Article

Interaction Effect of Tourism and Foreign Exchange Earnings on Economic Growth in Nigeria

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Abstract

Deteriorating nature experienced in the level of economic activities in Nigeria is evident in most sectors of the economy, including the tourism sector. But there is a need to develop the tourism industry because of its potentials for job creation, and the Nigerian government should make vital efforts to diversify the economy from oil production to other viable sectors in order to create wealth for the nation. Against this backdrop, this study examined the interaction effect of tourism and foreign exchange earnings from the tourism industry on economic growth in Nigeria. The study engaged time series data sourced from the World Development Indicators for the period 1980–2016 and employed the fully modified ordinary least squares (FMOLS) and Johansen cointegration econometric technique of analysis. The empirical results from the FMOLS showed that revenue generated from tourism have a significant and positive effect on Nigeria's economic growth; the interaction effect of tourism and foreign exchange earnings on economic growth in Nigeria is positive which implies that an increase in the tourism and foreign exchange earnings will lead to an increase in economic growth. Thus, based on these findings, the study recommended that as a matter of priority, the Nigerian government should encourage diversification through tourism promotion to achieve the desired level of economic growth and ensure that foreign exchange earnings from tourism transmits to the improvement of amusement parks and recreational centres which will significantly open new opportunities for tourism patronage and hence boost economic growth.

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Introduction

The deteriorating nature of economic activities in Nigeria cuts across virtually all sectors of the economy, tourism sector inclusive. It is interesting to know that the tourism industry displays a noticeable recovery after the economic downturn and a flexible economic growth for more than two decades in major European countries (Dogru & Bulut, 2018). The tourism industry is known to be one of the major industries of the world economies, as the sector generates about 18 per cent of the economic activities (Dogru & Bulut, 2018). It is unarguably believed that tourism has been recognized to be a safe shelter industry for both the developed and the developing countries, this transformation is mostly in the area of economic growth. The development of tourism generates new direct and indirect job opportunities and a reduction of deficit in current account and generates more tax revenues for the government for the running of economic activities (Adeleye, Osabuohien, Bowale, Matthew, & Oduntan, 2017; Dogru & Bulut, 2018; Matthew, Fasina, Olowe, & Adegboye, 2010).

In recent times, it is a known fact that tourism is fast becoming a strong primary source of growth to most developing countries as they make billions of US dollars (US$) from tourist locations (Samini & Sadeghi, 2011). It also creates numerous employment opportunities for the unemployed citizens in these countries. The tourism industry has now grown to be among the world's biggest and one of the fastest growing sectors, globally (Mowforth & Munt, 2015). According to the World Travel and Tourism Council (WTTC, 2014), data showed that in 2013 travel and tourism's total contribution to the global economy rose to US$7 trillion, about 9.5 per cent of the global gross domestic product (GDP); this figure revealed that tourism seems to be growing faster than other sectors such as financial and business services, transport and manufacturing, and its total contribution to employment was nearly 266 million jobs, about 8.9 per cent of the world's total employment rate. The sustained demand for travel and tourism, coupled with its ability to generate a high level of employment, continued to prove the importance and value of the sector as a tool for job creation and economic development (Dwyer & Kim, 2003; Ejemeyovwi, Osabuohien, & Osabohien, 2018).

The urgency for diversification to other revenue-generating sectors of the economy in most developing countries has become imperative because of their defining monocultural economic feature where only one or two commodities continue to supersede other exports and provide the bulk of foreign exchange earnings (which has adverse economic implication and could have significant consequences if the prices of such commodities fall in the international market); this assertion is supported by Osabuohien, Obiekwe, Urhie, and Osabohien (2018) and Shafaru (2010). According to Ashikodi (2010) who observed that just like in some other African countries, tourism in Nigeria started way back in the early 1960s with the creation of the Nigerian Tourist Association by a group of tourism lovers and practitioners in the country. Afterwards, tourism was legitimately documented by the government as a potential economic activity in the mid-1970s with the establishment of the Nigerian Tourism Board (NTB). In the early 1990s, the Nigerian Tourism Development Corporation (NTDC) was established to replace NTB because NTB failed to have any meaningful impact on the country's tourism industry. To strengthen the tourism industry, the government in conjunction with the United Nations World Tourism Organization (UNWTO) and the United Nations Development Programme (UNDP) in 2006 produced a National Tourism Development Master Plan (Bello, Bello, & Raja, 2014; Danglah, 2010; Nigeria Tourism Development Corporation [NTDC], 2006; Nwankwo & Agboeze, 2013).

In Nigeria, tourism is seen as one of the driving forces necessary for the continual progress of the economy. As of 2015, tourism's contribution to GDP was about 6.11 per cent, and it provided employment for about 2.81 per cent of the total labour force (National Bureau of Statistics [NBS], 2016). Therefore, the Nigerian tourism industry is growing and capable of generating more employment opportunities and foreign exchange earnings that can compete with the contributions of the agriculture and petroleum sectors (Osabuohien et al., 2018). Although, the tourism industry in Nigeria cannot be said to be fully developed, it is still in its developing stage. However, in spite of tourism's increasing position, the sector has attracted limited attention drawing from the limited studies that have been done in this area. Nigeria is said to be seeking crucial efforts to diversify her economy from oil production to other viable sectors that can generate revenue (Osuma, Ikpefan, Osabohien, Ndigwe, & Nkwodimmah, 2018). Thus, this diversification strategy is one way by which Nigeria's economic growth can be boosted. The study is structured into five sections as follows: the first section is the introduction, the second section is the review of literature, the third section examined the methodology and analysis of data, the fourth section focused on the discussion of findings, while the fifth section is the concluding part of the article and presents the conclusion, managerial implications and suggestions for future research.

Review of Literature

Tourism refers to traveling for pleasure or business, also the theory and practice of touring and the business of attracting, accommodating and entertaining tourists, as well as the business of operating tours (Milne & Ateljevic, 2001). Tourism may be international or within the traveller's country. The World Tourism Organization defines tourism more generally, in terms which go 'beyond the common perception of tourism as being limited to holiday activity only', as people 'traveling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes' (World Tourism Organisation [WTO], 1995, p. 10). According to Milne and Ateljevic (2001), in recent times, the tourism sector is one of the rapidly growing sectors globally which has become one of the largest sectors in the world. It is widely seen as an effective tool for socio-economic development of any nation. The sector has possible backward and forward linkages with the other sectors of the economy in that it creates job opportunities and provides source of livelihood for citizens. It also enhances the quality of life and consequently brings about economic growth (Fayissa, Nsiah, & Tadasse, 2008; Manwa, 2012).

However, Hall (2007) opined that the rate at which these benefits accrue to a nation significantly depends on some local conditions such as the disposition of citizens to recreational activities and the attention paid to these leisure centres. Furthermore, Manwa (2012) argued that for tourism to be sustainable the 'host community' has roles to play which include: the conservation and protection of natural resources that are situated in such communities. On the other hand, Smith (2007) opined that apart from the type of tourism, the extent to which tourism would impact on any nation is largely dependent on the expectations of visitors and the host country's ability to provide appropriate and adequate facilities. Smith also observed that unless economic policies to promote tourism in developing countries are well coordinated and implemented, tourism will not be a significant potential source of economic growth (Ekanayake & Long, 2012; Matthew, Osabohien, Fagbeminiyi, & Fasina, 2018).

Studies have been carried out on the impact of tourism and foreign exchange earnings on economic growth. According to Balaguer and Cantavell-Jorda (2002), cointegration and causality tests were employed on Spain's economic data to examine the role of tourism sector in the long-run economic development of the country; they found out that the increase in tourism income affects economic growth. Khalil, Kakar, and Waliullah (2007) investigated the role of tourism in the short run on the economic

development of the Pakistani economy. Their results showed that a strong relationship exists among tourism, receipts and economic expansion. In a related study, Zortuk (2009) empirically examined the relationship between expansion in tourism and economic growth in Turkey with the Granger causality test using the vector error correction model (VECM). He found out that there is a unidirectional causality between tourism development and economic development.

According to Seetanah, Padachi, and Rojid (2011), they employed panel autoregressive model to investigate the dynamic and endogenous contribution of tourism to output using 40 African countries between 1990 and 2006. Their results revealed that tourism contributed largely to African development, although private investment, openness and human capital remain the main drivers, they also found a reverse causation from economic growth to tourism development. In another study, Yusuf and Akinde (2015) examined tourism development and economic growth nexus in Nigeria. Time series data spanning from 1995 to 2013 was employed; they found out that a unilateral causality and a positive long-run relationship exists between tourism development and economic growth. Using the error correction model (ECM) and causal relationship between tourism receipts and economic expansion, Makochekanwa (2013) examined tourism contribution to economic growth of countries in the Southern African Development Community (SADC). He found out that the contribution of tourism to GDP, employment, export receipts and investment is significant, although the sector's contribution to the economy varies among SADC countries.

Sharmin (2016), in his study, examined empirically the economic contribution of the tourism industry in Bangladesh, using multiple regression techniques. The result of his study showed that tourism created over 1 million international tourists in 2014; international tourism generated US$1.5 trillion in export earnings, and international tourist arrivals grew by 4.3 per cent in 2014 to 1.133 billion. Robert (2010) examined the contribution of tourism to economic growth and food security using balanced panel data. Findings from his study showed that tourism is a principal export that accounted for about 83 per cent of developing countries, and it is the most significant source of foreign exchange after petroleum. In addition, results also showed that the rate of tourism growth in lower middle-income countries and in the 50 least-developed countries (LDCs) has approximately doubled the world average growth rate in recent years and almost tripled the growth rate for high-income countries.

Investment in the tourism sector of an economy can also be seen as a business incubation programme which is described as a dynamic process of developing emerging commercial entities. The most common goals of incubation programmes are creating jobs in a country, enhancing a country's entrepreneurial climate, retaining businesses in a country, building or accelerating growth in a local industry and diversifying local economies (Al-Mubaraki & Busler, 2010). Al-Mubaraki and Busler found out from this survey and interviews that small business incubators vary widely in size, sponsorship and budgets. Most incubators serve a locally or nationally based clientele and are primarily directed at fostering small technology businesses for the primary purpose of encouraging employment growth and economic development in the areas that they serve. Therefore, researchers deduced from this study that the tourism industry can boost economic growth in Nigeria via the provision of employment opportunities to the Nigerian citizenry and also generate foreign exchange for Nigeria which can boost the foreign reserves of the country and enhance economic growth. Similarly, Anifowose, Izlin, and Sukor (2018) in their study examined the Malaysian foreign exchange market microstructure assessment of exchange rate dynamics using the vector autoregressive (VAR) model. They estimated the influential role of currency order flow in the determination of the currency exchange rate for the Malaysian ringgit (MYR) against the US$ and investigated whether currency order flow captures the movements of exchange rate of MYR against US$, and how the long-term and short-term components impact the relative estimation of MYR in the international market. They analysed a dataset of every 15-minute currency order flow and exchange rate movements

from January 2010 to December 2015. Anifowose et al. found out that currency order flow explains an important portion of movements in the MYR–US$ exchange rate. In the same vein, the flow of foreign exchange from the tourism industry in Nigeria will have a positive impact on the Nigerian economy in that it will help improve the value of the Naira with respect to the US$.

Similarly, Ajibade, Ajayi, and Allo (2016) opined that engaging in business in today's world necessitates taking of strengths, weaknesses, opportunities and threats (SWOT) analysis, for investment to be enduring. The internal and external environment of business is also an important factor that needs to be considered. This means that for the tourism industry to strive in Nigeria there must be peace and stability of the economy; this is what will make both local and foreign investors to invest in the Nigerian economy. According to Shahbaz and Rahman (2012), they investigated the effect of financial development, imports and foreign direct investment (FDI) on economic growth in Pakistan from 1990 to 2008 using the quarterly data set.

The autoregressive distributed lag (ARDL) bound testing approach was employed to examine the long-run relationship, and the direction of causality was examined using the VECM framework among variables. The findings of their study revealed the existence of cointegration, showing long-run relation among financial development, imports, FDI and economic growth. Shahbaz and Rahman also found out that financial development, imports and FDI have a positive and significant effect on economic growth in Pakistan. Causality analysis result revealed a bidirectional relation among variables, but strong causality is also running from financial development, economic growth and FDI to real imports. Investment in the tourism sector will attract FDI as foreigners will not only come into the Nigerian economy to invest, but they will also come to visit the tourist centres in Nigeria. This will help generate revenue into the purse of the Nigerian government; this revenue will in turn be invested in productive activities that will boost economic growth in the long run.

Tourism and Economic Growth in Nigeria

As a nation, Nigeria is blessed with both natural and material resources that can be explored to aid the economic development of the country by providing revenue and foreign exchange (Osabuohien et al., 2018). Tourism has been discovered to be a very important instrument for alleviating poverty towards the attainment of the Millennium Development Goals and by extension to achieve the Sustainable Development Goals (Tunde, 2012). It is pertinent to note that tourism ranks as one of the programme initiatives that contribute to national development. In Nigeria, the revenue generated from levies on hospitality sector (registration and other charges) increased from ₦1.149 million in 2004 to ₦100 million in 2009; this represents over 1,000 per cent increase, still in 2009, ₦313 million was generated as company tax from companies operating in the tourism industry (NBS, 2015). According to NBS (2012), in 2011 the tourism industry contributed about ₦1,232.2 billion (3.3%) to the GDP in Nigeria, and that over the next 10 years, the amount that is speculated is expected to grow by 6.5 per cent per annum to ₦483.4 billion in 2022. The WTTC (2014) forecasts that the industry will generate 897,500 jobs representing 2.85 per cent of Nigeria's total workforce in 2017. Thus, from the foregoing, the only way to have this growth sustained is to resuscitate the neglected tourist sites in Nigeria. This would translate to increased contribution to the GDP and generate employment opportunities and improved economic and social progress within Nigeria and Africa as a whole (Tunde, 2012). The immense socio-economic impact and benefits of tourism have in recent times been recognized by several states and the Federal Government of Nigeria. Contingent upon this, part of the effort towards diversifying the economy has been to harness and develop tourism—the untapped non-oil sector (Akpan & Obang, 2012; Ghose, 2000).

Tourism has the capacity of making a developing country like Nigeria to benefit from the advantages of opening the economy up for foreign investors to come in and invest in the hospitality and recreational businesses. This broadens the Nigerian economy. Although the quality of the environment, both natural and man-made, is essential for tourism; this cannot be taken for granted given the complex relationships that exist between tourism and the environment (Mbaiwa, 2003). Tourism is closely linked with the construction of roads and airports, holiday resorts, hotels, restaurants, shops, golf courses and historical sites, among others. Thus, ecological issues, in the view of Giaoutzi and Nijkamp (2006), inherently have costs for the quality and quantity of accessible natural resources, which over time might have adverse consequences that hinder the development of tourism. Yasong (2008) opined that it is easy to remodel the adverse influence that tourism associates with and amplifies the benefits it contains. This could be efficiently carried out via administrative planning of tourism. This is particularly needed in order to avoid undermining the carrying capacity of the biophysical setting. In specific and direct terms, it is believed that tourism can have an adverse effect on the social fabrics of local economies where frequent indigenous culture such as local festivities, holidays, dance and folklores, among others, could be incorporated (Godfrey & Clarke, 2000).

Tourism has been known to contribute to the growth of the Nigerian economy over the years, visible from its foreign exchange earnings potential. As revealed in Table 1 and Figure 1, the trend of its contributions is indicated by the contribution to the GDP, employment and visitors export. Contributions are not consistent and do not show either an increasing or decreasing trend over the period considered. The percentage share of the tourism sector to total GDP ranges from 5.6 per cent in the year 2005 and fluctuated within the intervening years and dropped to 3.7 per cent in 2016. It is also discovered that the contribution of tourism to employment generation is still very low; the percentage share of the sector to total employment ranges from 4 per cent in 2004 and fluctuates in the subsequent years and falls to 2.83 per cent in 2016 (see Figure 1).

Table 1. Percentage of Tourism Contribution to the Nigerian Economy between 2000 and 2016

Year	Tourism % Share of GDP	Total Visitor Exports	% Share of Total Exports	% Share of Total Employment
2000	4.4	18.92	0.7	3.8
2001	4.4	18.69	0.8	3.9
2002	5	30.87	1.2	4.3
2003	4.3	7.5	0.2	3.7
2004	5.5	6.51	0.1	4.8
2005	5.6	18.25	0.3	4.9
2006	2.6	26.89	0.3	2.3
2007	4.1	42.4	0.6	3.6
2008	5.4	159	1.1	4.4
2009	4.4	172.2	1.5	3.8
2010	2.9	149.8	0.8	2.4
2011	2.8	129.8	0.6	2.5
2012	2.9	109	0.6	2.5
2013	3.1	107.1	0.7	2.7
2014	3.1	106.2	0.7	2.7
2015	30.5	107.52	00.8	20.81
2016	30.7	108.98	00.84	20.83

Source: Adapted from Yusuf and Akinde (2015), WTTC (2016). Prepared by the authors (2018).
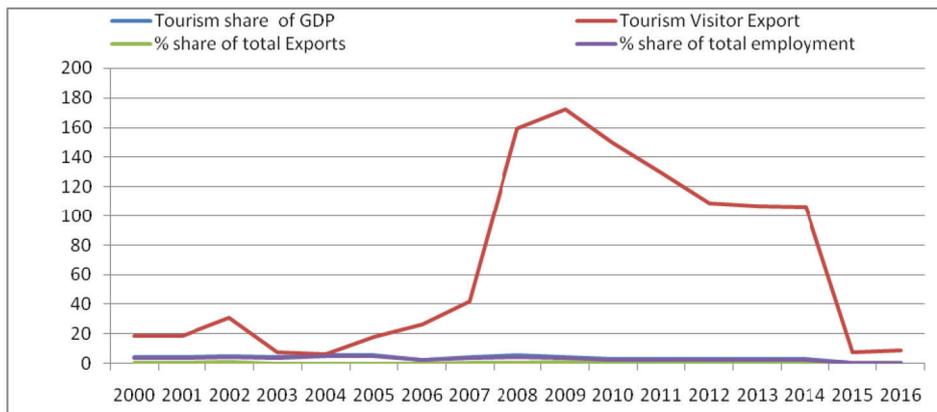
Figure 1. Percentage of Tourism Contribution to the Nigerian Economy between 2000 and 2016

Source: The authors (2018).

Over time, tourism business mostly creates an atmosphere for overseas earnings in the country. It does this by attracting foreigners from other countries to Nigeria; for instance, the Tinapa resort or Obudu cattle ranch in Cross River State attract foreigners to the state annually for site seeing and holiday visit (Ojo, 2014). In addition, the participation in tourism-related business pays massively in the advancement of the host localities or places. It positively affects the quality of life and welfare of the people living in that area. Localities with tourism potentials stand a better chance of maximizing the contributions of tourism to their economic lives by actively initiating and participating in various tourism-related businesses: small- and large-scale businesses.

However, there is nowhere the problem of inadequate infrastructure is most noticeable than in Nigeria where the shortage of infrastructure is compounded by the inability to maintain the few existing ones and replicate infrastructure to areas lacking in amenities usually outside of the urban cities in Nigeria. Inadequate infrastructure is most predominant in the rural areas where incidentally most of the tourist sites are located, although the urban areas are bedevilled with shortage of infrastructural facilities. Nevertheless, efforts at developing infrastructure to support tourism in Nigeria are inconsequential as this may be happening only in the urban areas (Briedenhann & Wickens, 2004). According to Fayissa, Nsiah, and Tadaese (2008), they observed that this is where and how tourism is expected to have its most significant influence on economic development assuming that amenities and revenues can be attracted to rural areas in Nigeria; this will stimulate economic growth. In this respect, it is believed that tourism would be able to facilitate the replication of basic amenities to areas that are underdeveloped in Nigeria. These are areas that lack infrastructural facilities (Havi & Enu, 2013; Hawkins & Mann, 2007; Sepo, 2006).

This study is built on the new endogenous growth theory which was developed as a reaction to omissions and deficiencies in the Solow Neoclassical growth model. The theory explains the long-run growth rate of an economy on the basis of endogenous factors as against exogenous factors of the neoclassical growth theory. This theory is of the view that the growth in GDP is a natural consequence of a long-run equilibrium. The theory explains both growth rate differentials across countries and a greater proportion of the growth observed. The endogenous growth theory discards the neoclassical assumption of diminishing marginal returns to capital investments, permitting increasing returns to scale in aggregate production and frequently focusing on the role of externalities in determining the rate of return on capital investments (Matthew, Osabohien et al., 2018).

By assuming that public and private investments in human capital generate external economies and productivity improvements that offset the natural tendency for diminishing returns, endogenous growth theory explains the existence of increasing returns to scale and the divergent long-term growth patterns among countries. Thus, the theory emphasizes technical progress resulting from the rate of investment, the size of the capital stock and the stock of human capital (Todaro & Smith, 2011). Therefore, investments in tourism business bring about increasing returns to scale that can bring about the technological progress of an economy, because it increases aggregate output which boosts economic growth. One way that the Nigerian government can use to come out of its mono-economy situation of Nigeria is to diversify the economy. The tourism sector, if well-developed, can help generate foreign exchange which will go a long way to help in the diversification drive of the Nigerian economy (Matthew, 2013; Matthew, et al., 2018; Osuma et al., 2018).

Objectives

The main objective of this study is to examine the interaction effect of tourism and foreign exchange earnings on economic growth in Nigeria. However, the other sub-objectives are to ascertain the impact of trade balance in tourism on economic growth in Nigeria. In line with these objectives, this study formulated hypotheses stated in the null forms, namely, H_{01}: there is no significant relationship between the interaction effect of tourism and foreign exchange earnings on economic growth in Nigeria, and H_{02}: trade balance in tourism does not have an impact on economic growth in Nigeria. In order to achieve these objectives and test these hypotheses, we employ the FMOLS and Johansen cointegration econometric techniques.

Rationale of the Study

This study becomes imperative because of the following reasons: first, the economy is likely to be impacted by tourism receipts in direct, indirect and induced ways. The direct effects usually involve changes in 'sales, employment, tax revenues and income levels' due to the immediate impacts from tourist spending. The indirect effects are generally changes in 'prices, quality and quantity of goods and services, property and other taxes and social and environmental impacts'. These effects are widely observed in tourism-related industries. The induced effects are often related to changes in household spending, a result of the additional income generated from tourist spending. Second, tourism's critical roles in the accumulation of capital, alleviating poverty and improving social welfare have aroused the interest of the researchers of this study. Third, the efficiency and productivity of the tourism sector invariably increase economic resources, which helps to maintain a high level of tourism competitiveness. Finally, in the context of globalization, a country's tourism industry will interact with external economic factors, for example, the causal relationship between FDI and the international tourism. The tourism industry would attract foreign investors into the Nigerian economy which in turn will boost economic growth. The aforementioned reasons constitute the rationale for carrying out this study.

Methodology

Annual data for the selected variables were chosen and they are: economic growth (GDP per capita growth rate—GDPGR) which measures the overall economic growth of the country and the interaction between international tourism expenditure (percentage of total imports) a measure of tourism

development and tourism revenue receipts (TRR) as a measure of foreign exchange earnings (TRXPEP). The study designed an empirical model from theory that explains the determinants of economic growth. The other key independent variables in this study are gross fixed capital formation (CAP), total labour force (LAB), trade balance in tourism (TRADB), effective exchange rate (EXCH), trade balance in tourism (TRD), while the dependent variable is the real GDP per capita growth rate (GDPGR) as a proxy for economic growth.

Thus, the model can be stated implicitly as follows:

$$GDPGR = f(TRXPEP, CAP, LAB, TRADB, EXCH, TRD) \qquad (1)$$

Equation (1) can be specified explicitly in a nonlinear form as follows:

$$GDPGR = TRXPEP^{\alpha 1}.CAP^{\alpha 2}.LAB^{\alpha 3}.TRADB^{\alpha 4}.EXCH^{\alpha 5}.TRD^{\alpha 6} \qquad (2)$$

The study utilized the Cobb Douglas production function, given that a production process (input and output systems) is undergone to produce a given level of output. Taking the double log of variables (i.e., to log both the dependent and the independent variables) in order to linearize Equation (1) gives:

$$log\,GDP = \alpha_1 log\,trxpep + \alpha_2 log\,lab + \alpha_3 log\,cap + \alpha_4 log\,tradb + \alpha_5 log\,exch + \alpha_6 log\,trd + e \qquad (3)$$

Technique of Estimation

This study adopts the technique of estimation as used by Bashier and Siam (2014), where a unit root test is carried out to determine the stationary level; the Johansen cointegration method is used to check for the existence of cointegrating equations between the dependent variable and the independent variables (based on the stationarity result) and the FMOLS and the normalized cointegrating coefficients are inter-preted to determine the long-run estimates for policy inference. A major assumption of a standard regression analysis is the condition that variables being tested are stationary at levels. However, many macroeconomic time series variables are often not stationary at levels, they fluctuate over time (Fleegler, 2006). Hence, before regression analysis can be carried out with the data sourced, the test for stationarity must be conducted in order to avoid 'bias estimates' or 'spurious results'.

The FMOLS technique was originally introduced and developed by Phillips and Hansen (1990) for estimating single cointegrating relationships for which the method has an advantage over the Engel and Granger techniques in introducing an appropriate correction to overcome the inference problem, and hence, the *t*-test for long-run estimates are valid (Himanshu & Lester, 2007). The FMOLS technique utilizes Kernal estimators of the nuisance parameters that affect the asymptotic distribution of the OLS estimator. In order to achieve asymptotic efficiency, this technique modifies the least squares to account for serial correlation effects and test for endogeneity in regressors that result from the existence of coin-tegrating relationships (Kalim, Ali, & Shahbaz, 2012; Wooldridge, 2015). Hence, the FMOLS method produces reliable estimates for small sample size and provides a check for robustness of results. While estimating the long-run coefficients, the FMOLS is employed, but to determine the number of cointe-grating vectors for any given number of non-stationary variables of the same order, the Johansen cointe-gration test could be employed (Bashier & Siam, 2014). The FMOLS technique corrects for endogeneity and serial correlation while producing optimal long-run cointegrating estimates (Phillips & Hansen, 1990) and is also reliable in the cases of a dataset having stationarity at levels and first difference.

Data Sources and Measurement of Variables

The data set utilized by this study is a time series data for Nigeria covering the period from 1980 to 2016. The data was sourced from World Development Indicators and the Central Bank of Nigeria Statistical Bulletin (Central Bank of Nigeria [CBN], 2016). Variables include the GDP per capita growth rate as a proxy for economic growth, tourism–foreign exchange earnings interaction (TRXPEP) the main variables, gross fixed capital formation (CAP), total labour force (LAB), trade balance in tourism (TADB), effective exchange rate (EXCH), trade balance in tourism (TRD), as presented in Table 2.

Results and Discussion

Descriptive Statistics

The descriptive analysis shows the features of the data with respect to each variable. Tools utilized are mean, median, maximum, minimum, standard deviation (*SD*), skewness and kurtosis. Table 3 shows the statistical analysis of variables—real GDP, tourism–foreign exchange earnings interaction (*TXPEP*) the

Table 2. Data Sources and Measurement

Data	Identifier	Data Source	Measurement
Economic growth: GDP per capita growth rate	*GDPGR*	World Development Indicators (WDI, 2018)	Growth rate
Tourism–foreign exchange earnings interaction	*LTRXPEP*	World Development Indicators (WDI, 2018)	Number
Gross fixed capital formation	*LCAP*	World Development Indicators (WDI, 2018)	Constant (US$)
Total labour force	*LLAB*	World Development Indicators (WDI, 2018)	Number
Trade balance in tourism	*LTRADB*	World Development Indicators (WDI, 2018)	Number
Effective exchange rate	*LEXCH*	World Development Indicators (WDI, 2018)	Constant (₦)

Source: The authors (2018).

Table 3. Summary Statistics of Variables

	LGDPGR	LTRXPEP	LTRD	LTRADB	LLAB	LREXCH	LTRREP	LCAP
Mean	0.28	0.41	0.93	0.45	5.87	1.32	−0.08	10.39
Median	0.18	0.19	0.90	0.55	7.58	1.34	0.00	10.26
Maximum	1.48	1.28	1.39	1.16	7.75	2.20	0.46	10.85
Minimum	−0.72	−0.12	0.65	0.00	0.00	−0.26	−0.89	10.08
SD	0.43	0.46	0.18	0.44	3.24	0.87	0.25	0.25
Skewness	0.28	0.43	0.23	0.16	−1.29	−0.62	−1.35	0.60
Kurtosis	3.59	1.54	2.44	1.45	2.66	1.97	5.64	1.81
Observations	35	35	35	35	35	35	35	35

Source: The authors (calculations using EViews 9, 2018).

main variables, gross fixed capital formation (*CAP*), total labour force (*LAB*), trade balance in tourism (*TRADB*), effective exchange rate (*EXCH*), trade balance in tourism (*TRD*). Looking at the skewness, most of the variables were positively skewed. This implies that the chance of getting an extremely negative outcome is very low compared to a negatively skewed dataset. Examining the kurtosis, all variables had their entire kurtosis coefficient greater than zero (>0) which shows that variables are leptokurtic. This also implies a low chance of getting a negative outcome.

Econometric Analysis

Unit Root Test

In dealing with times series data, it is necessary to check the presence of unit root with a goal to examine the level of stationarity of variables of interest. This is because time series are usually non-stationary, and the use of such data in econometric analysis could lead to the generation of spurious results. For this reason, the unit root test, which is used to test for the stationarity of time series, is used (Pesaran & Shin, 1999). This study proceeds by utilizing two types of unit root tests—the augmented Dickey–Fuller (ADF) unit root test and the Phillips–Perron unit root test—in order to determine whether logged time series data are stationary or not. The result of the unit root test is presented in Table 4.

As seen from Table 4, all variables of importance in this study are stationary after first differencing. With stationarity of orders established, the Johansen cointegration and the FMOLS methods are appropriate in carrying out the analysis for achieving the objectives of this study. Results are presented in Table 5.

Results based on trace test and the maximum Eigenvalue statistics reject the null hypothesis of no cointegrating equation among variables. The rejection of null hypothesis implies that there are at least two cointegrating equations among variables at 5 per cent level of significance. Similarly, the long-run test based on maximum Eigenvalue also confirmed that there is at least one cointegrating equation at 5 per cent level of significance. As it has seen that variables are cointegrated, there is a long-run equilibrium relationship among variables of interest; hence, the study proceeds by interpreting the normalized cointegration coefficients and carrying out the FMOLS estimation (for robustness) to generate the coefficient that shows the magnitude and direction of relationship within the result (see Table 6).

In terms of the interpretation of the FMOLS and Johansen cointegration results, specifically interpreting for the major variable of interest (tourism and foreign exchange earnings interaction), the *t*-statistic of the FMOLS-estimated coefficient is statistically significant at 5 per cent level of significance (>2), while the Johansen cointegration-estimated coefficient is statistically significant at 5 per cent level of significance

Table 4. ADF and PP Unit Root Tests

| Variables | ADF Test | | PP Test | | Order |
	Level	First Difference	Level	First Difference	
LGDPCGR	−2.1711	−4.6916	−2.0689	−13.312	**I (1)**
LTRXPEP	−2.4890	−5.1236	−2.4890	−4.8878	**I (1)**
LCAP	−0.5923	−3.1841	−1.3803	−4.4866	**I (1)**
LLAB	−1.7760	−4.2206	−1.6640	−5.8309	**I (1)**
LTRADB	−1.7348	−4.2206	−1.7348	−4.5123	**I (1)**
LEXCH	−2.6512	−4.5123	−2.1306	−4.4203	**I (1)**
LTRD	−1.0110	−4.8709	−1.0110	−4.8125	**I (1)**

Source: The authors (calculations using EViews 9, 2018).

Table 5. Estimates from Trace Test Statistics

Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None*	0.831551	203.4360	169.5991	0.0002
At most 1*	0.740070	144.6589	134.6780	0.0113
At most 2	0.571829	100.1966	103.8473	0.0851
At most 3	0.547243	72.20491	76.97277	0.1091
At most 4	0.426162	46.05573	54.07904	0.2130

Source: The authors (calculations using EViews 9, 2018).
Notes: * (at least one cointegrating equation), ** (significant at 5% level).
    CE means Cointegrating Equation.

Table 6. Estimates from Maximum Eigenvalue Statistics

Hypothesized		Max-Eigen	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None*	0.831551	58.77708	53.18784	0.0122
At most 1	0.740070	44.46233	47.07897	0.0928
At most 2	0.571829	27.99171	40.95680	0.6224
At most 3	0.547243	26.14918	34.80587	0.3682
At most 4	0.426162	18.32846	28.58808	0.5479

Source: The authors (calculations using EViews 9, 2018).
Notes: Maximum Eigenvalue test indicates 1 cointegrating equation(s) at the 0.05 level.
    * (at least one cointegrating equation), ** (significant at 5% level).

(<2), implying the presence of individually statistically significant relationship existing between tourism and foreign exchange earnings interaction and economic growth in Nigeria (Dickey & Fuller, 1979; Phillips & Ouliaris, 1990). In terms of the direction of relationship for the major variables of interest, tourism and foreign exchange earnings interaction and economic growth in Nigeria, a positive relationship exists, which implies that an increase in the tourism and foreign exchange earnings will lead to an increase in economic growth. In terms of the magnitude of the impact, the FMOLS estimates showed that a 1 per cent increase in tourism and foreign exchange earnings interaction will lead to a more than proportionate increase of about 2.30 per cent (given that the variables are logged; interpretation is based on elasticities, and the value of the coefficient is >1) in economic growth in Nigeria. This suggests that the influence of tourism and foreign exchange earnings interaction as a determinant of economic growth is statistically significant and significant which contributes significantly at 5 per cent level of significance (see Table 7).

Tourism creates an avenue for increases in personal income and an improvement in living standards for industrial workers. The interaction between tourism and foreign exchange earnings from tourism transmits to an improvement of park areas, street furniture and design criteria and greater care and attention will be given to overall environmental quality which significantly opens new opportunities for tourism patronage and hence boost economic growth.

Table 7. Empirical Results

Dependent Variable: GDP per capita growth rate	FMOLS	Johansen Cointegration Coefficients
Tourism–foreign exchange earnings interaction	2.302 [2.08]	3.048 [1.62]
Gross fixed capital formation	0.027 [1.10]	1.704 [4.86]
Labour force	0.050 [0.71]	0.149 [2.48]
Trade balance in tourism	2.262 [1.98]	3.493 [1.72]
Trade in Service (% of GDP)	−0.170 [−0.61]	0.335 [0.68]
Effective exchange rate	1.05 [0.71]	−0.161 [−1.41]

Source: The authors (calculations using EViews 9, 2018).
Note: Figures in square bracket '[]' represent *t*-statistic values.

Conclusion and Managerial Implications

This study examined the impact of foreign exchange earnings from international tourists on the economic growth of Nigeria and the interrelationship between international tourism and foreign exchange earnings. The motivation for the study stemmed from the fact that tourism has long been recognized as a major source of foreign exchange earnings and an economic diversification tool and has significant effect on the growth of an economy; this is because, the sector has become one of the largest industries and the fastest growing economic sectors. For many countries, tourism is seen as a main instrument for regional development, as it stimulates new economic activities. The study examined the interaction effect of exchange rate earnings and tourism on economic growth of Nigeria; findings showed that tourism and foreign exchange earnings interact positively to induce economic growth in Nigeria, and it is statistically significant at 5 per cent level. From the FMOLS and Johansen cointegration results it is clear that, in the long run, the foreign exchange rate and tourism interaction will increase economic growth by 2.302 and 3.048 per cent, respectively.

It was also noted that although tourism has a positive economic effect on the balance of payments, employment, gross income and production, it may also have negative effects, particularly on the environment. Unplanned and uncontrolled tourism growth can result in such a deterioration of the environment by which tourist growth can be compromised. Therefore, the study recommended that further studies should be carried out on the protection of the environmental effect of tourism; since the environment, being the major source of tourist product, should be protected in order to have further growth of tourism and economic development in the future. This is especially true with regard to tourism based on the natural environment as well as on the historical–cultural heritage. Sustainable tourism has three interconnected aspects: environmental, socio-cultural and economic. Sustainability implies permanence, so sustainable tourism includes optimum use of resources, including biological diversity, minimization of ecological, cultural and social impacts and maximization of benefits for conservation and local communities.

Suggestion for Future Research

This study only focused on Nigeria; however, this study suggests that other researchers may consider carrying out a comparative study of the same topic using Nigeria and a developed country or it could be with other African countries such as Ghana, South Africa or Kenya. Other studies could also be done using panel data comprising countries in sub-Saharan Africa or the African continent.

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