the Katircioğlu, ST (2011) study, Tourism and Growth in

Singapore: New Extensions from Test Boards to Relationship Level and Logical Gravity Tests during 1960-2007, the results confirm a long-term balance of the relationship between international tourism and economic growth in the case of Singapore, and real income growth converges. To the level of long-term equilibrium significantly increased by 51.4% in the TLG model (tourism-led growth hypothesis). The main conclusion of this study is that the TLG hypothesis is specific for the long-term economy of Singapore as a result of conditional causal tests.

The study of Belloumi, M. (2010) on the relationship between tourism revenues, real exchange rate and economic growth in Tunisia during the period 1970-2007 concluded that there is a correlation between tourism and economic growth. Also, the results of the Granger causality test indicate that tourism has a positive impact on GDP growth indirectly. Kreishan, F. M. (2010) was a study titled Tourism and Economic Growth: The Case of Jordan during the period 1970-2009. Moreover, the results of the Granger causality test revealed a one-way causality from tourism revenues to economic growth. The results of this study indicate that the government should focus on economic policies to promote international tourism as a potential source of economic growth in Jordan. Balaguer, J., & Cantavella-Jorda, M. (2002), Tourism as a Long-Term Economic Growth Factor: The Spanish Case, concluded that economic growth in Spain for at least the past three decades was reasonable for the continued expansion of international tourism. This increased activity has doubled the effects over time.

External competitiveness has also proved in the model that it is a crucial variable for Spanish economic growth. As for the Arslanturk, Y.et al (2011) study titled Changing Over Time Links between Tourism Revenues and Economic Growth in a Small Open Economy, which applied to the Turkish economy during the period 1963-2006, it concluded that there is no causal link between tourism revenues and economic growth. Over time economic growth does not have a predictive capacity for tourism revenues.

Studies on the cross-countries

There is another study dealing with tourism, but focused on a group of countries mention on the study of Semra, B. O. Ğ. A., & ERKİŞİ, K (2019) entitled Relationship between reception of international tourism and economic growth in Asia-Pacific countries: analysis of team data during the period 1995-2017 and concluded that there is a bilateral causal relationship between tourism receipts and short-term economic growth. The hypothesis notes that there is a two-way relationship between international tourism

receipts and economic growth.

Wu, TP, & Wu, HC (2018), The Interrelationship Between World Tourism and the Growth of the Chinese Economy in 12 Western Regions in China from 1995 to 2015 found a causal correlation between the two variables in 7 western regions while the remaining five regions affected Only one hand. The Tugcu, C. T. (2014) study entitled Tourism and Revisiting Economic Growth: A Causal Panel analysed the state of the Mediterranean region during the period 1998-2011 and found a causal relationship between tourism and economic growth in the case of the Mediterranean Group. European countries were better able to generate growth than tourism in that region.

For the study Lee, J. W., & Brahmasrene, T. (2013) entitled Investigating the Impact of Tourism on Economic Growth and Carbon Emissions: Evidence from the EU Panel Analysis during 1988-2009, the study concluded a long-term equilibrium relationship between study variables. Moreover, tourism, carbon dioxide emissions and foreign direct investment have a positive and robust impact on economic growth. The latter, in turn, shows a positive and robust impact on CO2 emissions during tourism and FDI has a strong negative impact on CO2 emissions.

Through the survey of previous studies according to the knowledge of the researcher we conclude that the subject of the study did not address it in the case of the Algerian economy in terms of the relationship of both the returns of global tourism and economic growth real exchange rate, especially during the period 1995-2017, which is considered a gap in this topic can provide an addition For decision-makers in the Algerian economy or academic researchers in this field.

Research Hypotheses

To answer the previous problem and achieve the desired research objectives, we propose the following set of hypotheses:

H1: international tourism receipts and real exchange rate effect at economic growth in Algeria.

H2: Economic growth and real exchange rate affect Algeria's international tourism receipts.

H3: Economic growth and tourism international receipts effect at the real exchange rate in Algeria.

H4: The real exchange rate hurts economic growth in Algeria.

H5: The real exchange rate hurts international tourism receipts in Algeria.

Data and methodology

In this study, we rely on the ARDL to study the relationship between international tourism receipts, real exchange rate and economic growth in Algeria during the period (1995-2017), And we used the EViews 10 software for analysis. However, before that, we describe the variables used in the model.

Data

Before constructing the model, we collected the data based on the World Bank database (WDI) on the study variables. We identified the dependent variable, the explanatory variables and the expected impact of each variable, and we summarised it in Table (1).

Table (1): Variables used in the study and their definition

Variable	Characteristic	definition
LNTOUR	The logarithm of International Tourism Receipts	)current US$)International tourism ,receipts
LNGDP	The logarithm of gross domestic product	)constant 2010 US$)GDP
LNREER	The logarithm of the real effective exchange rate	real effective exchange rate index (2010 = 100)

Source: All data are from the World Development Indicators' Data Bank by the World Bank (databank.worldbank.org/wdi).

Table (2) shows that the most important statistical indicators for the variables used in the model during the period 1995-2017; i.e., within 22 views are highly acceptable to the nature of this study, which reflected in the statistical indicators.

Table (2): Descriptive statistics of the variables in the study

	LNGDP	LNITOURD	LNREER
Mean	25.64336	18.96608	4.678132
Median	25.68922	19.40553	4.631567
Maximum	26.00156	19.98303	4.893648
Minimum	25.25774	17.14772	4.568695
Std. Dev.	0.235291	0.885302	0.098134
Skewness	-0.175789	-0.690407	0.774543
Kurtosis	1.741023	2.228206	2.247407
Jarque-Bera	1.566245	2.293786	2.718889
Probability	0.456977	0.317622	0.256803
Sum	564.154	417.2537	102.9189
Observations	22	22	22

Source: Output of EViews 10

In Table (3), which represents the correlation matrix between study variables, we note that there is a correlation between those variables. It increases the accuracy of the model, which uses the best unbiased linear capabilities.

Table (3): Correlation of the variables in the study

	LNGDP	LNITOURD	LNREER
LNGDP	1		
LNITOURD	0.88094	1	
LNREER	-0.796362	-0.8377847	1

Source: Output of EViews 10

Methodology

The methodology used in this study is to follow these steps:

Test the stability of time series (Unit Root of Stationarity).

VEC Granger Causality Analysis

Bound test.

Estimation of the long-run model using ARDL model

Determination of error correction formula for ARDL model (ARDL-ECM)

Structural stability test for long-run coefficients (ARDL-ECM).

Test the stability of time series (Unit Root of Stationarity)

After studying the stability of time series we found that the study variables are not stable in the level and stable in the first difference, we used ZIVOT test and the result as shown in Table (4).

Table (4): Unit Root Tests results

		LNGDP	LNITOURD	LNREER
ZIVOT Test		-5.77***	-4.21*	-6.05***
		(0.0038)	(0.008)	(0.024)
	BreakPoint	2006	2007	1999
	Order of Integration	I(1)	I(0)	I(1)

Note: *, ** and *** indicate rejection of null hypothesis at 1per cent, 5per cent and 10per cent, respectively.

Source: Output of EViews 10

VEC Granger Causality Analysis

Granger's causality used to find out the direction of the relationship between study variables because there are variables affected by each other, and there are relationships in one direction. It varies from one economy to another, so we must find out whether the study variables have a relationship with each other in both directions or one direction.

From Table (5) we note that there is a causal relationship between the variables of the study, but in one direction is that both the revenues of global tourism and economic growth affect the real exchange rate. Economic growth and the real exchange rate do not affect the revenues of international tourism in Algeria, i.e., there is no causal link in this direction.

Table (5): VEC Granger Causality

Dependent variable: D(LNGDP)			
Excluded	Chi-sq	df	Prob.
D(LNITOURD)	1.014733	2	0.6021
D(LNREER)	1.149925	2	0.5627
All	1.416157	4	0.8414
Dependent variable: D(LNITOURD)			
Excluded	Chi-sq	df	Prob.
D(LNGDP)	0.357885	2	0.8362
D(LNREER)	2.924967	2	0.2317
All	8.109425	4	0.0877
Dependent variable: D(LNREER)			
Excluded	Chi-sq	df	Prob.
D(LNGDP)	10.03685	2	0.0066
D(LNITOURD)	5.354057	2	0.0688
All	10.95035	4	0.0271

Source: Output of EViews 10

Bound test

According to Pesaran, the Bound Test can be applied under the ARDL model regardless of whether time series are stable at I (0), first-order integrated I (1) or a combination between the two, and the only requirement to apply This test in that time series not integrated second order I (2) (Pesaran .M, 2001). The results presented in Table (6) show

that the calculated value of F (14.23) is higher than the maximum value of the critical values in the model at the 1% level of significance (14.22> 5), i.e. the rejection of the null hypothesis at the 1% level of significance, and acceptance of the alternative hypothesis. There is a long-term equilibrium relationship (co-integration) between the variables of international tourism revenues and the GDP.

Table (6): Bound Testing Approach

	[I(0)-I(1)]	Conclusion
(%10)Lower - upper bound	[2.63-3.35]	Refusal
(%5)Lower-upper bound	[3.1-3.87]	Refusal
(%1)Lower-upper bound	[4.13-5]	Acceptance
F-statistics	(14.23>5)***14.22	
K	2	

Note: * denotes statistically significant at 1 %; ** denotes statistically significant at 5%; *** denotes.
K: represents the number of regressors included in the models

Source: Output of EViews 10

Estimation Model: using ARDL Model

After confirming the existence of a typical integration relationship between the dependent variable and the independent variables of the study, we can estimate the model (1) using ARDL:

$$LNREER_t = \alpha_0 + \alpha_1 LNTOUR_t + \alpha_2 \Delta LNGDP_t + \varepsilon_t \quad \text{......(1)}$$

Table (7): Results of model estimation using ARDL (1,2,1)

Variable	Coefficient	Prob.*
LNREER(-1)	0.463121	0.0013
LNGDP	-2.412448	0.0002
LNGDP(-1)	1.411035	0.0509
LNGDP(-2)	1.086769	0.0132
LNITOURD	0.010086	0.5984
LNITOURD(-1)	-0.099183	0.0005
C	2.132914	0.1838
R-squared	0.96401	
Adjusted R-squared	0.947399	
F-statistic (Prob(F - statistic))	58.0355 (0.0000)	

Source: Output of EViews 10

Table (7) shows the results of model estimation using ARDL. Moreover, the above shows the results of estimating the parameters of the study variables using the ARDL model (1,2,1). The current year and the negative and significant impact of tourism revenues last year on the real exchange rate in the short term. Also, the value of the adjusted coefficient shows that 94.74% of the changes in real exchange rate revenues explained by the GDP and the international tourism receipts in Algeria. We can confirm these results in the short and long term by:

long-run

As for the long-run equilibrium based on the results of the stability of the time series root unit shown in Table (4), which confirmed that both the real exchange rate and economic growth are stable in the first difference I (1) and the returns of international tourism is stable in level I (0) According to the causality of Granger shown in Table (5). We can rely on the ARDL model, and Table (8) shows the results of estimating the parameters of the long-run study variables using the ARDL model (1,2,1), as there is a negative, significant and statistically significant impact of 1% of international tourism revenues on the real exchange rate in the long run. While there is no significant effect of GDP on the real exchange rate in the long run.

Table (8): Results of model Long-run coefficients estimation using ARDL (1,2,1)

Conditional Error Correction Regression		
Variable	Coefficient	Prob.
C	2.132914	0.1838
LNREER(-1)*	-0.536879	0.0004
LNGDP(-1)	0.085356	0.1566
LNITOURD(-1)	-0.089098	0.0003
D(LNGDP)	-2.412448	0.0002
D(LNGDP(-1))	-1.086769	0.0132
D(LNITOURD)	0.010086	0.5984
Levels Equation		
Case 2: Restricted Constant and No Trend		
Variable	Coefficient	Prob.
LNGDP	0.158986	0.1919
LNITOURD	-0.165955	0.0002
C	3.972803	0.1219
EC = LNREER - (0.1590*LNGDP -0.1660*LNITOURD + 3.9728)		

Source: Output of EViews 10

ECM ARDL Model

The error correction model reflects the measurement of the short-term relationship, on the one hand, and the measurement of adjustment speed to rebalance the dynamic model on the other. Table (9) shows the error correction results of the ARDL model. The error correction parameter (1.05) indicates that about 53.68% of the imbalance in the real exchange rate in the previous year is corrected and adjusted in the current year. The results of Table (9) show that the parameter in the short term was significant at 1% level.

Table (9): Error Correction representation of ARDL(1,2,1)

ECM Regression Case 2: Restricted Constant and No Trend		
Variable	Coefficient	Prob.
D(LNGDP)	-2.412448	0.000
D(LNGDP(-1))	-1.086769	0.0047
D(LNITOURD)	0.010086	0.4942
CointEq(-1)*	-0.536879	0.000
R-squared	0.839628	
Adjusted R-squared	0.809558	

Source: Output of EViews 10

Structural stability test for long-term coefficients (ARDL-ECM)

In ARDL models, structural stability testing and diagnostic parameters are better used, including the Heteroskedasticity Test by:`

Parameter diagnostic test (Heteroskedasticity Test: ARCH)

To ensure the quality of the model used in the analysis and that it is free from the standard problems, the stability test was used using Heteroskedasticity Test: ARCH. The results of Table (10) indicate that the value of chi-square is higher than the significance level of 5%, which makes us accept the null hypothesis that there is no problem of instability of variance.

Table (10): Diagnostic test results parameters (Heteroskedasticity Test: ARCH)

| Heteroskedasticity Test: ARCH			
F-statistic	0.064519	Prob. F(1,17)	0.8025
Obs*R-squared	0.071837	Prob. Chi - Square(1)	0.7887

Source: Output of EViews 10

Structural stability test for the estimated ARDL model

To ensure that the data used are free of any structural changes over time that may affect the quality of the model, CUSUM and CUSUMSQ (Brown, R., J. Durbin and J. Evans, (1975)) should use to determine the stability and harmony between long-term and short-term parameters. Figure 1 shows that the cumulative residual starvation test (CUSUM) expresses a linear medium within the boundaries of the critical region, indicating a pattern of stability in the model at 5% in the long and short term and Figure 1 illustrates this.

Figure (1): Model Stability: Cumulative sum of recursive residuals (CUSUM)
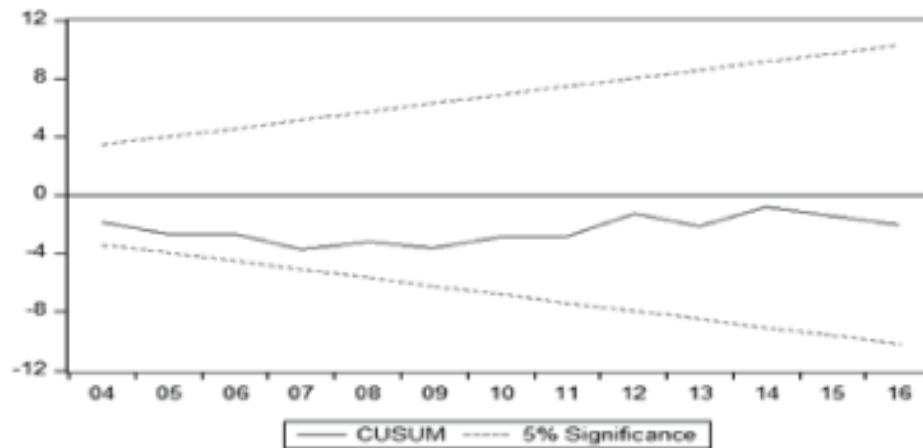
The same is true for the cumulative sum test for the residual follow-up boxes (CUSUMSQ), as shown in Figure 2.

Figure (2): Model Stability: Cumulative sum of squares of recursive residuals (CUSUM of squares)
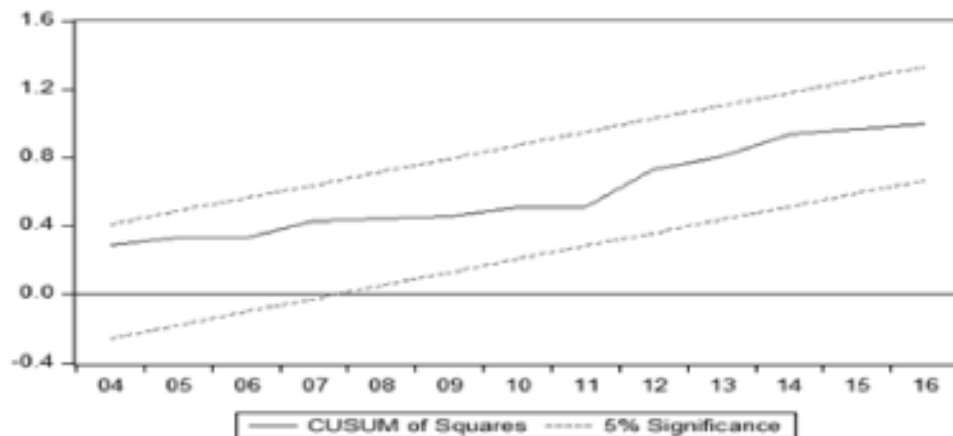
Source: Output of EViews 10

Empirical Results and Discussion

The study concluded that there is a one-way causal relationship between the real exchange rate and the international tourism receipts and the GDP of the Algerian economy. It corresponds to the study of Kreishan, FM (2010). The real exchange rate revenue explained by the GDP and the tourism receipts of world tourism in Algeria. It is contrary to the study of Belloumi, M. (2010). in general, but in the long and short term. In terms of long-run equilibrium, there is a negative, significant and statistically significant impact of 1% of international tourism receipts on the real exchange rate, while there is no significant effect of the gross domestic product on the real exchange rate in the long term, which is consistent with the study Arslanturk, Y.et al (2011). In the short term, it was noted that the real exchange rate is positively affected by the real exchange rate of the previous year, negatively by the GDP of the current year and the previous two years, the absence of statistical significance of tourism revenues for the current year and the negative and significant impact of tourism revenues for the previous year on the real exchange rate. According to the structural stability test results of the estimated ARDL model, the model is acceptable.

Conclusion

Through the results of this study, which is essential for decision-makers in Algeria and academic researchers in this field, we find that the relationship between the real exchange rate and the proceeds of global tourism and economic growth in Algeria is a causal one-way relationship which is the proceeds of global tourism and economic growth affect the exchange rate Foreign exchange in the short and long term, which is contrary to the study Belloumi, M. (2010), researched that the higher the revenues of world tourism the lower the real exchange rate in the long term, and the higher the rate of economic growth in Algeria the real rate of exchange declined after the next year after that.

The results of our study have many critical political implications, no doubt, the Algerian economy needs to make deep reforms to improve its growth rate through diversification and move away from dependence on the hydrocarbons sector and the most critical possible development sector agriculture, tourism and industry, which can increase investments on the one hand and thus increase demand variables Effective as a result of increased investment in all its forms, which raises the GDP and thus increase economic growth.

This paper is not without its shortcomings and must be used in other research, first, the neglect of some of the variables that are specific to one of the variables of the study, and could have strengthened the results of the study, especially those relied on in studies similar to this study. Second, it would be useful to investigate the causal relationship of each of the two variables that could have enhanced this study with better results. Third, increase the number of years of study because the number of views 22 is relatively weak to study a time series.

Finally, our study focused on the economy of Algeria, which concentrated most of the growth in one sector is the hydrocarbons sector, and therefore if the same study examined on a group of countries such as Arab countries or the countries of the Middle East and North Africa or the Mediterranean countries were, and this is what the researcher sees as a horizon for new research.

References

Choyakh, H., 2008. A model of tourism demand for Tunisia: inclusion of the tourism investment variable. *Tourism Economics* 14(4): 819–838.

Dickey D, Fuller WA. 1981. Likelihood ratio statistics for autoregressive time series with a unit root. *Econometrica* 49: 1057–1072.

Dristakis, N., 2004. Tourism as a long-run economic growth factor: an empirical investigation for Greece using causality analysis. *Tourism Economics* 10(3): 305–316.

Granger CWJ. 1969. Investigating causal relation by econometric and cross-sectional method. *Econometrica* 37: 424–438.

Granger CWJ. 1988. Causality, cointegration and control. *Journal of Economic Dynamics and Control* 12: 551–559.

Granger C, Newbold P. 1974. Spurious regressions in econometrics. *Journal of Econometrics* 2: 111–120.

Phillips PCB, Perron P. (1988). Testing for a unit root in time series regression. *Biometrika* 75: 335–346.

Phillips PCB. 1993. The spurious effect of unit roots on vector autoregressions: an analytical study. *Journal of Econometrics* 59: 229–255.

Pesaran .M.Hashem, Yong Cheol Shim, Richard J.Smith : Bounds Testing Approuchs To The Analysis of Level Relationships, *Journal of Applied Econometrics*, 2001, p 290.

Brown, R., J. Durbin and J. Evans (1975), Techniques for testing the constancy of regression relations over time. *Journal of the Royal Statistical Society*, Volume 37, pp. 149-163.

Wu, T. P., & Wu, H. C. (2018). The causal nexus between international tourism and economic development.

Tourism Analysis, 23(1), 17-29.

Ohlan, R. (2017). The relationship between tourism, financial development and economic growth in India. *Future Business Journal*, 3(1), 9-22.

Kumar, R. R., & Stauvermann, P. J. (2016). Dataset for an analysis of tourism and economic growth: a study of Sri Lanka. *Data in brief*, 8, 723-725.

Liu, M., Kuo, K. C., & Lai, S. L. (2016). Dynamic Inter-relationship among International Tourism, Economic Growth, and Energy Consumption in Taiwan. *International Journal of Simulation--Systems, Science & Technology*, 17(19).

Katircioğlu, S. T. (2011). Tourism and growth in Singapore: New extension from bounds test to level relationships and conditional Granger causality tests. *The Singapore Economic Review*, 56(03), 441-453.

Belloumi, M. (2010). The relationship between tourism receipts, real effective exchange rate and economic growth in Tunisia. *International journal of tourism research*, 12(5), 550-560.

Kreishan, F. M. (2010). Tourism and economic growth: The case of Jordan. *European Journal of Social Sciences*, 15(2), 63-68.

Balaguer, J., & Cantavella-Jorda, M. (2002). Tourism as a long-run economic growth factor: the Spanish case. *Applied Economics*, 34(7), 877-884.

Semra, B. O. Ğ. A., & ERKİŞİ, K. THE RELATIONSHIP BETWEEN INTERNATIONAL TOURISM RECEIPTS AND ECONOMIC GROWTH IN ASIA PACIFIC COUNTRIES: A PANEL DATA ANALYSIS. *Akademik Hassasiyetler*, 6(11), 31-46.

Tugcu, C. T. (2014). Tourism and economic growth nexus revisited: A panel causality analysis for the case of the Mediterranean Region. *Tourism Management*, 42, 207-212.

Lee, J. W., & Brahmasrene, T. (2013). Investigating the influence of tourism on economic growth and carbon emissions: Evidence from panel analysis of the European Union. *Tourism Management*, 38, 69-76.

Arslanturk, Y., Balcilar, M., & Ozdemir, Z. A. (2011). Time-varying linkages between tourism receipts and economic growth in a small open economy. *Economic Modelling*, 28(1-2), 664-671.

Appendix

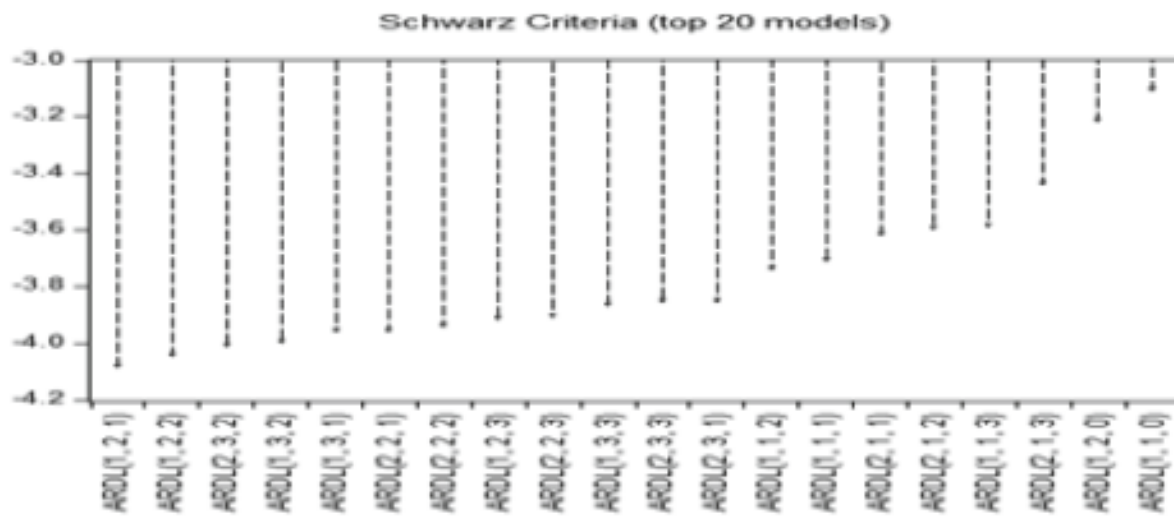### Appendix (1): ARDL model estimation results

Dependent Variable: LNREER
Method: ARDL
Date: 11/14/19   Time: 21:27
Sample (adjusted): 1997 2016
Included observations: 20 after adjustments
Maximum dependent lags: 2 (Automatic selection)
Model selection method: Schwarz criterion (SIC)
Dynamic regressors (3 lags, automatic): LNGDP LNITOURD
Fixed regressors: C
Number of models evaluated: 32
Selected Model: ARDL(1, 2, 1)
Note: final equation sample is larger than selection sample

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
LNREER(-1)	0.463121	0.113245	4.089542	0.0013
LNGDP	-2.412448	0.465267	-5.185080	0.0002
LNGDP(-1)	1.411035	0.656094	2.150660	0.0509
LNGDP(-2)	1.086769	0.378917	2.868094	0.0132
LNITOURD	0.010086	0.018683	0.539838	0.5984
LNITOURD(-1)	-0.099183	0.021608	-4.590039	0.0005
C	2.132914	1.519467	1.403725	0.1838

R-squared	0.964010	Mean dependent var		4.670140
Adjusted R-squared	0.947399	S.D. dependent var		0.099460
S.E. of regression	0.022811	Akaike info criterion		-4.453926
Sum squared resid	0.006764	Schwarz criterion		-4.105420
Log likelihood	51.53926	Hannan-Quinn criter.		-4.385894
F-statistic	58.03550	Durbin-Watson stat		3.017801
Prob(F-statistic)	0.000000			

*Note: p-values and any subsequent tests do not account for model selection.

Source: Output of EViews 10

Appendix (2): Choose the best model according to Schwarz Criteria standard

Schwarz Criteria (top 20 models)

Source: Output of EViews 10