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Revisiting the Resource Curse Hypothesis in Nigeria: The Roles of Financial Development, Natural Resources and Trade Openness

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A B S T R A C T

This study investigates the resource curse hypothesis in Nigeria by analysing how financial development, natural resource abundance, trade openness, and capital formation affect economic growth. Using the Autoregressive Distributed Lag (ARDL) model with data from 1990 to 2023, the results reveal that financial development significantly boosts economic growth in both the short and long run. In contrast, natural resources negatively impact long-term growth supporting the resource curse hypothesis although they have a positive short-run effect. Trade openness consistently harms growth in both periods, while capital formation enhances long-run growth but hampers it in the short run due to inefficiencies. These findings affirm the existence of a resource curse in Nigeria, where natural wealth fails to translate into sustainable development. Financial development emerges as a key driver of economic performance, whereas trade liberalization and poorly managed capital investments pose short-term challenges. The study recommends strengthening the financial sector, diversifying the economy beyond natural resources, adopting strategic trade policies, and improving investment planning and execution. The novelty lies in the integrated analysis of these factors within Nigeria's context, offering fresh insights into their dynamic effects over time

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INTRODUCTION

According to the resource curse hypothesis, the greater the abundance of natural resources in a country, the lower its economic growth, the weaker its institutional structures, and the greater its socio-economic inequality (Voumik & Ridwan, 2023; Al-Balushi, & Yusoff, 2025). Nigeria exemplifies this paradox. Despite being richly endowed with crude oil and natural gas resources that contribute over 70% of public revenue, nearly 50% of GDP, and more than 80% of export earnings (World Bank, 2023) the country continues to experience chronic fiscal deficits, economic instability, and high unemployment, particularly among the youth, where joblessness exceeds 13% (ILO, 2024). This inconsistent scenario demonstrates the core symptoms of the resource curse; excessive dependence on hydrocarbons, underdevelopment of non-oil sectors, fiscal vulnerability, and exposure to volatile global energy prices (Sherif et al., 2023; Nadabo, 2023b).

Even though natural resource abundance is theoretically expected to accelerate development, empirical studies have shown that countries rich in resources, such as Nigeria, Venezuela, and Benin, have grown more slowly than resource-poor but high-performing economies like Japan, Hong Kong, and Singapore (Gylfason, 2000; Leite & Weidmann, 1999; Sachs & Warner, 1999; Papyrakis & Gerlagh, 2004). However, the resource curse is not inevitability. Nations like Norway, Germany, and Great Britain have successfully transformed their natural resource endowments into engines of economic growth and industrialization, while Ecuador experienced significant income growth during its resource boom (Gylfason, 2001; Sachs & Warner, 1999). These contrasting outcomes underline the importance of institutional quality, financial systems, trade openness, capital formation and economic policies in mediating the impact of natural resources on development trajectories.

In Nigeria's case, one of the critical missing links in transforming resource wealth into sustainable development lies in its underdeveloped financial sector. Despite the country's status as Africa's largest oil producer, its financial system remains shallow. Domestic credit to the private sector is only about 25% of GDP, compared to over 80% in many middle-income countries (IMF, 2024). This weak financial intermediation limits the productive deployment of resource revenues and inhibits economic diversification by starving non-oil sectors of needed investment capital (Uchenna & Okonkwo, 2024; Nadabo, Kwarah, & Abdullahi, 2024). Notably, the lack of access to finance remains a significant constraint for small and medium-sized enterprises (SMEs), with only about 15% reporting adequate financing (CBN, 2023), despite the policy efforts under frameworks such as the Economic Recovery and Growth Plan (ERGP) and Nigeria Vision 2050.

Alongside financial development, trade openness plays a vital role in influencing the effects of natural resource endowment on macroeconomic outcomes. Trade openness and financial liberalization are frequently cited as crucial levers for stimulating economic growth while potentially inducing complex environmental and structural outcomes (Valickova et al., 2015; Shahbaz et al., 2016). In theory, openness can facilitate the transfer of

technology, promote competitive industries, and attract foreign investment. However, in the absence of robust domestic financial infrastructure and industrial capabilities, it may also exacerbate dependence on commodity exports and intensify external vulnerabilities.

Financial development and trade openness significantly enhance the contribution of natural resources to economic growth in Nigeria. Financial development improves access to capital and investment in resource sectors, boosting productivity and sustainability. Meanwhile, trade openness promotes global integration, attracts foreign investment, and increases market access, which further strengthens the role of natural resources in driving economic growth (Olayungbo & Adediran, 2020; Adeleye et al., 2019; Okonkwo et al., 2022).

Moreover, the study examines the efficacy of diversification efforts under national strategies such as the National Development Plan (2021–2025) and Nigeria Vision 2050, analysing their implications for inclusive growth, environmental sustainability, and long-term prosperity. Despite Nigeria's efforts at economic transformation, the overconcentration of public and private investments in the hydrocarbon sector continues to crowd out agriculture, manufacturing, and services sectors where non-oil GDP growth has averaged less than 2% over the past decade (World Bank, 2023; Olayemi et al., 2022). The economy remains highly vulnerable to external shocks, with the 2020 oil price crash during the COVID-19 pandemic widening the budget deficit to over 5% of GDP and pushing the nation into a deep economic contraction (Alshonubi, 2023; Olayemi et al., 2022). By comparing Nigeria's experience with other resource-rich and resource-poor economies, this study aims to bridge the gap between theoretical discourses on the resource curse and the practical challenges facing policymakers, providing evidence-based recommendations to balance resource utilization with sustainable and inclusive development (Nadabo, 2023a).

This study investigates how the interplay between natural resource abundance, financial development, and trade openness affects Nigeria's economic growth. It critically evaluates whether Nigeria's heavy reliance on oil and gas aligns with the resource curse hypothesis.

The rest of the paper is organised as follows: Section 2 provides an overview of the literature on relationships between natural resources, financial development and trade openness. Sections 3, 4 and 5 provide the methodology, results & discussion, and conclusions & policy implications, respectively.

LITERATURE REVIEW

There has been a surge of scholarly debate surrounding the Resource Curse Hypothesis the idea that an abundance of natural resources may hinder rather than enhance economic growth and development. Recent research, employing diverse methodological approaches across various regions, offers valuable insights into how this phenomenon operates. To begin with, Yanyan and Dong (2024) examined the effect of natural resource rents on economic

growth from 1990 to 2020, using dynamic panel regressions. Their findings revealed that political instability and conflict significantly weaken the growth benefits of resource wealth, thereby validating the resource curse hypothesis. Consequently, they recommend improving political stability and conflict management to mitigate these adverse effects. Similarly, Syed et al. (2024) analyzed the impact of geopolitical risks on the benefits derived from resource wealth between 1995 and 2022. Through fixed-effects regression, they demonstrated that geopolitical risks reverse the positive growth effects of resource rents, further supporting the resource curse hypothesis. As a result, they suggest strengthening both domestic and international political stability.

In addition, Boulanouar and Essid (2023) focused on the ecological impact of resource rents from 1990 to 2021. Using a panel ARDL methodology, they found that resource rents and fossil fuel subsidies diminish renewable energy adoption and intensify environmental degradation. Thus, their findings lend credence to the environmental dimension of the resource curse. They therefore recommend promoting renewable energy and reducing fossil fuel subsidies. Moreover, Joshia et al. (2024) conducted a comparative analysis of energy use patterns in developed and developing countries between 2000 and 2022 using a mixed-methods approach. They found that poor regulatory enforcement and inadequate infrastructure investment hinder sustainable energy development in resource-rich developing countries, thereby reinforcing the resource curse hypothesis. Hence, they advocate for stronger regulatory frameworks and increased infrastructure investments.

Furthermore, Muhammad et al. (2024) assessed the impact of oil resource abundance on industrial structure in Belt and Road Initiative (BRI) countries from 1990 to 2020 using system GMM. Their results indicate that oil abundance negatively affects industrial structure, particularly in countries like Algeria, Angola, and Libya, which aligns with the resource curse narrative. Accordingly, they recommend industrial diversification and effective oil revenue management. Likewise, Saglam et al. (2024) investigated the role of tungsten production in China's economic growth using panel regression. Their analysis revealed that tungsten production negatively affects economic growth, thereby supporting the resource curse thesis. To address this, the authors propose economic diversification and reduced dependence on single-resource sectors.

In the same vein, Jiang (2024) revisited the political resource curse using regression discontinuity and difference-in-difference approaches. His findings provide robust evidence of a political resource curse, prompting the recommendation of strengthening political institutions and governance systems. In addition to the above, Syed et al. (2024) used Fourier augmented ARDL to assess the interaction between resource wealth and geopolitical risks globally from 1990 to 2021. Their findings highlight that while natural resources can promote growth, their interaction with geopolitical risks often hinders it. Consequently, they advocate for measures to minimize geopolitical tensions. Moreover, Abdelkawy (2024) studied economic shocks and GDP growth in GCC countries using dynamic GMM. The study found that although natural resources positively influence short-term growth, their benefits diminish over

time without institutional reforms. Therefore, economic diversification and structural reforms are crucial for long-term development. Similarly, Umeh and Okoro (2024) examined oil revenue volatility in Nigeria using a VECM. Their findings indicate that oil revenue volatility adversely affects economic growth and fiscal stability, which aligns with the resource curse hypothesis. Hence, they recommend improving fiscal management and stabilizing oil revenues.

Conversely, Lin et al. (2024) reassessed the resource curse in least developed countries (LDCs) using GMM techniques. Their results show that resource rents positively influence growth in countries with strong governance structures, thereby invalidating the resource curse hypothesis. As such, they propose institutional strengthening and governance reforms. Likewise, Baafi (2024) found that oil exploration in Ghana positively impacts economic growth when democratic governance and transparency are present. This contradicts the resource curse theory. Thus, he recommends prioritizing democratic governance and fiscal discipline. Additionally, Li et al. (2024) examined the link between resource rents and financial development using panel cointegration and causality tests. They found that the combination of financial development and conflict mitigation enables resource wealth to stimulate growth. Consequently, the authors suggest improving financial systems and reducing conflict. Equally, Hou et al. (2023) employed structural equation modeling to explore the role of institutional quality in translating resource wealth into inclusive growth. The results emphasize that governance quality is instrumental in converting resource wealth into economic prosperity. Accordingly, governance reforms are recommended.

Moreover, Al-Balushi and Yusoff (2025) tested the resource curse hypothesis in Oman using ARDL bounds testing along with robustness checks. Their findings indicate a strong positive relationship between resource wealth and economic growth, facilitated by financial development and trade openness. This finding refutes the resource curse hypothesis and leads to the recommendation of investments in financial and trade openness. In the same context, Paschal et al. (2024) assessed Tanzania's mineral sector using panel cointegration methods. Their study found that institutional quality and FDI shape the growth outcomes of mineral rents, suggesting that the curse can be avoided through robust institutions. Hence, they advocate for institutional strengthening and increased FDI. Similarly, Qi (2024) reexamined the political resource curse in Africa, focusing on cobalt reserves. Contrary to expectations, the study found that cobalt reserves reduce local conflict due to government interventions, thereby disputing the resource curse. Thus, the author recommends enhancing state capacity and governance. Furthermore, Murillo and Sardon (2024) studied mining windfalls in Peru using a triple difference strategy. Their analysis shows that state capacity determines the developmental outcomes of resource wealth. As a result, they stress the importance of investing in institutional capacity.

However, Ali et al. (2024) used panel data to analyze Indonesia from 1984 to 2019. They found that resource revenues promote economic growth and financial development when moderated by institutional quality, thereby

rejecting the resource curse. Accordingly, they recommend leveraging resource wealth and strengthening institutions. Likewise, Dahmani and Gherbi (2025) investigated economic diversification in Algeria and confirmed the presence of the resource curse. However, they emphasize that diversification holds the key to sustainable development and therefore advocate for proactive diversification policies.

Although the Resource Curse Hypothesis is widely studied, its specific relevance to Nigeria remains underexplored. Most research overlooks Nigeria's unique socio-economic and institutional context, including governance issues and efforts at diversification. Key factors such as financialisation, trade openness, and capital formation have not been adequately linked to resource-driven growth in Nigeria. Existing studies often rely on broad regional data and generic models, leaving gaps in understanding the true dynamics of Nigeria's economy. This study aims to fill those gaps by examining whether Nigeria suffers from the resource curse and how natural resources, domestic investment, and trade influence its economic performance.

METHODOLOGY

Theoretical Framework and Model Specification

In theory, the resource curse hypothesis posits that, rather than driving economic growth, an abundance of natural resources can suppress it through institutional degradation, rent-seeking behaviour, and macroeconomic distortions (Li et al., 2024). These adverse outcomes often emerge when resource revenues are mismanaged or when they crowd out more productive sectors of the economy (Raihan et al., 2024b). While natural resources can generate significant revenue to fund infrastructure, education, healthcare, and technological advancement contributing to long-term development (Ridzuan et al., 2023) the resource curse suggests that economies overly dependent on natural resources become vulnerable to global market fluctuations, particularly volatile commodity prices.

Additionally, resource booms can lead to currency appreciation, a phenomenon known as "Dutch disease," which undermines the competitiveness of non-resource export sectors. This research hypothesizes that Nigeria's resource-driven economic performance depends on the efficiency of its resource management. By incorporating natural resource abundance as a core variable, the study aims to assess whether Nigeria aligns with the resource curse hypothesis or whether it has leveraged its resource wealth to stimulate economic growth through effective revenue utilisation and diversification efforts.

The empirical strategy applies both short- and long-term models to evaluate the nuanced relationship between natural resources and economic growth, while accounting for the interactive effects of financialisation, trade openness, and domestic investment. These variables are integral to understanding how resource wealth is mediated by structural and institutional factors. The economic growth function, along with the relevant explanatory variables rooted in the resource curse framework, is specified in Equation 1 below.

$$GDP = f(\text{FND}, \text{NTR}, \text{TOP}, \text{CFM})$$

Where, GDP denotes Gross Domestic Product, FND presents financial development, NTR is natural resource abundance, TOP is trade openness, and CFM shows capital formation.

This study adopts and modifies the model specification by Al-Balushi and Yusoff (2025) to investigate whether the resource curse exists in Nigeria. Unlike the original model, this study includes capital formation as an additional factor influencing economic growth in Nigeria. Accordingly, the modified model is presented in equation 2:

$$lnGDP = \beta_0 + \beta_1 \text{lnFND} + \beta_2 \text{lnNTR} + \beta_3 \text{lnTOP} + \beta_4 \text{lnCFM} + \mu_t$$

Where, β_0 shows intercept term and β_1 to β_4 used as coefficient of explanatory variables. In Equation (2), the author uses logarithmic forms of variables to simplify nonlinear relationships, enable elasticity interpretation, reduce data skewness, stabilize variance, and address heteroscedasticity. This common econometric approach improves model fit and enhances result interpretation.

This study employs the Autoregressive Distributed Lag (ARDL) approach to test for cointegration among variables, following Pesaran (2001). The ARDL bounds test is preferred due to its flexibility it can be used whether the variables are integrated at level (I(0)), first difference (I(1)), or a mix of both. This makes it especially suitable for small sample sizes and robust in detecting both short-run and long-run relationships. Unlike traditional cointegration tests, ARDL does not require all variables to be of the same integration order and remains reliable even in the presence of structural breaks. The ARDL bounds testing model is specified in Equation (3):

$$\begin{aligned}\Delta lnGDP_t = {} & \beta_0 + \beta_1 lnGDP_{t-1} + \beta_2 lnFND_{t-1} + \beta_3 lnNTR_{t-1} + \beta_4 lnTOP_{t-1} \\ & + \beta_5 lnCFM_{t-1} + \sum_{i=0}^{q} \alpha_1 \, \Delta lnGDP_{t-i} + \sum_{i=0}^{r} \alpha_2 \, \Delta lnFND_{t-i} \\ & + \sum_{i=0}^{s} \alpha_3 \, \Delta lnNTR_{t-i} + \sum_{i=0}^{t} \alpha_4 \, \Delta lnTOP_{t-i} + \sum_{i=0}^{u} \alpha_5 \, \Delta lnCFM_{t-i} + \mu_t\end{aligned}$$

In this model, (lnGDP) represents gross domestic product as a proxy for economic growth, (lnTOP) denotes trade openness, (lnFND) refers to the financial development index, (lnNTR) stands for natural resources, and (lnCFM) represents capital formation. The symbol Δ indicates the first difference operator; q is the maximum lag order selected by Akaike's Information Criterion (AIC); α_1 - α_5 stand for the short run coefficients while μ_t is the white noise error term in equations 3, which represents the ARDL model. Also, β_0 is the constant term; β_1 - β_5 stand for the long run coefficients.

Once a cointegration relationship is established among the variables, the Error Correction Model (ECM) derived from the ARDL framework is estimated to capture both the short-run adjustments and the long-run equilibrium path represents in equation 4.

$$\Delta lnRGDP_t = \alpha_0 + \alpha_1 ECT_{(t-1)} + \sum_{i=0}^{q} \alpha_1 \Delta lnGDP_{t-i} + \sum_{i=0}^{r} \alpha_2 \Delta lnFND_{t-i} + \sum_{i=0}^{s} \alpha_3 \Delta lnNTR_{t-i} + \sum_{i=0}^{t} \alpha_4 \Delta lnTOP_{t-i} + \sum_{i=0}^{u} \alpha_5 \Delta lnCFM_{t-i} + \mu_t$$

Where: α_0 is the constant term; α_1 is the coefficient of one period lagged error term, $ECT_{(t-1)}$ which also represents the long term dynamics while α_2 and α_8 are the short run coefficients.

Description and Source of Variables

This study, covering the period from 1990 to 2023, utilizes five key macroeconomic variables to investigate the presence of the resource curse in Nigeria.

Table 1. Description and Source of Variables

Variables	Description	Log Form	Unit of Measurement	Source
GDP	Gross Domestic Product	lnGDP	GDP (constant 2015 US$)	WDI
FND	Financial Development	lnFND	Financial Development Index	IMF
NTR	Natural Resource Abundance	lnNTR	Total natural resources rents (% of GDP)	WDI
TOP	Trade Openness	lnTOP	Trade (% of GDP)	WDI
CFM	Capital Formation	lnCFM	Gross capital formation (% of GDP)	WDI

Note: WDI represents World Development Indicators (World Bank, 2025) and IMF presents International Monetary Fund (IMF, 2025).

Source: Authors' Computation (2025)

RESULT AND DISCUSSION

Table 2. Descriptive and Correlation Analysis

Statistic	lnGDP	LnFND	lnNTR	lnTOP	lnCFM
Mean	4.846	0.198	-1.178	37.308	-1.732
Median	5.015	0.203	-1.166	38.499	-1.879
Maximum	15.329	0.244	-0.909	54.889	-0.588
Minimum	-1.617	0.153	-1.502	23.545	-2.212
Std. Dev.	3.380	0.038	0.136	8.984	0.415
Skewness	0.830	0.047	-0.628	-0.168	1.394
Kurtosis	4.708	1.489	3.101	1.949	4.068
Jarque-Bera	6.379	2.577	1.796	1.372	9.997
Probability	0.042	0.276	0.409	0.504	0.067
Obs.	33	33	33	33	33
LnGDP	1.000				
LnFND	0.898	1.000			
LnNTR	0.500	0.549	1.000		
LnTOP	0.940	0.776	0.346	1.000	
LnCFM	-0.808	-0.590	-0.276	-0.786	1.000

Source: Authors' Computation (2025)

Table 2 presents the descriptive and correlation analysis for five key macroeconomic variables based on 33 observations. The average value of lnGDP is 4.846 with a standard deviation of 3.380, indicating notable variability in economic performance. Its distribution is positively skewed (0.830) and leptokurtic (kurtosis 4.708), with a Jarque-Bera statistic of 6.379 (0.042), suggesting significant deviation from normality. Moreover, lnFND records a mean of 0.198 and a low standard deviation of 0.038, indicating relative stability. The distribution is nearly symmetric (skewness 0.047) and platykurtic (1.489), with a Jarque-Bera p-value of 0.276, suggesting no significant deviation from normality. lnNTR has a negative mean of -1.178 and a standard deviation of 0.136. It is slightly negatively skewed (-0.628) with near-normal kurtosis (3.101) and a Jarque-Bera p-value of 0.409, indicating approximate normality. In addition, lnTOP shows a high mean of 37.308 with a standard deviation of 8.984, reflecting substantial variation in trade openness. Its distribution is nearly symmetric (skewness -0.168) and platykurtic (kurtosis 1.949), with a Jarque-Bera p-value of 0.504, confirming normality. lnCFM has a mean of -1.732 and a standard deviation of 0.415, and is characterized by positive skewness (1.394) and leptokurtosis (4.068). The Jarque-Bera statistic of 9.997 (0.067) indicates mild deviation from normality, though not statistically significant at the 5% level.

Regarding correlation, lnGDP shows a strong positive relationship with lnFND (0.898) and lnTOP (0.940), underscoring the critical role of financial development and trade openness in driving economic growth. It is moderately correlated with lnNTR (0.500) and strongly negatively correlated with lnCFM (-0.808), which may point to inefficiencies in capital allocation. lnFND is also positively correlated with lnTOP (0.776) and lnNTR (0.549), but negatively associated with lnCFM (-0.590). lnTOP correlates positively with lnNTR (0.346) and negatively with lnCFM (-0.786). Notably, lnCFM exhibits negative correlations with all other variables, particularly with lnGDP and lnTOP, which may reflect structural or institutional constraints on effective capital formation.

Table 3 presents the stationarity results of five macroeconomic variables using Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) unit root tests. Both tests confirm that lnGDP, lnNTR, lnTOP, and lnCFM are non-stationary at level but become stationary after first differencing, indicating they are integrated of order one [I(1)]. lnFND is found to be stationary at level under both tests, suggesting it is integrated of order zero [I(0)]. The consistency of ADF and PP results validates the mixed integration order of the variables, thus justifying the use of the ARDL modeling approach, which accommodates variables integrated at different levels (I(0) and I(1)).

Table 3. ADF and PP Tests

Variable	Level (Intercept)	Level (Intercept/Trend)	First Diff. (Intercept)	First Diff. (Intercept/Trend)	Order of Integration
Panel A: Augmented Dickey-Fuller (ADF) Test					
lnGDP	-1.783	-2.327	-4.727***	-5.599***	I(1)
lnFND	-3.883***	-2.353	-2.474	-2.431	I(0)
lnNTR	-2.477	-3.527*	-4.305***	-4.227*	I(1)
lnTOP	0.610	-4.538***	-6.077***	-6.109***	I(1)
lnCFM	-1.238	-2.070	-5.890***	-5.819***	I(1)
Panel B: Phillips-Perron (PP) Test					
lnGDP	1.751	-0.895	-4.751***	-10.391***	I(1)
lnFND	-3.472**	-5.998***	-2.987**	-3.345*	I(0)
lnNTR	1.897	-2.245	-4.340***	-4.265**	I(1)
lnTOP	-0.941	-2.727	-5.721***	-5.462***	I(1)
lnCFM	-1.214	-2.190	-5.833***	-5.771***	I(1)

*Note: *, *, and *** indicate significance at 10%, 5%, and 1% respectively. The order of integration is determined based on whether stationarity is achieved at level (I(0)) or at first difference (I(1)).

Source: Authors' Computation (2025)

Table 4. Bounds Test

Model	K	F-Stat.	Significance Level	Critical Values I(0)	Critical Values I(1)
lnGDP	4	8.809	1%	3.74	5.06
			5%	2.86	4.01
			10%	2.45	3.52

Source: Authors' Computation (2025)

Table 4 reports the ARDL Bounds Test results, indicating a statistically significant long-run relationship among the model variables, with lnGDP as the dependent variable. The F-statistic of 8.809 exceeds the upper critical bounds at the 1%, 5%, and 10% significance levels, leading to the rejection of the null hypothesis of no cointegration. This confirms the existence of a long-run equilibrium relationship between GDP and its regressors financial development, natural resource abundance, trade openness, and capital formation justifying the use of the ARDL long-run model.

Table 5. Short-run and Long-Run Estimates (Dependent Variable: lnGDP)

Long-run estimates				
Variable	Coefficient	Std. Error	**t-Statistic**	**Prob.**
LnFND	3.998	1.291	3.097	0.007
LnNTR	-0.022	0.169	-0.132	0.897
LnTOP	-0.481	0.113	-4.245	0.000
LnCFM	0.012	0.005	2.725	0.016
Short-run estimates				
lnGDP(-1)*	-0.241	0.118	-2.049	0.051
D(lnFND)	12.363	12.218	1.012	0.321
D(lnFND(-1))	54.666	13.914	3.929	0.001
D(lnNTR)	-0.034	0.025	-1.384	0.178
D(lnNTR(-1))	0.074	0.027	2.771	0.010
D(lnTOP)	-0.043	0.020	-2.125	0.050
D(lnTOP(-1))	0.045	0.025	1.778	0.096
D(CFM)	-1.164	0.380	-3.061	0.005
D(lnCFM(-1))	12.363	12.218	1.012	0.321
ECT(-1)	-0.696	0.106	-6.535	0.000

Source: Computed by the Author's (2025)

Table 5 presents long-run estimates, financial development exerts a positive and statistically significant impact on GDP in the long run. Specifically, a 1% increase in financial development leads to an approximate 3.998% increase in GDP. This result aligns with the classical finance-growth theory proposed by Goldsmith (1969) and is supported by recent empirical studies such as Pandey et al. (2024), Nadabo, & Abdullahi, (2024a) and Pușcașu (2024). These works highlight the role of financial development in stimulating growth through improved capital allocation, enhanced access to credit, and mobilization of savings.

Natural resource abundance exhibits a negative but statistically insignificant effect on GDP in the long run. A 1% increase in natural resource endowment leads to an approximate 0.022% decrease in GDP, although the effect is not statistically meaningful. This outcome is consistent with the resource curse hypothesis (Dahmani & Gherbi, 2025), which suggests that resource-rich economies like Nigeria may struggle with institutional fragility, economic mismanagement, and overreliance on commodity exports, ultimately hampering sustainable growth.

Trade openness shows a negative and statistically significant relationship with long-run economic growth. Specifically, a 1% increase in trade openness leads to an approximate 0.481% decrease in GDP. This finding supports arguments by Wani (2022) and Ajayi and Araoye (2019), who contend that trade

liberalization may harm growth in countries with underdeveloped institutions, inadequate infrastructure, and weak domestic industries. It underscores the importance of adopting strategic trade policies that safeguard national economic interests while integrating into the global economy. Capital formation has a positive and statistically significant effect on GDP in the long run. Here, a 1% increase in capital formation results in 0.012% increase in GDP. This outcome aligns with Solow's (1956) growth model and the findings of Ikhsan and Satrianto (2023) and Nadabo, & Abdullahi, (2024b), emphasizing that productive investment in physical capital remains a vital driver of long-term economic development particularly when such investment is channeled into infrastructure, technology, and industrial capacity. The coefficient of the lagged dependent variable (GDP) is negatively significant, indicating a partial adjustment toward long-run equilibrium. Specifically, a 1% deviation from the equilibrium level of GDP in the previous period leads to 0.241% correction in the current period. This result is consistent with error correction models and dynamic growth theories, affirming that the Nigerian economy tends to self-adjust in response to disequilibrium over time.

On the other hand, short-run estimates the result indicates that lagged financial development exerts a strong, positive, and statistically significant impact on GDP in the short run. A 1% increase in the previous period's financial development leads to 54.67% increase in current GDP. This substantial effect reinforces the finance-led growth hypothesis as outlined by Gull et al. (2023), Nadabo, & Maigari, (2021) and Pandey et al. (2024), emphasizing the critical role of efficient financial markets and institutions in driving short-term economic expansion. Natural resource abundance has a positive and statistically significant short-run effect on GDP. A 1% increase in lagged natural resource endowment results in 0.074% increase in GDP. This finding supports the dual-track perspective; where resource revenues may temporarily stimulate economic activity often through increased fiscal spending and public investment but do not necessarily translate into sustained long-run growth. It underscores the short-term utility of resource wealth as a fiscal stimulus tool.

Trade openness has a negative and statistically significant immediate impact on GDP in the short run. Precisely, a 1% increase in trade openness leads to 0.043% decrease in GDP. This result reflects the short-term adjustment costs associated with trade liberalization, including domestic sector disruptions and reallocation of resources, as highlighted by Nam and Ryu (2024) and Nadabo, & Salisu (2025). It suggests that the benefits of trade openness may only materialize after initial structural transitions and institutional strengthening. Capital formation demonstrates a negative and statistically significant effect on GDP in the short run. Specifically, a 1% increase in capital formation results in 1.164% decrease in GDP. This counterintuitive finding may indicate issues such as investment inefficiencies, project implementation delays, or crowding-out of private sector activity. It emphasizes the need for strategic investment planning, effective public procurement, and timely execution, consistent with the concerns raised by Ajayi and Araoye (2019). The Error Correction Term (ECT) is negative and highly significant, indicating a strong speed of adjustment toward long-run

equilibrium. Concretely, 69.6% of any short-run disequilibrium is corrected within one period. This confirms the stability and robustness of the estimated model and affirms that the system reliably returns to its long-run path following short-term shocks.

Table 6. Diagnostic Tests

Diagnostic Test	Chi-Square	P-value
Breusch-Godfrey LM	2.811	0.118
Breusch-Pagan-Godfrey	10.868	0.289
Jarque-Bera	3.226	0.201
Ramsey RESET	0.933	0.354
CUSUM (CUSUMSQ)	Stable	Stable

Source: Authors' Computation (2025)

The post-estimation diagnostic tests confirm the robustness and validity of the ARDL model. The Breusch-Godfrey LM test shows no serial correlation (0.118), while the Breusch-Pagan-Godfrey test confirms homoskedasticity (0.289). The Jarque-Bera test indicates that residuals are normally distributed (0.201). The Ramsey RESET test detects no model misspecification (0.354). Lastly, the CUSUM and CUSUMSQ tests demonstrate model stability over time, with test statistics remaining within 5% critical bounds.

CONCLUSION AND RECOMMENDATION

The findings of this study reveal that natural resource abundance in Nigeria has a statistically insignificant and negative effect on long-run economic growth. This supports the resource curse hypothesis, indicating that Nigeria's wealth in natural resources has not translated into sustainable growth due to structural inefficiencies, governance challenges, and economic volatility. In contrast, financial development plays a critical and statistically significant role in promoting economic growth in both the short and long term. This finding confirms the finance-growth nexus, emphasizing the importance of strengthening financial institutions, expanding access to credit, and mobilizing savings for productive investments. The results also show that trade openness negatively impacts economic growth in both the short and long run. This suggests that trade liberalization alone is not sufficient; it must be complemented with robust domestic policies, infrastructure development, and institutional support to harness its potential benefits and manage transitional costs. Furthermore, capital formation demonstrates a positive and significant effect on economic growth in the long run, consistent with classical growth theory. However, in the short run, the effect is negative and significant, pointing to possible inefficiencies in investment execution, delayed returns, or crowding-out effects. This duality underscores the importance of strategic planning and efficient allocation of investment resources.

Based on these findings, the following policy implications are recommended: Firstly, policymakers should prioritize the development of a

robust financial sector by enhancing regulatory frameworks, expanding access to affordable credit, and deepening capital markets. These reforms will facilitate more efficient resource allocation and foster private sector-led growth. Secondly, to mitigate the adverse effects of the resource curse, Nigeria must diversify its economy beyond oil and gas. This requires supporting agriculture, manufacturing, and services through targeted incentives, infrastructure upgrades, and human capital development. Thirdly, trade liberalization must be carefully managed. The government should adopt strategic trade policies that protect nascent industries while investing in transport, energy, and digital infrastructure to reduce trade costs and enhance competitiveness. Finally, Public and private investment initiatives must be subjected to rigorous cost-benefit analyses, transparent procurement processes, and timely implementation schedules. Enhancing project management capacities will ensure that capital formation yields timely and meaningful growth outcomes.

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