

Developing The Tourism Resources Of Nigeria As A Potential Source Of Revenue

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ABSTRACT:- This study investigated the tourism industry as a potential source of revenue enhancement to the Nigerian economy. The study used datasets from the World Development Indicator from 1995 to 2023. Gross national income was used as dependent variable while tourism trips, expenditure, employed persons and inbound arrivals served as the independent variables. The Autoregressive Distributed lag model form of regression was used as the key estimation technique. Findings arising from the study showed that tourism arrivals, trips and number of employed people significantly affected national revenue while, expenditure had no significant effect. It is recommended that the tourism sector in Nigeria should be developed for the necessity of economic growth and diversification.

Keywords: Tourism development, National Income, ARDL model, Economic diversification.

I. INTRODUCTION

Tourism is widely recognized as a key driver of economic growth and a vital revenue source, with its ability to contribute to a nation's GDP through export earnings (Marcelino & Juan, 2020). While tourism is often viewed as a tool for development, recent literature emphasizes its complex role in sustainable economic growth. Success in tourism requires enabling conditions, such as translating tourism revenue into better quality of life for local communities and meeting tourist expectations. In this context, a successful tourism destination efficiently generates revenue while enhancing the tourist experience. Nigeria, with its rich cultural heritage and scenic landscapes, has significant potential to diversify its economy and reduce reliance on oil exports through tourism. Despite this, the sector remains underdeveloped (Alamai et al., 2018). The history of tourism in Nigeria dates back to the 15th century, with steady growth since the establishment of the Nigerian Tourist Association in 1962 (Munzali, 2011). Despite challenges, tourism's foreign exchange potential was evident in 1987, when 328,906 tourists generated N1.1 billion in revenue (CBN, 1988). Projections indicated further growth by 2005 (Yusuf & Akinde, 2015).

While Nigeria has demonstrated economic growth potential, it remains vulnerable to the challenges typical of resource-based economies, with fluctuating growth rates and periods of recession (Fritova Economics, 2017). However, the United Nations World Tourism Organization (UNWTO, 2015) highlights tourism's resilience in economic recovery, creating income and jobs globally. The sector's development relies on government support and international collaboration, particularly in promoting Nigeria's tourist sites and cultural festivals, which attract significant international visitors and contribute to economic growth. Oladunjoye and Areyemi (2021) argue that tourism's economic role is amplified by global collaboration, while the World Travel and Tourism Council (WTTC) has consistently recognized its contribution to GDP and job creation (Ekanayake, 2012).

Nigeria's tourism sector, which contributed N3.63 billion to GDP in 2018 (Osinubi & Osinubi, 2020), holds great promise for further growth, contingent upon continued investment and development.

Despite challenges such as inadequate infrastructure, poor policies, limited funding, political instability, and security issues, international tourism has grown significantly since the 1970s. However, Nigeria's tourism potential remains largely untapped due to the lack of effective policy implementation and infrastructure development. The Nigerian Tourism Master Plan, intended to guide sector development, remains largely unimplemented, further hindering growth.

Nigeria's economy continues to rely heavily on oil exports, and while tourism is recognized as a potential revenue source, it has not made a significant contribution to national income. Despite the country's rich cultural and natural resources, the tourism sector faces obstacles such as poor marketing, insufficient infrastructure, and ineffective policy execution, which have led to a decline in inbound tourism and revenue generation. As a result, the impact of tourism on Nigeria's Gross National Income (GNI) is poorly understood, preventing the development of targeted policies to foster growth in the sector. This study aims to explore

Nigeria's tourism development from 1999 to 2023, identifying challenges and opportunities for growth. It also addresses Nigeria's low ranking (129th out of 136 countries) in the Travel and Tourism Competitiveness Report, highlighting the need to examine the role of tourism in contributing to the country's GDP, especially given the low international tourist arrivals and revenue compared to other African nations.

II. LITERATURE REVIEW

Musgrave's theory identifies three ranges in the demand for public recreational services, which correspond to different levels of per capita income. The foundational or primary range exists at low per capita income levels, typically observed in developing nations. Here, the need for public recreational facilities is low, as most income is devoted to satisfying basic necessities (Musgrave, 1959). At the secondary level, as per capita income begins to increase above the foundational range, there emerges a growing demand for public services like health, education, transport, and hospitality. This expansion necessitates a corresponding rise in government expenditures to meet these needs (Musgrave & Musgrave, 1989). Finally, in the high-income range, commonly seen in developed economies, the public sector's growth accelerates as basic needs are largely met, and demand for quality public services intensifies. Specifically within the tourism sector, higher income levels among tourists drive up demand for hospitality and recreational services. This demand stimulates government provision of supporting infrastructure, including health services, transport networks, and other social amenities, which in turn supports the growth of tourism (Musgrave, 1959; Stiglitz, 2000).

Since tourism is primarily a consumption-oriented activity, with products and services designed specifically for tourists, the behaviour of tourists in selecting destinations can be explained through the law of demand. Edgeworth (1871) identified several key factors affecting demand for commodities, which can be adapted to tourism. Product/Service Price: Price plays a crucial role in a tourist's destination decision, primarily due to two cost components: Transportation Costs: Tourists consider the expense of travel from their home country to their destination before committing. These costs, which can vary widely, influence a tourist's decision either positively or negatively. Furthermore, transportation costs also include economic aspects like the opportunity cost associated with long, uncomfortable journeys (Edgeworth, 1871). In-Country Costs: These are the expenses incurred within the destination, such as accommodation and daily necessities. Differences in local costs can significantly influence tourists' choice of destination, as some destinations may offer a better balance between cost and value, thereby affecting tourist demand (Smith, 2004). Income Variable: Since tourists operate within the limits of their disposable income, their choice of destination is often determined by income level. This means a tourist may prefer one destination over another based on affordability, directly aligning with the elasticity of demand, where higher income generally corresponds to higher spending on travel (Smith, 2004). Socio-Political Variables: Qualitative factors such as the availability and quality of tourist attractions in a country significantly impact demand. Natural landmarks, cultural sites, historical ties, and festivals are among the attractions that influence a tourist's choice. Additionally, socio-political factors, including climate and political stability, can sway destination preferences. For instance, political instability can deter tourists from visiting a region, as countries with centralized power structures are often perceived as more politically unstable (Baum & Hai, 2005). Political freedom is another crucial aspect; tourists are likelier to visit countries with stable governance and minimal unrest. In Nigeria, for instance, current insecurity issues in Northern states are significant barriers to tourism growth, as tourists avoid areas perceived as unsafe (Baum & Hai, 2005; Kester, 2003).

Following the Homan (1974) social exchange theory, individuals possess freedom of choice and frequently encounter situations requiring them to select among competing actions. Each choice yields some rewards while incurring associated costs. Rewards may manifest in various forms, including money, goods, services, prestige, or status (Becker, 1976; Homans, 1958). The theory suggests that individuals act rationally, seeking to maximize rewards while minimizing costs, ultimately selecting the actions that lead to the most favourable outcomes. Applied to tourism, this theory implies that tourists evaluate the costs of visiting specific destinations—such as accommodation expenses, transportation, health and safety, and food—against the anticipated benefits or experiences. If the expected benefits surpass the costs, the tourist is more likely to undertake the trip (Smith & Duffy, 2003). When choosing among potential destinations, tourists often compare the perceived outcomes of each option and select the one they believe will yield the highest satisfaction relative to alternatives (McIntosh et al., 2007).

Nigeria's tourism sector remains largely unorganized and underdeveloped, limiting its GDP contribution. As Africa's most populous nation, Nigeria boasts rich cultural diversity, a welcoming environment, and vibrant festivals (Ekanayake & Long, 2012). Each of Nigeria's six geo-political zones offers unique attractions, from lush forests to breathtaking plateaus and waterfalls. Unfortunately, many Nigerians perceive tourism as an opportunity for immoral activities, hindering the sector's potential (Afolabi, 2018). Ekanayake and Long (2012, p. 12) emphasize, "unless economic policies to promote tourism remain a focus in developing countries, tourism will not be a potential source of economic growth." However, the Nigeria Tourism

Development Commission's (NTDC) awareness efforts have yielded positive results, shifting perceptions among Nigerians.

The growing revenue from tourism, alongside its vibrant global industry, has sparked interest in examining its link to economic growth. The relationship between tourism and globalization has both positive and negative effects on economic development.

Adebayo (2023) argued that economic and political globalization positively influences economic growth, while social globalization has a detrimental impact on developing countries. Oladapo (2022) examined Asia-Pacific countries and found that economic and political globalization are beneficial, but social globalization is harmful, although its negative effects can be mitigated.

Uzochukwu (2023) explored how globalization affects foreign direct investment (FDI) and GDP. The study found that economic globalization positively impacts FDI but negatively affects GDP, while political globalization has a negative impact on FDI but benefits GDP.

Adebayo et al. (2023) investigated tourism's role in Nigeria's economic diversification using data from 2000 to 2022. Their findings show that tourism can diversify revenue away from oil, boosting employment and infrastructure development. However, challenges such as inadequate rural tourism investment and security issues remain. Similarly, Oladapo and Williams (2024) found that cultural tourism, particularly through festivals and heritage sites, positively affects tourism revenues, though infrastructure and policy gaps limit its full potential.

Uzochukwu and Okechukwu (2023) examined ecotourism's impact on Nigeria's economy. Their study revealed that while ecotourism supports local economies, challenges like environmental degradation hinder progress. They recommend expanding ecotourism in rural areas for job creation and resource conservation. Ademola et al. (2023) highlighted that improved tourism infrastructure can boost revenue, aligning with Uzochukwu and Okechukwu's (2023) conclusions on the need for infrastructure investment.

Balogun and Yusuf (2024) found a positive link between hospitality services and tourism growth but noted the lack of proper staff training. Chukwu and Eke (2023) focused on security challenges, revealing that insecurity discourages tourism, further supporting the call for improved safety.

Ibrahim and Johnson (2024) found that wildlife tourism offers untapped revenue potential, hindered by poor conservation efforts. Omotayo et al. (2023) identified policy gaps limiting tourism revenue and recommended consistent policies to foster growth. Similarly, Suleiman and Akande (2022) noted that hotel occupancy positively impacts Nigeria's GNI but suffers from seasonal fluctuations, calling for year-round promotions to stabilize income.

White and Odion (2023) found that quality accommodation investments positively affect GNI but warned of the sector's energy demands. Adeyemi and Thomas (2023) highlighted the need for more balanced accommodation distribution to benefit rural areas. Several studies, including Kamara and Bello (2023) and Hassan and Chukwu (2024), reinforced the need for sustainable tourism practices to maximize economic benefits.

Other studies, such as those by Johnson and Ahmed (2022), Williams and Chen (2023), and Ali and Nwosu (2023), emphasized that tourism contributes significantly to GNI, but seasonal tourism patterns and infrastructure challenges can undermine its potential. These studies support the need for improved policy support, infrastructure investment, and efforts to reduce income instability.

In conclusion, a comprehensive approach to tourism development, with a focus on infrastructure, policy consistency, and sustainability, is essential for maximizing its contribution to economic growth.

Tourism is widely recognized as a potential revenue source for developing economies, including Nigeria, given its rich cultural heritage, diverse ecosystems, and historical assets. However, despite substantial literature on tourism's economic potential globally, specific challenges and dynamics within Nigeria's tourism sector remain insufficiently explored. Key variables essential to tourism development, such as government expenditure, consumer demand, infrastructure, security, and social exchange dynamics, have received limited attention in Nigerian-focused studies. This gap becomes particularly notable when examining how foundational economic theories can guide tourism revenue strategies in Nigeria.

Several relevant theories provide frameworks for understanding tourism's revenue potential, but their application to Nigeria's context is minimal. For example, Musgrave's Theory of Public Expenditure Growth suggests that increased government spending in tourism infrastructure could stimulate economic returns. Yet, empirical studies examining the impact of public expenditure on Nigeria's tourism sector and revenue generation are sparse. Similarly, Consumer Demand Theory (Edgeworth) emphasizes the role of consumer preferences in shaping tourism demand, yet there is little research on the specific preferences of tourists in Nigeria, which could be crucial for informed policy and targeted investments.

Moreover, Social Exchange Theory (Homans) posits that tourism should yield benefits for both visitors and host communities. Still, few studies address local perceptions of tourism in Nigeria or its social and

economic impacts on communities. Understanding this exchange dynamic could foster tourism models that are economically viable and socially supportive.

Nigeria’s tourism sector also faces infrastructure, security, and policy challenges that restrict its development as a revenue source. Although studies recognize Nigeria’s tourism potential, few examine how these challenges interact with economic and social factors, thus limiting actionable insights. Addressing these gaps through a comprehensive analysis of economic, consumer, social, and infrastructural variables could strengthen Nigeria’s capacity to leverage tourism as a substantial contributor to economic growth. This research aims to fill this gap by applying the frameworks of public expenditure, consumer demand, and social exchange to explore how Nigeria’s tourism sector can be effectively developed for revenue generation.

III. METHODOLOGY

The research design for this study is the *ex-post facto* and analytical design. This research design was chosen because *ex-post facto* design focuses on events that are already completed and is analyzed in a manner that the utilized variables cannot be controlled by the researcher (Onwumere, 2019). The analytical part of the design refers to the quantitative nature of the dataset and the application of statistical approaches to the work. This means that this research work, in its design, combines the features of the *ex-post facto* design with those of analytical design. This is consistent with the objective of empirically providing evidence-based conclusions in the study.

This dataset to investigate the functional relationship between tourism and income in Nigeria for the period under review will be time series. They are described as time series because they are arranged according to natural frequency (Brooks, 2014). The datasets are annualized and are purely quantitative.

In terms of sources, the datasets are secondary because they are drawn from already existing sources. The World Development Indicator (WDI, 2024), a data repository of the World Bank that contains country-specific macro data represents the source of the data for this research work.

This work is empirically benchmarked after the study by Isik and Arslan (2009) that looked at the impact of tourism industry on the growth rate of the economy of Turkey. The study expressed growth rate as a function of tourism thus:

$$GR = f(T)$$

GR = Economic Growth Rate

T = Tourism

F = functional notation.

However, the current study differs from the aforementioned by using Gross National Income (GNI) as the outcome variable and disaggregated tourism to cover

- i. Size of Inbound tourism arrival
- ii. Inbound tourism accommodation
- iii. Inbound tourism expenditure
- iv. Number of employees

With the above, the functional relationship investigated in this study appears thus:

$$GNI_t = f(INBTARR, INBTACC, INBTEXP, NOEMP)$$

Where:

GNI = Gross National Income

INBTARR = Size of Inbound tourism arrival

INBTACC = Inbound tourism accommodation

INBTEXP = Inbound tourism expenditure

NOEMP = Number of employees

To evaluate the impact of the explanatory variables in the gross national income (GNI), the research converts the above functional relationship into an estimable model. The Autoregressive Distributed Lag model form of regression is used and the general model appears thus:

$$GNI_t = \beta_0 + \sum_{n=1}^k \beta_1 \Delta GNI_{t-n} + \sum_{n=1}^k \beta_2 \Delta INBTARR_{t-n} + \sum_{n=1}^k \beta_3 \Delta INBTACC_{t-n} + \sum_{n=1}^k \beta_4 \Delta INBTEXP_{t-n} + \sum_{n=1}^k \beta_5 \Delta NOEMP_{t-n} + \sum_{n=1}^k \beta_6 \Delta EXR_{t-n} + \rho_1 GNI_t + \rho_2 INBTARR_t + \rho_3 INBTACC_t + \rho_4 INBTEXP_t + \rho_5 NOEMP_t + \rho_6 EXR_t + \varepsilon_t$$

Where:

β_0 = the constant or the intercept.

$\beta_1 - \beta_4$ are the coefficient of the short run parameters.

$\rho_1 - \rho_3$ are the coefficient of the long run parameters.

$t - n$ is indicative of the lagged time series

ε_t = the residual, noise or error term.

Δ = the difference operators

k, n shows the minimum and maximum lag

EXR = Exchange Rate used as the control variable.

The variables of interest in this study are listed and briefly discussed in table 1 below.

Table 1: Description of model variables

S/N	Name of variable	Notation	Role	Source	Expectation
1	Gross National Income	GNI	Dependent variable	World Development Indicator (WDI)	-----
2	Size of Inbound tourism arrival	INBTARR	Independent Variable	World Development Indicator (WDI)	Positive
3	Inbound tourism accommodation	INBTACC	Independent Variable	World Development Indicator (WDI)	Positive
4	Inbound tourism expenditure	INBTEXP	Independent Variable	World Development Indicator (WDI)	Positive
	Number of employees	NOEMP	Independent Variable	World Development Indicator (WDI)	Positive
5	Exchange rate	EXR	Control variable	World Development Indicator (WDI)	Negative or Positive

Source: Compiled by the author

In this study, we follow four estimation procedures. First, measures of aggregative tendencies, measure of dispersion, symmetrical properties of the series and measures of the degree of peakness of the distribution are used as preestimation tests.

Secondly, the model to be employed in this study is Auto Regressive Distributed Lag model (ARDL). It is preferred to Ordinary Least Square (OLS) model because OLS has many shortcomings and is becoming old fashioned. This is because many economic variables now are either I (0) or I (1) variable and OLS cannot be employed for variable that has the combination of the two orders of integration. OLS model, oftentimes has diagnostics problem such as auto correlation. ARDL popularized by Pesaran, Shin and Schmidt (2001) overcome these shortcomings and is a perfect model for this study. This is because it has the following advantages over OLS model according to (Pesaran and Shin, 1998): It solves diagnostic issues like autocorrelation and remains consistent in the face of small samples. In addition, it models simultaneously, short run and long run elasticities.

Thirdly, the post estimation test is done to determine the reliability of the result. These include test for the significance of the overall result, test for auto correlation conducted using Breusch-Godfrey Lagrange Multiplier test (BG LM), test for heteroscedastic residuals conducted following the Breusch, Pagan and Godfrey test (BPG) and the test for model stability conducted by adopting Ramsey RESET and CUSUM test. The decision rule in this study is based on 5% degree of significance and conclusions were drawn based on this decision rule.

IV. RESULTS

Pursuant to the core objectives of this study, table 2 presents the data set for the evaluation of the elasticity of Nigeria’s revenue to the development and potentials of tourism resources from 1999 to 2023.

Table 2 – Gross National Income and Tourism Development Indicators, 1995 – 2023

Year	GNIR	INBARR	LINEXP	LTOUREMP	TRIPSN
1995	32.91348	7.147559	1.951684	6.004134	8.325548
1996	32.24603	8.568836	1.944780	7.265010	9.601483
1997	32.35262	8.552946	2.062933	7.284752	9.621324
1998	32.16065	8.702344	1.813749	6.987398	9.772011

1999	32.59266	8.586906	1.987011	7.324292	9.660970
2000	32.24603	8.568836	1.944780	7.265010	9.601483
2001	32.24603	8.568836	1.944780	7.265010	9.601483
2002	32.46446	8.566745	2.026744	7.304516	9.641148
2003	32.59266	8.586906	1.987011	7.324292	9.660970
2004	32.16065	8.702344	1.813749	6.987398	9.772011
2005	32.59266	8.586906	1.987011	7.324292	9.660970
2006	32.16065	8.702344	1.813749	6.987398	9.772011
2007	32.09841	8.476996	1.857115	6.781625	9.464052
2008	32.16065	8.702344	1.813749	6.987398	9.772011
2009	32.91348	7.147559	1.951684	6.004134	8.325548
2010	32.91348	7.147559	1.951684	6.004134	8.325548
2011	32.35262	8.552946	2.062933	7.284752	9.621324
2012	32.78227	7.127694	1.719140	5.969219	8.305978
2013	32.91348	7.147559	1.951684	6.004134	8.325548
2014	32.78227	7.127694	1.719140	5.969219	8.305978
2015	32.16065	8.702344	1.813749	6.987398	9.772011
2016	32.35262	8.552946	2.062933	7.284752	9.621324
2017	32.59266	8.586906	1.987011	7.324292	9.660970
2018	32.46446	8.566745	2.026744	7.304516	9.641148
2019	32.24603	8.568836	1.944780	7.265010	9.601483
2020	32.16065	8.702344	1.813749	6.987398	9.772011
2021	32.91348	7.147559	1.951684	6.004134	8.325548
2022	32.24603	8.568836	1.944780	7.265010	9.601483
2023	32.35262	8.552946	2.062933	7.284752	9.621324

Source: World Development Indicator, 2023.

GNIR is Gross Nation Income, INBARR stands for inbound tourism arrivals, LINEXP stands for inbound tourism expenditure, LTOUREMP is for tourism employment while TRISPN represents number of tourism trips. The raw data set from the World Development Indicator, 2023, were log linearized to ensure that they were brought to the same base for efficient estimation.

The basic descriptive statistics of the datasets under investigation are presented in table 3 below:

Table 3 – Summary of Basic Descriptive Statistics

Variables	Mean	Median	Maximum	Minimum	Std. Dev.	Jarque-Bera	Probability	CV	Obs
GNIR	32.45291	32.35262	32.91348	32.09841	0.283370	2.979782	0.225397	0.0087	29
INBARR	8.249011	8.568836	8.702344	7.127694	0.638225	7.105063	0.028652	0.0774	29
LINEXP	1.928051	1.951684	2.062933	1.719140	0.100189	1.900515	0.386641	0.0519	29
LTOUREMP	6.897772	7.265010	7.324292	5.969219	0.538216	5.456281	0.065341	0.0095	29
TRISPN	9.336369	9.621324	9.772011	8.305978	0.587692	6.903852	0.031685	0.0039	29

Source: Computed by the author

The measures of central tendency, dispersion and tests for normality are presented in table 4.2. Expectedly, National Income presents the highest average of 32.45billion over the study period with the lowest mean of 1.93billion for tourism expenditure. All the variables share equal number of observations at 29 and all are found to be stable as the relative standard deviation of less than unity shows that the variables are close knit and less dispersed. The Jarque Bera statistics and its associated probability largely show that the variables are normally distributed with reduced excess kurtosis and skewness around the mean.

Next, the linear association among the series is evaluated using the correlation matrix as reported in table 4.

Table 4 – Summary of Correlational Matrix

Correlation					
t-Statistic					
Probability	GNIR	INBARR	LINEXP	LTOUREMP	TRIPSN
GNIR	1.00				
INBARR	0.87	1.00			
	9.18	-----			
	0.00	-----			
LINEXP	0.13	0.19	1.00		
	0.70	1.02	-----		
	0.49	0.32	-----		
LTOUREMP	0.72	0.95	0.43	1.00	
	5.38	15.41	2.48	-----	
	0.00	0.00	0.02	-----	
TRIPSN	0.86	1.00	0.19	0.95	1.00
	8.80	135.22	1.01	15.18	-----
	0.00	0.00	0.32	0.00	-----

Source: Computed by the author

The correlation between tourism and revenue is found to be positive as all the tourism indicators are found to share a positive correlation with income. The magnitude of correlation is found to be at the highest level with arrival while employment shares the least correlation coefficient. This proves that tourism is not fully contributing to national revenue as influenced by such other factors as expenditure and arrival. The stationarity properties of the series are shown in table 4.4. this is a necessary step in determining that the results will not be spurious and aid in selecting the appropriate estimation technique.

Table 5 – Summary of Unit Root Test Results

Variable	ADF Stat	Critical Values			P-value	Inference
		1%	5%	10%		
GNI	-5.198794	-4.32	-3.59	-3.25	0.0013	I(1)
INBARR	-4.250165	-4.32	-3.58	-3.23	0.0118	I(0)
LINEXP	-5.396361	-4.32	-3.58	-3.23	0.0008	I(0)
LTOUREMP	-3.966536	-4.32	-3.58	-3.23	0.0222	I(0)
TRIPS	-5.396361	-4.32	-3.58	-3.23	0.0114	I(0)

Source: Computed by the author

All the variables are found to be stationary at levels except for the income figure that is stationary at first difference. At all these points, the ADF test statistics are found to be more negative than the critical value at the relevant levels of significance. The varied orders of integration make the use of Autoregressive Distributed lag model form of regression the most appropriate estimation technique.

The result of the main estimation tests following the ARDL framework is presented in table 6. This forms the basis for the test of the formulated hypotheses.

Table 6 – Summary of ARDL Estimates

Variable	Coefficient	Std. Error	t-Statistic	Prob.
INBARR	-4.565665	0.762079	-5.991065	0.0000
LINEXP	0.100251	0.213997	0.468470	0.6445
LTOUREMP	0.399986	0.114621	3.489631	0.0023
TRIPSN	4.231743	0.826613	5.119375	0.0001
C	27.65279	1.502420	18.40550	0.0000
DIAGNOSTIC TESTS				
R-SQUARED	0.83 OR 83%			
ADJUSTED R-SQUARED		0.795 OR 79.5%		
F-STAT	22.03551(0.0000)			
DW STAT	1.906 APROX 2			

Source: Computed by the author

The results of the ARDL estimates are found to have goodness of fit as shown by the R-squared of 83% as well as the adjusted R-squared of 79.5%. This implies that about 80% of the change in gross national income is accounted for by the investigated tourism variables under the investigated model. There is also proof that the overall result is statistically significant. The F-stat of 22.035 and the pvalue that is less than 5% shows that the overall result is meaningful enough for informed analyses.

To test for autocorrelation, the Durbin Watson statistics of approximately 2 show that no first order autocorrelation exists. To check for higher order autocorrelation, the Breusch and Godfrey, Langrage multiplier serial correlation test results are presented in table 7.

Table 7 – Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.320781	Prob. F(2,18)	0.7296
Obs*R-squared	0.963639	Prob. Chi-Square(2)	0.6177

Source: Source: Computed by the author

The F-statistics and Chi-square results of the test are in consensus that the null hypothesis of no serial correlation cannot be rejected. Given that the p-value in the two test are insignificant, we conclude in favour of the absence of autocorrelated residuals. This is with the conclusions that the estimates are not spurious given that the mean of the residuals has been proven to be constant for every succeeding lag.

The next diagnostic test is to confirm that the residuals are constant with the aim of ruling out the likely presence of heteroscedastic residuals. The test suggested by Breusch, Pagan and Godfrey (BPG) was used and the result is as shown in table 8.

Table 8 – Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	1.017326	Prob. F(7,20)	0.4491
Obs*R-squared	7.352008	Prob. Chi-Square(7)	0.3932
Scaled explained SS	4.177496	Prob. Chi-Square(7)	0.7591

Appendix Seven – Heteroscedasticity Tests

The homoscedasticity of the residuals is confirmed by the insignificant pvalue of the chi-square and f-statistics as reported in table 8. This proves that the standard errors in the estimated ARDL are reliable with the implication that type I and type II errors in our hypothesis testing are unlikely.

Additionally, the stability of the model for this study is confirmed by the Regression Equation Specification Error Test (RESET) following the Ramsey format as reported in Table 4.8 as well as Fig. 1 which is the Cumulative Sums of Squares (CUSUM) graph.

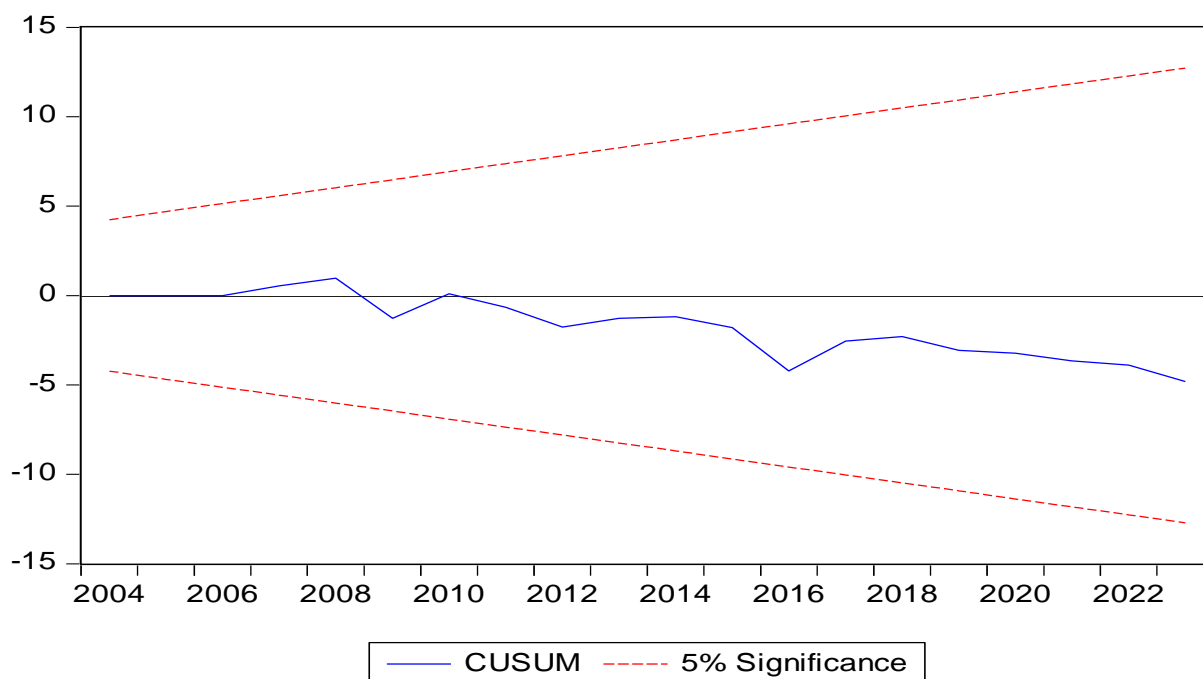
Table 9 Ramsey RESET Test

	Value	df	Probability
t-statistic	0.934851	19	0.3616
F-statistic	0.873946	(1, 19)	0.3616

Appendix Eight – Regression Error Specification Test

The result of the RESET test proves that the model is without specification error. This means that it follows the correction functional form, there are no omissions of relevant estimators, no inclusion of irrelevant variables and is void of all specification biases. The null hypothesis of no misspecification cannot be rejected.

This is supported by the CUSUM graph shown as Fig. 1. which follows the recursive estimation at a 0.05 level of significance.



The proof of model stability in the CUSUM graph is the blue curve that is hemmed in by two broken red lines. This is to show that the estimates are best linear and unbiased (BLUE). The diagnosed and validated results formed the basis for the test of the hypotheses and drawing of inferences in this study.

Following the ARDL estimates, it was found that a unit change in inbound tourism arrival reduced national income by around 4points. This may be as a result of the profit repatriation effect or capital flight that may be triggered by the form of tourist that comes into the Nigerian economy. The finding that tourism arrival does not necessarily lead to increase in national income is consistent with the theory of Musgrave & Musgrave, (1989) and also the empirical study of Suleiman and Akande (2022).

Also, the results show that national income is a positive and significant function of the number of tourism trip. This shows that national income rises as the number of tourism trips rises. The coefficient that is statistically significant stands at 4.23units. This result appears intuitively correct as it is expected that income from tourism should rise as the number of tourism trips by tourist rises. This result agrees with the findings of Ademola et al. (2023).

Expenditure inflow from tourism was found to be too small to significantly affect the size of the national income. This goes to show the low level of development of the tourism sector. This explains why successive governments in Nigeria have continued to drive for the optimization of revenue from the sector even as revenue diversification is pursued. The monolithic status of the Nigeria economy continually underscores the importance of this drive. This finding agrees with the theory of Ibrahim and Johnson (2024) as also found in the study by Balogun and Yusuf (2024)

This result is consistent with aprori expectation that when more people are employed by the tourism sector, the income contribution from the sector to national income rises.

The result further shows the underdeveloped nature of the sector as the contribution to national income in response to a unit change in number of employed persons is less than 1 This finding buttresses the results shown by Chukwu and Eke (2023) in their study which is consistent with the theory of Omotayo et al. (2023).

V. CONCLUSIONS AND RECOMMENDATIONS

A country like Nigeria in search of growth and development needs to diversify its revenue and economic bases. Oil has remained the mainstay of the Nigerian economy over a long time. It is against this backdrop that this study was set to investigate the contributory effect of the tourism sector to the growth and development of the Nigerian covering a period of 29years, 1995 – 2023.

Relevant objectives, questions and hypotheses were raised in pursuit of the broad objective of the study. The study adopted a robust estimation form of the regression model given the novelty and resilience of

the ARDL framework. In addition, it produced results that overcame the difficulties and shortcomings that are common with the Ordinary Least Squares form of regression.

Major findings were recorded to the effect that the trips in tourism, number employed by the sector as well as inbound tourism arrivals significantly affected the growth of National Income over the period investigated. It was also discovered that the expenditure to the sector have not been big enough to elicit a significant impact on national income.

This study is seen as a major call for the exploitation of the boundless benefits that the tourism industry can offer to the economic growth of the Nigerian economy. In addition, it can be a vanguard for the economic diversification of the country.

This work is believed to be able to open the door for further investigation in this area of study given that no single work can claim to be exhaustive.

Based on the findings arising from this study, the following are recommended:

- That the government should increase expenditure on tourism to activate optimal growth of the sector for the imperatives of economic growth and development.
- That the economic, social and political setting of the nation should be enhanced and made more attractive to tourism. This will increase inbound tourism and enhance its contributory effect on the nation's income growth.
- The country currently faces a lot of security challenges which limit intra-city trips by tourist and by extension limit the impact of tourism trips on income growth. This can be reversed through a deliberate improvement on the security situation of the country.
- Growth in the tourism sector through enhancing policies will boost the job creation potential of the sector thereby enhancing the income creation capacity of the sector. Government should develop tourism development strategic plans that will grow the sector as veritable source of employment.

The conversation on the relevance of the tourism sector in the development of the revenue potential of a country in the class of Nigeria is ongoing and should touch such areas as review of the tourism development policies of the government and impact of tourism development on naturally endowed rural communities in Nigeria. Such an investigation can be extended to cover tourism development and the growth of the economies of SSA countries given that they have similar nuances as Nigeria.

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