Tourism-Economic Growth Nexus in Nigeria: Implications for the Economic Recovery and Growth Plan

David Terfa Akighir PhD
Department of Economics,
Benue State University, Makurdi
E-mail: akighirdavidterfa@yahoo.com
Phone: 08169587920

Ateata Aaron
National Open University of Nigeria,
Makurdi

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Abstract

The study investigated the tourism-economic growth nexus in Nigeria with a view to ascertaining whether or not tourism development can lead to economic growth in Nigeria and vice versa. Using Autoregressive distributed lag (ARDL) modelling approach on the time series data spanning from 1980-2015; the findings of the study revealed that, tourism development has positive and significant impact on economic growth in Nigeria both in the short and long-run. Based on the findings it was concluded that the government can use the enormous tourist potentials in the country to achieve her economic recovery and growth plan (ERGP) in the wake of dwindling oil prices.

Key words: Economic growth, Tourism, Autoregressive Distributed Lag (ARDL) model, Economic recovery and Growth Plan (ERGP).

Introduction

Tourism has been widely acknowledged by scholars as an economic activity that promotes economic growth in both developed and developing countries. This is the postulation of the tourism-led growth hypothesis. According to Abdul, Tahir and Muhammed (2013), indeed, tourism industry is an important business sector of the world. The importance of this sector can be manifested from the fact that it raises revenue, generates employment opportunities, encourages the private sector and develops infrastructure. Yusuff and Akinde (2015) stressed that when tourism business is sustainably managed, it can transform an economy by facilitating the transfer of technology and information, accelerates reforms and empowers women and minorities.

Nigeria has huge tourism potentials as the country is magnificent in arts, crafts, sport, park, museum, cultural and historical heritage, good tropical weather, lush vegetation, variety of wild life, tribes which are critical in rural and urban tourism development. According to Yusuff and Akinde (2015), Nigeria has unprecedented potentials to become an important tourist destination in the world. The country has over 7000 tourist centers among them are the 5 UNESCO heritage cities and 7000 tourist sites. There are 371 tribes and over 200 languages with rich cultural heritages that when properly exploited could galvanize economic growth and development of the Nigerian economy.

Efforts to translate the huge tourist potentials of Nigeria to pragmatic fortunes dates back to 1962 when a private group formed the Nigeria's Tourism Association that was subsequently admitted into World Trade Organization (WTO) in 1964. These initial efforts failed to boost tourism as a vibrant economic until 1976 that a Decree was promulgated to establish the Nigeria Tourism Board and States Tourism Committees as government agencies were charged with matters relating to tourism development. Even with the Decree No.54, the desired development in tourism matters was not achieved and the Decree was upgraded in 1992 to Nigeria Tourism Development Commission (NTDC) as the highest body saddled with the responsibility of promoting, marketing and coordinating tourism activities.

NTDC was still not able to make Nigeria the ultimate tourism destination in Africa as it was intended. In 2000, the ministry of culture and tourism was established to carter for tourism development. Yet, satisfactory outcomes were not recorded and this necessitated the need to raise the profile of the country's tourism sector; accordingly, the Miss tourism Nigeria pageant was introduced in 2004 to create awareness for youth tourism through the introduction of various skills and training of youths especially in the use of French language. In 2005, the federal government of Nigeria in collaboration with United Nations World Tourism Organization (UNWTO) facilitated the Nigeria Tourism development master plan. The objective was to develop sustainable tourism by capitalizing on heritage diversity as the basis for promoting domestic and international tourism.

Inspite of all these initiatives, Nigeria's tourism has not made significant impact. According to World Travel and Tourism Council (WTTC) (2014), tourism contributed 3.2% to the GDP and provided 2.7% of total employment in 2013 and this rose by 4.1% in 2014. The total contribution of trade and tourism to employment including indirectly supported by industry was 3.6% of total employment in 2014. Travels and tourism attracted capital investment of about N889.3bn in 2014.

The above indices are indicative of the fact that Nigeria's tourism sector is performing below expectation given the enormous potentials in the sector. This abysmal performance is proven by the world ranking of tourism that ranked Nigeria 116th position in 2013 with a total receipt of only $601,000,000; while other African countries like Ghana, Cameroun, Angola, Kenya, Ethiopia, and South Africa were ranked higher than Nigeria. Furthermore, despite the boundless tourism potential, Nigeria has once again slipped on global tourism ranking, leaving smaller Sub-Saharan African countries to take the shine in 2017. According to the Travel and Tourism Competitiveness Report in 2017 released by the World Economic Tourism in April, 2017, Nigeria is ranked 129 out of 136 economies surveyed.

This development is worrisome especially now that the Nigerian economy is in a recession precipitated by the slump in the international oil prices and there is a national clamor to diversify the economy away from oil as contained in the economic recovery and growth plan.

Thus, the justification for this study is compelling given that the causal relationship between tourism and economic growth in Nigeria is not clear; coupled with the fact that the trailing confusion is whether it is the tourism-led growth hypothesis or growth-led tourism hypothesis that best explains the dynamics of the tourism sector of the Nigerian economy. Also, since the direction of this causality has some certain policy implications on the economic recovery and growth plan of the current administration in Nigeria, it is imperative to examine the tourism-growth nexus with a view to repositioning the tourism sector in Nigeria in this period of economic recovery.

Conceptual Clarifications

Concept of Tourism: The concept of tourism is

variously defined; for instance, Gilbert (1990) defined tourism as a form of recreation which involves travel to a less familiar destination or community for a short-term period, in order to satisfy a consumer's need for one or a combination of activities. The United Nation World Tourism Organization (UNWTO) (2015) defined tourism as the activities of persons traveling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes not related to the exercise of an activity remunerated from within the place visited. In this study, the definition of the UNWTO is considered as the operational definition.

Tourism is determined by a number of factors; Proenca & Soukiazis (2005) identified income as a major determinant of tourism. They assert that the demand for and length of stay are directly related to income of potential traveler and inversely related to the domestic cost of living.

Exchange rate is another factor that determines the demand for tourism. It is the price of tourism generating countries currency in relation to the currency of the inbound country. Tourism demand depends on its own price (cost of journey), price of alternative goods-services as well as the general price level of the domestic market. Proenca and Soukiazis (2005) explained that increase in domestic prices of the destination country influenced by exchange rate tend to discourage tourist to move to such destination and can relocate to a cheaper competing places.

Investment climate in the destination country is also an influential factor of tourist attraction in such destination. Tekin (2015) identified empirically that political and economic instability in the destination country adversely affect tourism in such destination. Dwyer and Kim (2003) identified trade openness, relative prices, and consumer prices as important factors explaining tourism demand in a destination.

Concept of Economic Growth: According to Jhingan (2003), economic growth is the quantitative sustained increase in the country's per capita output or income accompanied by expansion in its labour force, consumption, capital and volume of trade. Milton (1980) conceptualized economic growth to be the rate of increase in an economy's full employment, real output or income over time.

Growth could be classified as actual or potential. The actual growth is what an economy is able to produce using it productive resource at a given period of time; while the potential growth has to do with what an economy could have produce if the available resources are optimally utilized.

Scholars have identified factors such as capital, investment, education, research and development, government policies, economic openness, foreign direct investments, strong institutions among others as the determinants of economic growth (see Eliot, 2014, Hermes & Lensink, 2000, Fischer, 1993, Mankiv, 1992).

The Economic Recovery and Growth Plan (ERGP): The philosophy behind the ERGP is that previous economic policies left the Nigerian economy ill-prepared for the recent collapse of crude oil prices and production. It is against this backdrop that the Buhari-led administration in the quest to diversify the Nigerian economy that launched the Economic Recovery and Growth plan (ERGP), it is a medium term plan for 2017-2020 which has been developed for the purposes of restoring economic growth while leveraging the ingenuity and resilience of the Nigerian people.

The broad objectives of the plan are:

1. Restoring Growth: To restore growth, the plan focuses on achieving macroeconomic stability and economic diversification. Macroeconomic stability will be achieved by undertaking fiscal stimulus, ensuring monetary stability and improving the external balance of trade. Similarly, to achieve economic diversification, the policy will focus on the key sectors driving and enabling economic growth with particular focus on agriculture, energy, MSME led growth industry, manufacturing and key services such as tourism by leveraging science and technology. The aim is to restore growth in the short-term and create jobs and bring structural change.
2. Investing in people: The plan aims at achieving inclusive growth by creating opportunities and providing support to the vulnerable. The ERGP will invest in the Nigerian people by increasing social inclusion, creating jobs and improving the human capital base of the economy.
3. Building a globally competitive economy: The ERGP aims to tackle the obstacles hindering the competitiveness of Nigerian businesses, notably poor or non-existent infrastructural facilities and difficult business environment. It will increase competitiveness by investing in infrastructure and improving the business environment.

Given that the policy direction of the ERGP is in tune with the Sustainable Development Goals (SDGs), which tourism is explicitly emphasized in goals 8, 12, and 14 of SDGs for its capacity to foster economic growth, create jobs, promote sustainable consumption and production and advance conservative and sustainable development; the

Nigerian economy given the tourism potentials it has, can simply leverage on these potentials to achieve the ERGP.

Tourism Potentials of the Nigerian Economy

Nigeria has a land mass of about 365,000 square miles and is a country of magnificent arts, crafts, sports, parks, museums, cultural and historical heritages, good tropical whether, lush vegetation, variety of wildlife, tribes and ethnicities among others which are critical factors for developing rural and urban tourism (Ogunberu, 2011). With these tourism potentials, the most populated country in Africa, Nigeria has become untapped tourist paradise with long stretches of exotic beaches, lush mountains, well preserved tradition and culture and enchanting tourist attractions.

The table below shows the top 30 tourist attractions and their locations in Nigeria.

Table 1: The top 30 Tourist attractions and their locations in Nigeria

Tourist Attraction	Location
1. The Ibeno Beach	Ibeno, Akwa Ibom State
2. Obudu Mountain Resort	Obudu, Cross River State
3. Ngwo Pine Forest	Ngwo, Enugu State
4. Awhum Waterfall	Awhum, Enugu State
5. Arochukwu Long juju slave route	Abia State
6. The Giant Footprint of Ukhuse oke	Owan, Edo State
7. Port Harcourt Tourist Beach	Port Harcourt, River State
8. Gashaki-Gumpti National park	Gashaki-Gumpti, Taraba State
9. Alok Ikom Monoliths	Ikom, Cross River State
10. Isaac Boro Garden Park	Port Harcourt, River State
11. The Tinapa free zone and resort	Calabar, Cross River State
12. Osun-Osogbo Grove	Oshogbo, Osun State
13. The Emotan Statue	Benin, Edo State
14. The Royal palace of Oba of Benin	Benin, Edo State
15. Sukur cultural landscape	Madageli, Adamawa State
16. Queen Amina's wall	Zaria, Kaduna State
17. Surame cultural landscape	Surame, Sokoto State
18. Oban Hills	Cross River State
19. Oke-Idanre Hills	Oke-Idanre, Ondo State
20. Ogbnike Caves	Enugu State
21. Ancient Kano city walls	Kano, Kano State
22. Coconut Beach	Badagry, Lagos State
23. Bar Beach	Victoria Island, Lagos
24. Millennium Park	Maitama, Abuja
25. Nana living history museum	Wari, Delta State
26. The Ancient Nok settlement	Jaba, Kaduna State
27. New Afrika Shrine	Ikeja, Lagos State
28. Abuja Arts and crafts village	Abuja
29. Kainji National Park	Niger State
30. Yankari National park	Bauchi State

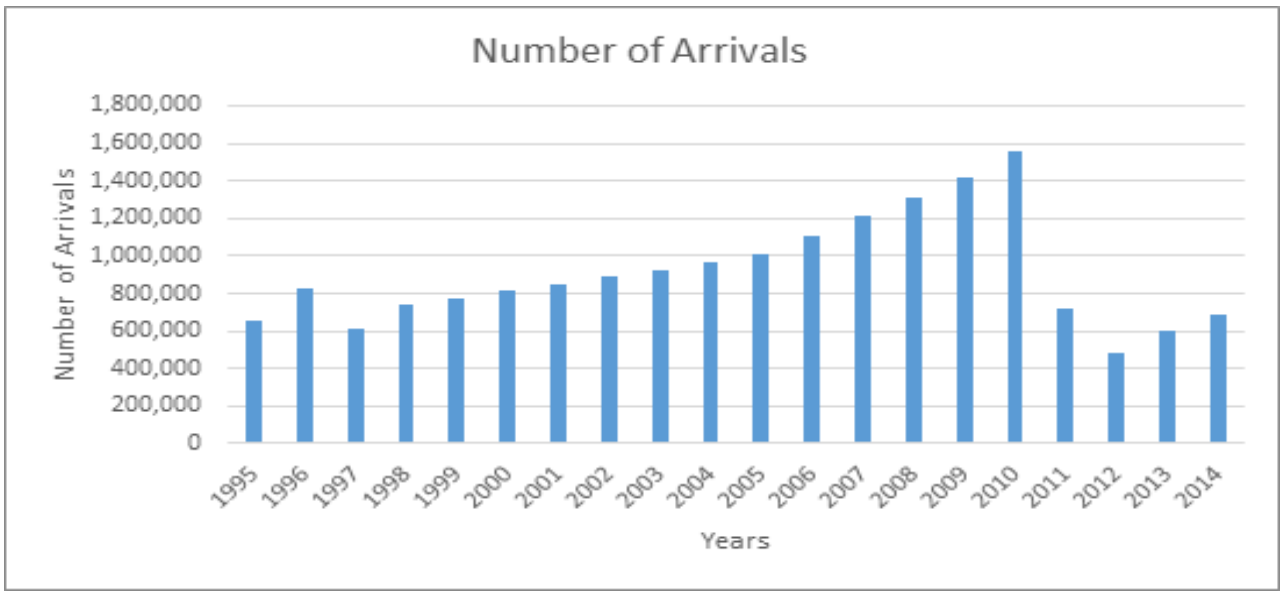
Source: Ministry of Information, Culture and Tourism, 2016

The above reveals that Nigeria has boundless tourist attractions across the country. These enormous tourist potentials are scattered across the states of the country. In addition to these thirty top tourist attractions, there are business tourism like seminar conferences and meetings as well as festivals that vary across regions, ethnicities and groups all year round such as Argungun fishing festivals, Akata fishing festivals and enormous tourist activities that are commonly used to showcase the Nigeria's rich cultural heritage. This rich heritage provides a range of tourism development opportunities which if properly harnessed would make the tourism sector viable in the country.

The quest to develop the tourism sector in the country, governments at various tiers have evolved policies and programs aimed at enhancing the performance of the sector in terms of contribution to GDP and employment creation.

In 2005, the federal government of Nigeria in collaboration with the United Nations World Tourism Organization (UNWTO) facilitated the Nigerian tourism development master plan. The objective was to develop sustainable tourism by capitalizing on heritage diversity as the basis for promoting domestic and international tourism.

The commencement of the implementation of the master action plan in 2006 was expected to build momentum and raise the profile of tourism in Nigeria amongst the general public, stakeholders, private sector tourism interest, federal and state government officials and potential investors. Regrettably however, eleven years after its implementation, tourism sector of the Nigerian economy has not significantly improved. The chart below shows the international inbound tourist (overnight visitors) in Nigeria from 1995 to 2014.



Source: World Tourism Organization, 2015

Figure 1: International Tourism, Number of Arrivals in Nigeria

The chart above shows the international inbound tourists (overnight visitors) in Nigeria from 1995 to 2014. These are the number of tourists who travelled to Nigeria for a period not exceeding 12 months and whose main purpose of visiting is other than an activity remunerated from within Nigeria. This indicator shows that over the past 18 years its value reached a value of 1,555,000 in 2010 and a minimum value of 486,000 in 2012. The implication of these maximum and minimum values is that after the implementation of tourism master plan in Nigeria, the tourist arrivals increased from 1,010,000 arrivals in 2005 to an all-time high of 1,555,000 and started declining in 2011 and reached the minimum value of 486,000 in 2012. This means that the master plan had not achieved its predetermined objective of promoting sustainable development of the tourism industry since the increase in the number of tourist arrivals was just short-lived.

Furthermore, international tourism receipts (% of exports) were considered from 1995 to 2014. This has to do with the share in exports and it is calculated as a ratio to exports of goods and services, which comprise all transactions between residents of a country and the rest of the world involving a change of ownership from residents to non-residents of a general merchandize, goods sent for processing and repairs, non-monetary, gold and services. The graph below shows the trend of the international tourism receipts (% of exports) in Nigeria from 1995 to 2014. The graph shows that its value over the past 19 years was 1.41% in 2002, while its lowest value was 0.13% in 2004.

Source: World Tourism Organization, 2015

Figure 2: International Tourism Receipts (% of Exports)

A cursory look at figure 2 reveals that upon the implementation of the National tourism master plan in Nigeria in 2006, international tourism receipts (% of exports) rose from 0.24% in 2005 and reached a peak of 1.35% in 2008, after which it continuously declined. This is also indicative of the fact that the tourism master plan failed to achieve its goal of promoting sustainable tourism development in Nigeria.

Again, data on international tourism receipts passenger transport items were collected. These are expenditures by international inbound visitors for all services provided in international transportation by resident's carriers. The data are in US current dollars. The chart below shows the international tourism receipts for passenger transport items in Nigeria from 1995 to 2014.

Source: World Tourism Organization, 2015

Figure 3: International Tourism Receipts for passenger transport items

As it can be seen from the above chart, upon the implementation of the tourism master plan in Nigeria, the international tourism receipts for passenger transport items increased from $25,000,000 in 2006 and reached an all-time high value of $390,000,000 in 2008, after which declined. This also supports the other indicators previously considered that the master plan of tourism has failed to achieve its predetermined mandate of promoting sustainable development of the tourism sector in Nigeria.

Theoretical and Empirical Literature

The study is anchored on tourism-led growth hypothesis and the growth-led tourism hypothesis. The tourism-led growth hypothesis suggests that there is unidirectional relationship between tourism and economic growth; and the relationship runs from

tourism to economic growth. According to this hypothesis, the inbound tourism growth is one of the engines of economic growth. Therefore, the restrictions on inbound tourists may hurt the process of economic growth. However, the hypothesis of tourism-led growth is mostly found in small countries.

On the other hand, the growth-led tourism hypothesis postulates that there is a unidirectional causality between economic growth and tourism which runs from economic growth to tourism (Oh, 2015). This implies that economic growth leads to improvement in inbound tourism as such, restrictions on the international tourists have no or little adverse effects on economic growth of an economy. This line of thought presupposes that it is economic growth that drives the development of the tourism sector.

Yet, there is another school of thought that has argued that there is a feedback mechanism between tourism and economic growth; meaning that there is a bidirectional causality between tourism and economic growth. This implies that inbound tourism and economic growth jointly determine each other (Dritsakis, 2004; Durbary, 2004). The table below shows a survey of empirical studies on the nexus of tourism and economic growth.

Table 2: TOURISM GROWTH- NEXUS.

Authors	Time Coverage	Econometric methodology	Country Coverage	Causal Relationship
Multi-Country Cases:				
Lanza et al (2003)	1977-1992	Almost Ideal Demand System	13 OECD countries	Tourism → growth
Adamos & Sofranis (2005)	1981-2004	Fixed Effect Estimation	162 Countries	Tourism → growth
Skerrit &Huybers (2005)	1965-1992	Ordinary Least Squares	37 developing Countries	Tourism → growth
Neves & Paula (2008)	1982-2002	GMM and LSDV	94 countries	Tourism → growth
Po and Huang (2008)	1995-2005	Threshold Autoregressive Model	88 Countries	Tourism → growth
Lee and Chang (2008)	1992-2002	Panel Co-integration	OECD and non-OECD countries	Tourism → growth
Holzar (2010)	1970-2007	Ordinary Least Square	134 countries	Tourism → growth
Seetanah (2011)	1990-2007	GMM-Granger Causality Test	19 Island	Tourism → growth
Tiwari (2011)	1995-2008	Fixed and Random Model	China, Pakistan, Russia and India	Tourism → growth
Single Country Cases				
Balaguer & Cantavella-Jorda (2002)	1975-1997	Johansen Co-Integration	Spain	Tourism → growth
Driksakis (2004)	1960-2000	Error Correction Model	Greece	Tourism → growth
Durbarry (2004)	1952-1999	Error Correction Model	Mauritius	Tourism → growth
Narayan (2004)	1970-2000	Error Correction model	Fiji	Tourism → growth
Oh (2005)	1975-2001	Granger Causality Test	Korea	Growth → tourism
Kim et al (2006)	1956-2002	Granger Causality Test	Taiwan	Tourism → growth
Sr and Croes (2003)	1975-2000	co-integration	Aruba	Tourism → growth
Jimenez (2008)	1990-2004	Dynamic Panel Techniques	Spain and Italy	Tourism → growth
Kaplan and Celik (2008)	1963-2005	VAR Model	Turkey	Tourism → growth
Ozturk and Ali (2009)	1987-2007	ARDL	Turkey	Tourism → growth
Chen and Wei (2009)	1975-2007	EGARCH-M	Taiwan	Tourism → growth
			South-Korea	Growth → tourism
Katircioglu (2009)	1960-2005	Granger Causality Test	Cyprus	Growth → Tourism
Malik et al (2010)	1972-2007	johansen Co-integration	Pakistan	Tourism → growth
Akinboade and Braimoh (2010)	1980-2005	VAR Model	South-Africa	Tourism → growth
Brida et al (2008)	1980-2007	Johansen Co-integration	Mexico	Tourism → growth
Noor (2009)	1973-2007	Johansen Co-Integration	Pakistan	Tourism → growth
Brida et al (2010)	1987-2006	Johansen Co-integration	Mexico	Tourism → growth
Chancharat and Chancharat (2010)	1979-2006	Gregory-Hansen Test	Pakistan	Tourism → growth
Khalil et al (2010)	1960-2005	Johansen Co-integration	Pakistan	Growth → tourism
Tang (2011)	1995-2009	Error Correction Model	Malaysia	Growth → tourism
Kreishan (2011)	1970-2009	Johansen Co-integration	Jordan	Tourism → growth

Source:

From the above table, it can be seen that different countries with different levels of development have been studied using different time frames and methodologies. These studies have arrived at four different conclusions. Majority of the studies have found that tourism development leads to economic growth, and a few have shown that economic growth leads to tourism development. Others have suggested a feedback mechanism, that is, a two- way causation between tourism and economic growth. Finally, one of the studies have found no causation between economic growth and tourism development.

Of all these studies surveyed none is about Nigeria inspite of the enormous tourist potentials the country has. This is the major motivation of this study coupled with the fact that the economy is in dire need to diversify the economy away from oil as a result of the slump in oil prices that has taken a serious toll on the economy.

Methodology of the Study

Model Specification

In line with Abdul, Tahir and Muhammad (2013), the theoretical foundation of the model for this study is the Cobb-Douglas production function given as;

$$Y_t = A_t K^{\alpha} L^{1-\alpha} \text{----------1}$$

Where Y_t is real per capita GDP, A_t is factor productivity, K is capital stock, L is labour force.

However, empirical studies have linearized and expanded the Cobb-Douglas function to include other variables for analytical purposes. Thus, in this study, the Cobb-Douglas function is expanded to incorporate important determinants of economic growth such as trade openness of the economy, exchange rate, tourism, (see Abdul, Tahir and Muhammad, 2013). The functional specification of the model becomes;

$$y_t = f(K, Op, To, reer) \text{----------2}$$

Where y_t is real GDP, K is Gross Fixed Capital formation, Op is a measure of the openness of the Nigerian economy to the rest of the world. To refers to tourism arrivals in Nigeria, $reer$ is the real effective exchange rate,

In order to ascertain whether or not economic growth leads to tourism development in Nigeria, the tourism variable was endogenized and model 2 becomes;

$$To = f(y_t, K, Op, reer) - 3$$

Stochastically, models 2 and 3 are expressed as follows;

$$lny_t = \alpha_0 + \alpha_1 lnK_t + \alpha_2 lnop_t + \alpha_3 lnTo_t + \alpha_4 lnreer_t + \varepsilon_{1t} - - - - - 4$$

$$lnTo_t = \beta_0 + \beta_1 lnK_t + \beta_2 lnop_t + \beta_3 lny_t + \beta_4 lnreer_t + \varepsilon_{2t} - - - - - 5$$

Where α_0 and β_0 are the constant terms for models 4 and 5, respectively. α_i and β_i, (i =1,2,3,4) are the parameter estimates for models 4 and 5, while ε_{1t} and ε_{2t} are the stochastic terms in the models.

Given that previous studies have revealed mixed conclusions about the direction of causality between economic growth and tourism, this study has employed the Autoregressive Distributed Lagged (ARDL) methodology. This model has the advantage of testing for long-run cointegration using the bounds test cointegration; also, the method estimates both the short and long run estimates within a single framework.

Following the framework of the ARDL, equations 4 and 5 can be expressed as:

$$\Delta lny_t = \alpha_0 + \sum_{i=1}^{p} \alpha_1 \Delta lny_{t-1} + \sum_{i=1}^{p} \alpha_2 \Delta lnK_{t-1} + \sum_{i=1}^{p} \alpha_3 \Delta lnop_{t-1} + \sum_{i=1}^{p} \alpha_4 \Delta lnTo_{t-1} + \sum_{i=1}^{p} \alpha_5 \Delta lnreer_{t-1} + \varphi_1 lny_{t-1} + \varphi_2 lnK_{t-1} + \varphi_3 lnop_{t-1} + \varphi_4 lnTO_{t-1} + \varphi_5 lnreer_{t-1} + \varepsilon_{1t} \quad ---------6$$

$$\Delta TO_t = \beta_0 + \sum_{i=1}^{p} \beta_1 \Delta lnTO_{t-1} + \sum_{i=1}^{p} \beta_2 \Delta lny_{t-1} + \sum_{i=1}^{p} \beta_3 \Delta lnK_{t-1} + \sum_{i=1}^{p} \beta_4 \Delta lnOP_{t-1} + \sum_{i=1}^{p} \beta_5 \Delta lnreer_{t-1} + \varphi_1 lnTO_{t-1} + \varphi_2 lny_{t-1} + \varphi_3 lnK_{t-1} + \varphi_4 lnop_{t-1} + \varphi_5 lnreer_{t-1} + \varepsilon_{1t} \quad ---------7$$

The error correction version of the ARDL model for equations 6 and 7 are presented below:

$$\Delta lny_t = \delta_0 + \sum_{i=1}^{p} \delta_1 \Delta lny_{t-1} + \sum_{i=1}^{p} \delta_2 \Delta lnK_{t-1} + \sum_{i=1}^{p} \delta_3 \Delta lnop_{t-1} + \sum_{i=1}^{p} \delta_4 \Delta lnTo_{t-1} + \sum_{i=1}^{p} \delta_5 \Delta lnreer_{t-1} \emptyset ECM_{t-1} + \mu_{1t} \quad .....8$$

$$\Delta TO_t = \beta_0 + \sum_{i=1}^{p} \beta_1 \Delta lnTO_{t-1} + \sum_{i=1}^{p} \alpha_2 \Delta lny_{t-1} + \sum_{i=1}^{p} \alpha_3 \Delta lnK_{t-1} + \sum_{i=1}^{p} \alpha_4 \Delta lnOP_{t-1} + \sum_{i=1}^{p} \alpha_5 \Delta lnreer_{t-1} + \emptyset ECM_{t-1} + \mu_{1t} \quad .....9$$

Existence of a long-run relationship among the variables is examined by Bounds test. If the calculated F statistic is higher than the upper bound critical value, I (1) for the number of explanatory variables (k), the null hypothesis will be rejected. If the F statistic is lower than the lower bound critical value I (0), null hypothesis cannot be rejected. The F statistic being between I (0) and I(1) puts forth an indecision about co-integration.

Empirical Analysis

The starting point of this analysis is the unit root testing, even though the ARDL technique does not require pre-testing for unit root properties of the series, but the essence is to avoid series that are integrated of higher order. The result is presented in the following table.

Table 3: Unit root at level and first difference of the variables

variables	ADF (null: variable has unit root)			PP (Null: variable has unitroot)		
level	1st difference	critical values at 0.05 level	level	1st difference statistic	critical value at 0.05 level	
y_t	-0.64408	-5.085439	-2.297182	1.20842	-5.63242	- 3.98745
K	-0.5313	-5.7825	-2.97183	-1.3829	-4.5632	- 2.73456
TO	5.42572	-5.1316	-3.58062	-2.82472	-4.8248	- 3.2356
OP	1.15623	-4.07095	-2.97183	-1.04281	-3.9983	- 2.45982
reer	1.89361	-3.38321	-3.5872	-2.08438	-5.6784	- 3.67582

Source: Author's Computation Using Eviews 9

From the table above, when the computed values of the ADF and PP statistics are compared with the critical values, it reveals that in both ADF and PP statistics, the values of the computed statistics at first difference are higher than the critical values. This leads to the rejection of the null hypotheses and the acceptance of the alternative hypotheses. This implies that all the variables are integrated of order one i.e. I(1), meaning that the variables have the mean reverting ability in the long-run. This then calls for a long-run test. Thus, the bounds test co-integration was conducted and the results are shown in the following table;

Table 4: Bounds Tests for the existence of long -run Relationships

	F-Statistics	5% critical Bounds	
		I(0)	I(1)
Growth-led Tourism	3.3487	3.8241	4.8367
Tourism-led Growth	8.6289	4.2827	5.2843

Source: Author's Computation Using Eviews 9

Based on the results of the Bounds test, there is no long-run relationship between economic growth and tourism development in Nigeria since the F-statistic value of 3.3487 is less than the lower bound value of 3.8241; while there is long-run relationship between tourism development and economic growth in Nigeria since the F-statistic value of 8.6289 is higher than upper bound value of 5.2843.

Given the outcomes of the bounds tests, for Growth-led Tourism model, we estimate only the short-run ARDL estimates because of the fact that there is no long-run relationship and for Tourism-led Growth model, estimate both the short and long-run ARDL estimates since there is co-integration.

Table 5 Short-Run Estimates of ARDL (1,0,2,0,1) for Growth-led Tourism

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
lnTo(-1)	0.123963	0.179864	0.689207	0.4973
lny	4.047464	3.174639	1.274047	0.3221
lnK	0.340750	0.114088	2.986780	0.0241
lnKI(-1)	0.036413	0.108539	0.335483	0.7402
lnK(-2)	0.412014	0.114797	3.589059	0.0015
lnOP	0.004206	0.002199	1.912287	0.0678
lnreer	0.001249	0.002300	0.542903	0.5922
lnreer(-1)	0.004732	0.002430	1.947208	0.0633
C	-2.097044	0.480011	-4.368739	0.0002
@TREND	0.037406	0.023509	1.591139	0.1247

R-squared	0.990574	Mean dependent var	0.960064
Adjusted R-squared	0.987039	S.D. dependent var	1.322103
S.E. of regression	0.150517	Akaike info criterion	-0.709552
Sum squared resid	0.543730	Schwarz criterion	-0.260622
Log likelihood	22.06238	Hannan-Quinn criter.	-0.556454
F-statistic	280.2317	Durbin-Watson stat	2.022886
Prob(F-statistic)	0.000000		

Source: Authors' Computation using Eviews 9.0

The short-run estimates of ARDL (1,0,2,0,1) model have shown that economic growth though has positive relationship with tourism development in Nigeria but it is statistically insignificant. This may be due to the fact that the government is not investing much to develop the tourism sector. The outcome of the result invalidates the growth-led hypothesis, implying that in Nigeria, economic growth does not lead to the development tourism. This is evident in the current ranking of Nigeria in tourism development inspite of the enormous tourist potentials of the country. The R-square value of 0.99057 means that variations in the dependent variable (tourism development) is 99.6% explained by the explanatory variables included in the model.

Diagnostic Tests for Growth-led Model

In order to validate the performance of the model, the following diagnostic tests, Ramsey RESET test, Breusch-Godfrey LM test, and Breusch-Pagan-Godfrey heteroscedasticity test were performed.

Table 6: Diagnostic Tests for Growth -led Model

Tests	Statistics	Probability values
Ramsey RESET test (F-statistic)	0.165040	0.8489
Autocorrelation (Breusch-Godfrey LM test)	1.40078	0.1517
Heteroskedasticity (Breusch-Pagan-Godfrey)	1.54399	0.1328

Source: Authors' computation using Eviews 9

All the diagnostic tests have revealed that the null hypotheses should be accepted implying that the model is free from mis-specification problem, and that the successive errors are not correlated with each and there is equal variance among the errors of the model.

For the tourism-led model, having ascertained the existence of the long-run relationship running from tourism development to economic growth, the long-run and short-run estimates were computed and results are presented in the following tables.

Table 7: Long-Run Estimates of ARDL (2,2,0,0,0)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
lnTO	3.651829	0.879814	4.150688	0.0046
lnK	0.307165	0.458540	0.669876	0.5084
lnOP	0.028658	0.038874	-0.737202	0.4671
lnreer	-0.004877	0.008697	-0.560718	0.5794
C	1.096553	1.143417	0.959014	0.3458
@TREND	0.032958	0.095279	0.345913	0.7320

Source: Authors' Computation using Eviews 9.0

The long-run coefficients of the ARDL (2,2,0,0,0) showed that tourism development has a positive and significant relationship with economic growth in the long-run in Nigeria; this means that 1% increase in tourism development will lead to 36.5% increase in economic growth in the long-run. This result lends credence to the tourism-led growth hypothesis in the long-run in Nigeria.

Table 8: Short-Run Estimates of ARDL (2,2,0,0,0) for Tourism -led Growth

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
D(lny(-1))	0.344820	0.161344	2.137173	0.0430
D(lny(-2))	0.325096	0.149336	2.176939	0.0395
D(lnTO)	0.252416	0.255050	0.989673	0.3322
D(lnTO(-1))	0.753606	0.364623	2.066809	0.0497
D(lnTO(-2))	1.068410	0.345439	3.092901	0.0050
D(lnK)	0.076860	0.020680	3.716662	0.0011
D(lnOP)	0.001433	0.000479	2.994308	0.0063
D(lnreer)	-0.000101	0.000276	-0.364914	0.7184
C	0.229606	0.064611	3.553636	0.0016
CointEq(-1)	-0.019610	0.004873	-4.024541	0.0005

R-squared	0.999140	Mean dependent var	2.718786
Adjusted R-squared	0.998818	S.D. dependent var	0.805373
S.E. of regression	0.027692	Akaike info criterion	-4.095393
Sum squared resid	0.018405	Schwarz criterion	-3.646464
Log likelihood	79.62168	Hannan-Quinn criter.	-3.942295
F-statistic	3098.654	Durbin-Watson stat	2.369956
Prob(F-statistic)	0.000000		

Source: Authors' Computation using Eviews 9.0

The short-run estimates of ARDL (2,2,0,0,0) have revealed that the lagged estimates of GDP have positive and significant relationship with the growth in the manufacturing GDP. This means 1% increase in GDP in the previous years will lead to 66.9% increase in the growth of the GDP in the short-run. Also, in the short-run, tourism development has positive and significant relationship with economic growth in Nigeria. This means 1% increase in tourism development will lead to 207.44% growth in economic growth in the country. The R-square value

of 0.99914 means that variations in the dependent variable (economic growth) is 99.9% explained by the explanatory variables included in the model and the F-statistic value of 3098.65 with the probability value of (0.0000) shows a very robust joint effect of the explanatory variables of the model on the dependent variable (economic growth). In the short-run too, the results support the tourism-led growth hypothesis in Nigeria. The error correction term which is the speed of adjustment is correctly signed, which means if there is any deviation from equilibrium in the long-run, it will annually adjust by 2.0% to achieve convergence.

Diagnostic Tests of the Tourism-led growth model

In order to validate the performance of the model, the following diagnostic tests, Ramsey RESET test, Breusch-Godfrey LM test, and Breusch-Pagan-Godfrey heteroscedasticity test were performed.

Table 9: Diagnostic Tests of the Tourism -led growth model

Tests	Statistics	Probability values
Ramsey RESET test (F-statistic)	0.17534	0.4489
Autocorrelation (Breusch-Godfrey LM test)	1.43278	0.2617
Heteroskedasticity (Breusch-Pagan-Godfrey)	1.89399	0.4378

Source: *Authors' computation using Eviews 9*

All the diagnostic tests have revealed that the null hypotheses should be accepted implying that the model is free from mis-specification problem, and that the successive errors are not correlated with each and there is equal variance among the errors of the model.

Conclusion and Policy Implications

Based on empirical findings of this study, it means that in Nigeria tourism development can lead to economic growth both in the short and long-run. This finding support the tourism-led hypothesis. This finding corroborates the findings of Narayan (2004), Sr and Croes (2004), Oztruk and Ali (2009), Malik et al (2010), Akinboade and Braimoh (2010) and Tiwari (2011) that when tourism potentials of any economy is fully developed, it positively affects the process of economic growth both in the short and long-run.

Thus, given the vast and enormous tourist potentials of the Nigerian economy which have largely remained untapped, it is the position of this paper that the government and private individuals should expedite actions to invest in the tourism industry with a view to accelerating the process of economic growth especially now that the economic struggling to recover from the recession. The government can achieve this feat through the economic recovery and growth plan (ERGP).

Given that the policy direction of the ERGP is in tune with the Sustainable Development Goals (SDGs), which tourism is explicitly emphasized in goals 8, 12, and 14 of SDGs for its capacity to foster economic growth, create jobs, promote sustainable consumption and production and sustainable development; the Nigerian economy given the tourism potentials it has, can simply leverage on these potentials to achieve the ERGP and overcome the recession being currently faced with. This can be achieved through improvement in infrastructural facilities, political stability and security in the country.

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