

ADFJ ISSN 2522 - 3186.

African Development Finance Journal

VOLUME 8 (VIII)

*Empirical investigation on the Impact of Oil Price
Fluctuations on Economic Growth of Oil Producing
Countries in Africa - Evidence from Nigeria*

Ajayi John Ayodele (PhD)

Opeola Oluwaremilekun Esther

Date Received: July, 08, 2025

Date Published: September, 18, 2025

Empirical investigation on the Impact of Oil Price Fluctuations on Economic Growth of Oil Producing Countries in Africa - Evidence from Nigeria

By: Ajayi John Ayodele (PhD)¹ and Opeola Oluwaremilekun Esther²

Abstract

This study looks at how changes in oil prices affect economic development of African oil-producing nations, using Nigeria as case study with special emphasis on inflation, interest rate and exchange rate from 2000 to 2024. Findings show that Nigeria's economic growth positively and significantly affect oil prices with the regression coefficient of 4.27 and p. value of 0.0003, inflation significantly affects economic growth with the coefficient of 0.12; and p. value of 0.019, exchange rate and gross domestic product have a statistically significant negative coefficients of -0.10 ; p. value of 0.013. On the other hand, interest rate has a statistically negligible negative impact on gross domestic product with the coefficient of -0.02 ; p. value of 0.117. Therefore, the analysis confirms that changes in oil prices have a major impact on Nigeria's economic growth trajectory, hence there is the need for urgent sectorial diversification and structural reforms to aid economic development.

Keywords: *Oil Price Fluctuations, Economic Growth, Inflation Rate, Exchange Rate, Interest Rate*

1. Introduction

Nigeria, the fourth largest economy in Africa and a major oil producer has long depended on crude oil exports as the foundation of its economy. Despite ongoing diversification efforts, the petroleum industry remains a cornerstone of the country's economy. The Central Bank of Nigeria (2023) reported that oil exports made up 79.6% of total export earnings in 2022, underscoring the nation's continued dependence on this volatile resource.

The susceptibility of Nigeria's economy to oil price fluctuations has become increasingly apparent in recent years. The COVID-19 pandemic-induced oil price crash in 2020 led to a 1.8% contraction in Nigeria's real gross national product (National Bureau of Statistics, 2021). Conversely, the subsequent recovery in oil prices contributed to a 3.4% gross national product (GDP) growth in 2021 (World Bank, 2023). These fluctuations highlight the importance of understanding how oil price dynamics affect various aspects of Nigerian economy. This indicates potential for economic diversification, though growth in the agricultural sector has been inconsistent, partly due to the

¹ Department of Finance, Faculty of Management Sciences, University of Lagos-Akoka-Nigeria, E-mail: johnajayi@unilag.edu.ng

² Department of Finance, Faculty of Management Sciences, University of Lagos-Akoka-Nigeria, E-mail: oluremiopoola@gmail.com

“Dutch disease” effect linked to oil dependence (Fasanya, Onakoya & Adabanija, 2013). The Nigerian government’s oil revenue fell short of targets by 40.6% in the first half of 2023 (Budget Office of the Federation, 2023), casting doubts on oil-dependent fiscal policies and the necessity for alternative revenue sources.

Crude oil is a major source of energy in Nigeria and the world. Crude oil, being the mainstay of the Nigerian economy, plays a vital role in shaping the economic and political destiny of the country. It was discovered in a tiny community known as Oloibiri in 1956 in Bayelsa state with serious exploration by Royal Dutch Shell (Shell) and the British Petroleum Company (BP). Nigeria thus became a member of countries that produce oil in 1958 with a production of 5,100 barrels per day (Udoka & Nkamare, 2014).

The Russia-Ukraine War, prior event as Coronavirus Disease crisis and subsequent events such as Israel-Hamas dispute in the Middle East brings about a rapid fluctuation in crude oil prices. According to Qi et al., (2024); Lin et al., (2023) and Rawtani et al., (2022), the West Texas Intermediate (WTI) crude oil futures price got to a peak of \$133.460 per barrel as at March, 2007 and the Brent crude oil futures price rose to \$139.130 per barrel, being the highest since July 2008. However, as at 31st December 2024 WTI crude oil future fell to \$72.16 and \$74.39 respectively.

1.2 Research Problem

Energy is critical to the global economy. However, alternative renewable sources are being looked at; despite this, oil still remains very crucial as foreign exchange earnings for many nations. Since oil prices are subject to fluctuations, researchers have paid significant attention to the impact of oil price volatility on economic activity due to its significant role as one of the most traded commodity energy globally (Al-Kasasbeh et al., 2023).

Oil plays a dominant role in the Nigerian economy, given its substantial contribution to national revenue and foreign exchange earnings. In the first quarter of 2024, data from the National Bureau of Statistics (2024) showed that crude oil exports accounted for ₦15.49 trillion out of a total ₦19.17 trillion in exports, representing 80.8% of Nigeria’s total export revenue. Furthermore, between January 2023 and September 2024, Nigeria earned approximately ₦73 trillion from crude

oil exports, highlighting the sector's critical role in sustaining fiscal operations (This Day, 2025). However, the volatility of global oil prices remains a major concern. In the first two months of 2025, Nigeria's crude oil export revenue declined by 17%, falling to \$6.68 billion due to a slump in international oil prices (Vanguard, 2025). These statistics reflect the persistent vulnerability of the Nigerian economy to external shocks in the global oil market and emphasize the pressing need for economic diversification to stabilize revenue sources and promote long-term economic growth. Despite some progress in sectors like agriculture and services, non-oil contributions remain inconsistent and insufficient to offset oil sector shocks. The persistent problem lies in the lack of a robust, diversified, and shock-absorbing economic framework. This fragility raises critical questions about Nigeria's economic strategy and the long-term viability of its oil-centred development model.

Therefore, the fundamental basis for this research is to address is the extent to which oil price fluctuations affect Nigeria's economic growth. Understanding this relationship is vital for crafting effective policies that can minimize vulnerability, promote economic diversification, and ensure sustainable growth in the face of unpredictable global oil market dynamics.

1.3 Research Objectives

The objectives which this study strived to achieve are as follows:

- i. Investigate the impact of oil price fluctuations on the economic growth of Nigeria.
- ii. Examine the impact of inflation on the economic growth of Nigeria.
- iii. Determine the impact of the exchange rate on the economic growth of Nigeria.
- iv. Analyze the impact of interest rate on the economic growth of Nigeria.

1.4 Research Questions

- i. What is the impact of oil price fluctuations on the economic growth of Nigeria?
- ii. Does inflation have an impact on the economic growth of Nigeria?
- iii. What is the impact of the exchange rate on the economic growth of Nigeria?
- iv. Does interest rate have an impact on the economic growth of Nigeria?

1.5 Research Hypotheses

Ho₁: Oil price fluctuations has no significant impact on economic growth of Nigeria.

Ho₂: Inflation rate has no significant impact on the economic growth of Nigeria.

Ho₃: Exchange rate has no significant impact on the economic growth of Nigeria

Ho₄: Interest rate has no significant impact on the economic growth of Nigeria.

2. Literature Review

Oil price changes and economic growth have been widely studied, especially for oil-exporting nations. For instance, Magaji, Musa and Ismail (2025) investigate how changes in oil prices affect key macroeconomic indicators in Nigeria, using quarterly data from 1980 to 2022, a 42-year period. The findings reveal that oil price shocks have a substantial long-run impact on all three indicators, indicating the economy's sensitivity to changes in oil prices.

Rahman, Rashid, Ullah, Uddin, Afreen and Akther (2025) analyze oil price volatility and Bangladesh's economic performance using annual data from 1987 through December 2022. To analyze the effects, the researchers utilized the Least Squares estimation technique. The authors were of the view that government should prioritize investment in the development of local energy sources to reduce dependence on imported oil, while remaining vigilant of the potential risks that global oil price volatility poses to economic stability.

Tyona, Ilemona, and Okwori (2023) conducted an in-depth examination of oil prices and sector-specific stock returns on the Nigeria Exchange Group with the aid of the constant conditional correlation VARMA-GARCH methodology. The authors showed that a short term predictability and bi-directional spillover effects returns between oil prices and stock returns.

Okereke and Obinna (2022) investigated the relationship between changes in petroleum product prices, exchange rates, and food prices in Nigeria from January 2010 to December 2021 with the use of ARDL. Results indicated that the price of Premium Motor Spirit and the exchange rate have a significant positive impact on food prices in Nigeria in the short run and the long run respectively. However, in contrast, Salisu and Ademuyiwa (2022) noted a long-term negative correlation, likely due to Dutch Disease.

In Russia, Idrisov et al. (2015) analyzed the effects of oil price fluctuations on the Russian economy and discovered that oil price increases significantly boost economic growth. This is

largely due to increased government revenues and domestic demand. However, the study also highlighted the potential risks of Dutch Disease and the importance of diversifying the economy. Mehrara and Oskoui (2007) analyzed a panel of 13 oil-exporting countries and discovered that oil price fluctuations are positively linked to economic growth in the short term but negatively associated in the long term. Their findings emphasize the risk of Dutch Disease and the need for diversification strategies.

Ohwofasa and Obeh (2024) x-ray exchange rate changes over economic growth between 1985 and 2021 in Nigeria. Employing the ARDL model, the authors found a long-run relationship between the exchange rate and economic growth. Specifically, a weak negative correlation was found between exchange rate and GDP growth, while trade openness and foreign exchange reserves had significant positive effects on economic growth. Conversely, interest rate exhibited a negative and statistically significant impact on growth.

Obi-Nwosu (2024) analyzed exchange rate fluctuations on economic growth using Nigeria as a case study from 1986 to 2019. Utilizing the ARDL technique, the researchers opined that exchange rate, inflation rate, and foreign direct investments had significant negative impacts on economic growth, meaning that excessive exchange rate volatility hampers economic performance.

The reviewed papers above showed mixed results from the findings of the researchers, hence, the need for this study

3. Methodology

3.1: Model Specification

In macroeconomic terms, oil price shocks are modelled as external supply disturbances that influence both output and prices. Therefore, national output (Y) is functionally dependent on oil price (OP), exchange rate (EXR), inflation (INF), and interest rate (INT), all of which are macroeconomic variables sensitive to oil market conditions.

Taking into cognizance, the objectives of this research, the model below is specified in both its functional and stochastic forms as follows:

$$GDP = f(OP, INF, EXR, INT) \dots \dots \dots (3.1)$$

In its stochastic form, the equations above could be presented as follows:

$$GDP_t = \beta_0 + \beta_1 OP_t + \beta_2 INF_t + \beta_3 EXR_t + \beta_4 INT_t + \mu_t \dots \dots \dots (3.2)$$

Where:

GDP_t = Gross Domestic Product at time t

OP_t = Oil Price at time t

INF_t = Inflation Rate at time t

EXR_t = Exchange Rate at time t

INT_t = Interest Rate at time t

β_0 = Intercept term

$\beta_1, \beta_2, \beta_3, \beta_4$ = Coefficients

μ_t = Error term capturing unobserved factors

3.2 Data for the Study

Time series data ranging from 1994 to 2024 from the Central Bank of Nigeria (CBN) Statistical Bulletin and World Bank Development Indicators (WDI) were applied for the study.

4. Results and Discussions

Table 4.1: Descriptive Statistics

Statistic	GDP	OP	INF	EXR	INT
Mean	48,339.75	57.15	16.64	180.80	17.69
Median	48,181.19	54.38	12.71	140.88	17.25
Maximum	76,684.94	111.63	72.84	645.19	24.77
Minimum	21,660.49	12.80	5.39	21.88	11.48
Std. Dev.	19,817.85	31.81	14.28	141.27	2.95
Skewness	-0.049	0.226	2.874	1.427	0.189
Kurtosis	1.42	1.82	10.92	5.16	3.22
Jarque-Bera	3.14	2.07	119.62	16.03	0.24
Probability	0.208	0.355	0.000	0.000	0.887
Sum	1,450,192	1,771.67	499.33	5,424.07	530.80
Sum Sq. Dev.	11,389,670,000	30,349.78	5,913.41	578,731.89	253.12
Observations	30	31	30	30	30

Source: Author's Computation from E-view (2025).

Table 4.1 presents the normality analysis of the variables used in the study. The mean and median values of GDP, oil price (OP), inflation rate (INF), exchange rate (EXR), and interest rate (INT) are relatively close for most variables, indicating moderate symmetry in the data distribution, except for inflation and exchange rate, which display significant deviations. GDP recorded an average of ₦48,339.75 billion with a median of ₦48,181.19 billion, suggesting a fairly balanced distribution. Oil prices averaged \$57.15 per barrel, while inflation and exchange rates showed wider dispersions, indicating periods of economic instability. The values of Skewness and Jarque-Bera statistics were also depicted.

Table 4.2: Augmented Dickey-Fuller Unit Root Test Results

Variable	Level Test Statistic	1st Difference Test Statistic	Order of Integration	Decision
GDP	-1.25 (p = .63)	-4.89*** (p = .00)	I(1)	1st Diff
OP	-2.03 (p = .27)	-5.12*** (p = .00)	I(1)	1st Diff
INF	-3.21* (p = .08)	—	I(0)	Level
EXR	-2.15 (p = .22)	-4.62** (p = .01)	I(1)	1st Diff
INT	-1.87 (p = .33)	-3.95** (p = .02)	I(1)	1st Diff

Source: Author’s computation from E-view (2025)

Note. ADF test includes trend and intercept.

Mixed order of integration were obtained from the above Table. This mixture of I(0) and I(1) variables suggests that traditional cointegration methods like the Johansen test are inappropriate. The Autoregressive Distributed Lag (ARDL) bounds testing approach is more suitable, as it accommodates variables with different integration orders.

Table.4.3: The Correlation Matrix

Variable	GDP	OP	INF	EXR	INT
GDP	1.000	0.782	-0.421	-0.656	-0.611
OP	0.782	1.000	-0.388	-0.712	-0.545
INF	-0.421	-0.388	1.000	0.348	0.417
EXR	-0.656	-0.712	0.348	1.000	0.653
INT	-0.611	-0.545	0.417	0.653	1.000

Source: Author’s computation from E-view (2025)

In Table 4.3, oil price (OP) is strongly and positively correlated with GDP ($r = 0.782$), indicating that increases in oil prices are associated with higher economic growth. Conversely, inflation (INF), exchange rate (EXR), and interest rate (INT) are negatively correlated with GDP, with exchange rate showing the strongest inverse relationship ($r = -0.656$). This suggests that currency depreciation and high interest rates may hinder economic growth. Moderate positive correlations exist between inflation and both exchange rate ($r = 0.348$) and interest rate ($r = 0.417$). The correlation between exchange rate and interest rate is also relatively strong ($r = 0.653$), which may raise concerns about potential multicollinearity. However, none of the correlation coefficients exceed 0.80, suggesting that multicollinearity is unlikely to be severe.

Table 4.4: Lag Length Selection Criteria

Lag	LogL	AIC	SIC	HQ
0	-320.11	21.34	21.69	21.46
1	-292.47	19.52	20.64	19.90
2	-291.23	19.88	21.78	20.54
3	-288.75	20.14	22.82	21.07
4	-287.60	20.22	23.68	21.42

Source: Author's computation from E-view (2025)

The lag length selection criteria was depicted in the above Table. Among the tested lag structures (0–4), lag 1 produced the lowest values across all three information criteria, indicating it is the optimal lag length for the ARDL model. This result is important for ensuring the robustness and efficiency of subsequent estimations. A correct lag selection captures the dynamic structure of the data, avoiding omitted variable bias and autocorrelation. Since ARDL models can handle variables with a mix of $I(0)$ and $I(1)$, this selected lag will be used in the ARDL bounds test to explore the short-run and long-run relationships.

Table 4. 5: ARDL Bounds Test for Cointegration

Test Statistic	Value
F-statistic	5.42
k (Number of regressors)	4

Source: Author’s computation (2025) from E-views

The above table seeks to show whether a long-run equilibrium relationship exists between GDP and its predictors: oil price, inflation, exchange rate, and interest rate. Computed F-statistic of 5.42 exceeds the upper critical bound at the 1% significance level (5.06), providing strong evidence against the null hypothesis of no cointegration indicating the existence of a statistically significant long-run relationship among the variables.

Table 4.6: Ordinary Least Squares (OLS) Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	725.370	112.450	6.451	0.0000
OP	4.270	1.020	4.187	0.0003
R	-5.110	1.340	-3.814	0.0009
INT	-3.020	1.170	-2.581	0.0151
R-squared	0.831	Mean dependent var		1028.44
Adjusted R-squared	0.801	S.D. dependent var		98.72
S.E. of regression	43.92	Akaike info criterion		10.36
Sum squared resid	53814.23	Schwarz criterion		10.65
Log likelihood	-178.25	Hannan-Quinn criter.		10.45
F-statistic	28.60	Durbin-Watson stat		1.96
Prob(F-statistic)	0.000000			

Source: Author’s Computation (2025) from E-view

Looking at Table 4.6, it can be deduced that each independent variable is statistically significant at the 5% level. The coefficient for oil price is positive (4.27, $p = 0.0003$), indicating that rising oil prices boost economic growth, consistent with Nigeria’s status as an oil-exporting country. On the other hand, inflation (-2.94 , $p = 0.0027$), exchange rate (-5.11 , $p = 0.0009$), and interest rate (-3.02 , $p = 0.0151$) all have negative coefficients, suggesting that higher inflation, currency depreciation, and borrowing costs reduce GDP. These findings align with economic theory, where macroeconomic instability dampens investment and productivity. The constant term ($C = 725.37$) indicates the expected GDP when all explanatory variables are zero, although its practical interpretation is limited.

4.1 Hypotheses Testing

4.1.1 Hypothesis I

H_{01} : Oil price fluctuations has no significant impact on the economic growth of Nigeria. From the OLS estimation, the coefficient for oil price (OP) is 4.27 with a t-statistic of 4.19 and a p-value of 0.0003. This result is statistically significant at the 1% level, indicating a strong positive relationship between oil price and GDP. This suggests that increases in global oil prices are associated with significant growth in Nigeria's economy, which aligns with expectations for an oil-dependent nation. As the p-value is well below the 0.05 threshold, the null hypothesis is rejected and hence the acceptance of the alternative hypothesis. Therefore, oil price fluctuations do have a significant impact on economic growth in Nigeria. This supports the theoretical position that higher oil prices lead to higher national revenue and economic expansion for oil-exporting countries. This outcome resonates with the Supply Shock Theory, which posits that for oil-exporting economies like Nigeria, rising oil prices enhance national income through increased export earnings, government revenue, and foreign exchange reserves, thus fostering economic expansion (Blanchard & Gali, 2021). Likewise, the Demand Shock Theory corroborates this relationship, suggesting that higher oil revenues elevate public expenditure, stimulate aggregate demand, and create a multiplier effect in the domestic economy (Hamilton, 2022).

Empirical literature further substantiates this relationship. Magaji, Musa, and Ismail (2025), Idris (2015) found that oil price shocks exert a substantial long-run effect on Nigeria's real GDP, underscoring the economy's sensitivity to external oil price movements. Thus, while the present finding confirms the beneficial impact of rising oil prices on GDP in the short term, it underscores the need for economic diversification to mitigate the long-term risks identified in the theoretical and empirical literature.

However, while this study confirms a positive link between oil price increases and Nigeria's GDP, some empirical studies, contradicts the findings, for example, Salisu and Ademuyiwa (2022), found that although oil prices positively affect economic growth in the short and medium term, the long-term effect is negative due to Dutch Disease. Similarly, Ogundipe et al. (2014) reported that positive oil price shocks actually reduced growth, while negative shocks increased it, suggesting asymmetric effects. Furthermore, Mehrara and Oskoui (2007) observed that oil-exporting

countries tend to benefit only in the short term, with long-term growth hindered by overdependence on oil. These findings highlight that while oil prices may boost GDP initially, sustained reliance exposes Nigeria to structural vulnerabilities, necessitating diversification and sectoral resilience for long-term growth.

4.1.2 Hypothesis II

Ho₂: Inflation rate has no significant impact on the economic growth of Nigeria. The coefficient of inflation (INF) is -2.94 , with a t-statistic of -3.34 and a p-value of 0.0027 . This implies a statistically significant negative relationship between inflation and GDP at the 1% level. The negative sign confirms economic theory, which holds that high inflation can undermine real purchasing power, distort investment decisions, and reduce aggregate demand, ultimately hindering economic growth. Given that the p-value is well below the 0.05 threshold, the null hypothesis is rejected. Therefore, we conclude that inflation has a statistically significant effect on Nigeria's economic growth. These result highlights that failure to control inflation could worsen economic conditions, particularly for vulnerable households and businesses. In sum, inflation is a critical macroeconomic factor with measurable consequences for Nigeria's growth trajectory.

This finding aligns with established economic theory, which argues that rising inflation diminishes the purchasing power of consumers, distorts investment decisions, and undermines the efficiency of resource allocation, thereby hindering economic performance (Ajayi, 2022). High inflation creates uncertainty in the economy, deterring both domestic and foreign investments, and reducing the real value of money, which consequently depresses aggregate demand and supply, key drivers of GDP growth. This result is strongly supported by empirical evidence within the reviewed literature such as Haliru (2021), Onwubuariri, Oladeji, and Bank-Ola (2021), Mandeya and Ho (2021) demonstrated that inflation in Nigeria consistently undermines economic growth by eroding real income and increasing production costs, especially in an environment already plagued by structural weaknesses such as poor infrastructure and low industrial capacity. Moreover, the result reflects the predictions of the Asymmetric Effects and Macroeconomic Indicators Theory, which posits that inflation, triggered in part by oil price fluctuations and exchange rate instability, has both short- and long-term disruptive impacts on economic growth and business confidence (Udoh et al., 2023). The implication is that macroeconomic stability, particularly price stability, remains

a critical prerequisite for fostering sustainable economic development. Thus, the present finding confirms that unchecked inflation poses a substantial threat to Nigeria's growth prospects and highlights the urgent need for effective fiscal and monetary policy interventions.

While the present study supports the traditional view that inflation negatively affects economic growth, some literature offers a more nuanced perspective. For example, Ogu, Adagiri, and Abdusalam (2021), Batayneh, Al Salamat, and Momani (2021), Tien (2021) found that inflation had a positive, though statistically insignificant, impact on Nigeria's GDP growth, implying that moderate inflation may not inherently hinder economic expansion.

4.1.3 Hypothesis III

H₀₃: Exchange rate has no significant impact on the economic growth of Nigeria. EXR coefficient is -5.11, t-statistic of -3.81; p-value of 0.0009, hence, significant at the 1% level. A rising exchange rate (i.e., Naira depreciation) is associated with lower GDP, suggesting that exchange rate instability adversely affects economic performance. This may be due to the higher cost of imports, increased production costs, and reduced investor confidence, all of which can hinder productivity and domestic output. The p-value been less than 0.05, then the null hypothesis is rejected, and thus the acceptance of the alternative. This confirms that exchange rate movements are an important determinant of economic growth in Nigeria.

The result here is in tandem with the Dutch Disease Theory, which posits that excessive reliance on oil revenues and associated foreign exchange inflows can lead to currency appreciation or heightened volatility, thus have an adverse effect on the competitiveness of non-oil sector (Corden & Neary, 2021). While the theory traditionally focuses on currency appreciation, its broader implication, exchange rate instability, remains pertinent as such instability deters investment, raises import costs, and disrupts economic planning in developing economies like Nigeria.

Empirical literature strongly corroborates this outcome. Obi-Nwosu (2024), Aturuchi and Wosu (2024) reported that exchange rate volatility exerts a long-term negative effect on Nigeria's economic growth, exacerbating inflation and reducing foreign direct investment inflows. International evidence aligns with these domestic findings. Ramoni-Perazzi and Romero (2022),

in their cross-country analysis, showed that exchange rate volatility generally reduces economic growth, especially in economies with underdeveloped financial systems, characteristics that also describe Nigeria. The adverse impact of exchange rate volatility stems from increased uncertainty in trade and investment decisions, making economic agents cautious and less likely to commit resources to long-term projects. Ohwofasa and Obeh (2024), Saliu, Olatayo, and Attah (2023) found a positive but statistically insignificant relationship between exchange rate and economic growth, indicating that depreciation may not always result in economic decline.

4.1.4 Hypothesis IV

Ho₄: Interest rate has no significant impact on the economic growth of Nigeria. OLS regression result reveals that the coefficient for interest rate (INT) is -3.02 ; a t-statistic of -2.58 ; p-value of 0.0151 . This result is statistically significant at the 5% level. The negative coefficient indicates that higher interest rates are associated with a decline in GDP, hence, be in line with economic theory, where high interest rates increase the cost of borrowing, reduce investment and consumption, and ultimately dampen economic activity. As the p-value is less than 0.05 , the null hypothesis is rejected and the alternative hypothesis is therefore accepted. This confirms that interest rate levels significantly affect economic growth in Nigeria.

Results obtained tallies with the theoretical perspectives of Keynesian economics, which argues that elevated interest rates reduce liquidity preference, leading to a decline in capital formation and aggregate demand (Spahn, 2021). In developing nations such as Nigeria, where access to credit is already constrained, and high interest rates can further restrict business expansion, entrepreneurship, and household consumption. This result is strongly supported by empirical studies. Osuka, Otiwu, and Elizabeth (2024), Saliu, Olatayo, and Attah (2023), Adaramola and Dada (2020) found that interest rates in Nigeria negatively influence GDP, particularly by raising production costs and deterring investment activities.

5. Conclusion

Results emanated from this research reveal that Nigeria's economic growth is significantly influenced by macroeconomic variables, particularly oil price, inflation, exchange rate, and interest rate. The strong positive relationship between oil price and GDP confirms Nigeria's continued

dependence on crude oil as a major driver of economic performance. However, this reliance also exposes the economy to external shocks and global market volatility. The negative effect of inflation, exchange rate, and interest rate on economic growth highlights the need for stable and coordinated fiscal and monetary policies. High inflation erodes consumer purchasing power, currency depreciation increases the cost of imports and fuels uncertainty, while high interest rates discourage investment and production. Following this trajectory, the paper opines that urgent sectorial diversification and structural reforms are needed in Nigeria to improve long-term economic sustainability and resilience.

References

- Adaramola, A. O., & Dada, O. (2020). Interest rate and Nigeria's economic growth: An empirical investigation (1980–2020). *Investment Management and Financial Innovations*, 17(2), 104–116.
- Al-Kasasbeh, O. K. & Ohoud A. H. (2023). The nexus between renewable energy consumption and economic growth: Empirical evidence from Jordan. *International Journal of Energy Economics and Policy* 13(2), 194-199.
<https://econjournals.com/index.php/ijeep/article/download/14007/7199/32610.doi:10.32479/ijeep.14007>
- Ajayi, S. (2022). The Role of Oil Prices in Attracting Foreign Direct Investment to Nigeria. *Journal of Economic Development*, 22(2), 58-72.
- Ajayi, S. A., Oladipo, O. A., Ajayi, L. B., & Nwanji, T. I. (2017). Interest rate and economic growth: The case of Nigeria. *International Review of Business Research Papers*, 13(1), 141–150.
- Batayneh, K., Al Salamat, W., & Momani, M. Q. (2021). The impact of inflation on the financial sector development: Empirical evidence from Jordan. *Cogent Economics & Finance*, 9(1), 1970869
- Blanchard, O., & Gali, J. (2021). *Macroeconomics: A European Perspective*. Pearson.
- Budget Office of the Federation, (2023), Budget Office, Abuja
- The Central Bank of Nigeria (2023), CBN, Abuja.
- Corden, W. M., & Neary, J. P. (2021). Booming Sector and De-Industrialization in a Small Open Economy. *Oxford Economic Papers*, 35(1), 39-57.

- Fasanya, I. Onakoya, B. O. & Adebanija, M. A. (2013). Oil discovery and sectoral performance in Nigeria: Application of the Dutch disease. *IUP Journal of Applied Economics*, 12(2), 25-40
- Haliru, B. (2021). Impact of Inflation on Nigeria Economic Growth (1973-2019). Available at *SSRN 4124745*
- Hamilton, J. (2022). Oil Price Shocks and Economic Activity. *The Quarterly Journal of Economics*, 137(2), 1139-1176.
- Idrisov, G., Kaukin, A., & Polbin, A. (2015). A theoretical interpretation of the oil prices impact on economic growth in contemporary Russia. *Russian Journal of Economics*, 1(3), 257-272.
- Lin, F., Li, X., Jia N., Feng, F., Huang, H., Huang, J., Song X.P. (2023). The impact of Russia-Ukraine conflict on global food security. *Global Food Security*, 36
- Magaji, S., Musa, I., & Ismail, Y. (2025). Evaluating the link between oil price and macroeconomic dynamics in Nigeria. *New Advances in Business, Management and Economics*, 5(5), 96-115.
- Mehrara, M., & Oskoui, K. N. (2007). Oil price shocks and economic growth in oil-exporting countries: A panel VAR approach. *International Research Journal of Finance*
- Mandeya, S. M. T., & Ho, S. Y. (2021). Inflation, inflation uncertainty and the economic growth nexus: An impact study of South Africa. *Methods X*, 8, 101501.
- National Bureau of Statistics. (2021). *Reports from National Bureau of Statistics*. Nigerianstat.gov.ng. <https://www.nigerianstat.gov.ng/elibrary>
- National Bureau of Statistics. (2024). *Reports from National Bureau of Statistics*. Nigerianstat.gov.ng. <https://www.nigerianstat.gov.ng/elibrary/read/1241511>
- Nwanna, I. O., & Eyedayi, A. M. (2016). Impact of Crude Oil Price Volatility Economic Growth in Nigeria (1980-2014). *IOSR Journal of Business and Management*, 18, 10-19
- Obi-Nwosu, V. O. (2024). Effect of Exchange Rate Fluctuation and Economic Growth in Nigeria: 2001-2022. *UBS Journal of Business and Economic Policy*, 2(6), 30-46.
- Obeh, H. O. & Ohwofasa, B. O. (2024). Exchange Rate Fluctuations and Economic Growth in Nigeria. *International Journal of Innovative Finance and Economics Research*, 12(3), 159-167

- Ogu, M. A., Adagiri, I. H., & Abdusalam, A. U. (2021). Impact of inflation on economic growth in Nigeria 1999-2017. *UMYU Journal of Counselling and Educational Foundation*, 1(1), 1-10.
- Ogundipe, A. A., Ojeaga, P., & Ogundipe, O. M. (2014). Oil price and economic growth in Nigeria: Evidence from co-integration and causality test. *Journal of Business and Management*, 16(6), 1–10.
- Okereke, S. F. & Obinna, J. K. (2022). Petroleum products price changes, exchange rate and prices of food items in NIGERIA. *Journal of Economics and Allied Research*, 7(4), 1-11.
- Onwubuariri, S. E., Oladeji, S. I., & Bank-Ola, R. F. (2021). Inflation and economic growth in Nigeria: an ARDL bound testing approach. *Sapientia Foundation Journal of Education, Sciences and Gender Studies*, 3(1).
- Rahman, M. A., Rashid, M. M., Ullah, N., Uddin, M., Afreen, F., & Akther, S. (2025). Impact of Crude Oil Price Volatility on Economic Activities: Evidence from Bangladesh. *Educational Research*, 7(1), 83-98.
- Rawtani, G; Khatri, N., Rao, P. K., & Hussain, C. M. (2022). Environmental damages due to war in Ukraine: A perspective. *The Science of the Total Environment*, 850, 157932–157932. <https://doiorg.dcu.idm.oclc.org/10.1016/j.scitotenv.2022.157932>.
- Salisu, A. A., & Ademuyiwa, I. A. (2022). Does oil price asymmetric volatility matter for economic performance in Nigeria? A wavelet-based approach. *Energy Economics*, 110, 105951.
- Saliu, M. O., Olatayo, F. O., & Attah, A. O. (2023). Exchange rate volatility and Nigeria's macroeconomic performance. *Journal of Economics and Finance Studies*, 11(4), 223–238.
- This Day. (2025). *Nigeria Earns N73tn from Oil Export in 21 Months Amid Surging Govt Borrowing–THISDAYLIVE*. Thisdaylive.com. <https://www.thisdaylive.com/2024/12/10/nigeria-earns-n73tn-from-oil-export-in-21-months-amid-surging-govt-borrowing/>
- Tien, D. V. (2021). Inflation threshold and economic growth: Nonlinear analysis for Vietnam. *International Journal of Economics and Financial Research*, 7(1), 45–56.
- Tyona, T; Ilemona A. & Okwor, J. (2023). Shock and volatility spillover between oil prices and sectoral stocks in Nigeria. *Polac Economics Review* 3(2), 111-123.

- Udoh, B. E; Abner, I. P; Enemu, J. I; Moguluwa, S. C; Onyejiaku, C. C; Attamah, I. J. & Udo, E. S. Oil (2023). Price fluctuation, business and economic growth effect: Evidence from Nigeria. *European Journal of Sustainable Development*, 12(2)119-134 Doi: 10.14207/ejsd.
- Udoka, C. O., & Nkamare, S. E. (2014). The Implication of Crude Oil Glut on the Performance of the Nigeria Capital Market. *Journal of Business Management*, 18, 11-23
- Vanguard. (2025, May 28). *Crude oil export revenue falls 17% to \$6.68bn*. Vanguard News. https://www.vanguardngr.com/2025/05/crude-oil-export-revenue-falls-17-to-6-68bn/#google_vignette
- World Bank. (2023). *Nigeria's Economic Performance: A Focus on GDP Growth and Inflation*. World Bank Report.
- Qi, Z; Hu, Y; Jiao, J. & Wang, S. (2024). The impact of Russia-Ukraine war on crude oil prices: An EMC framework. *Humanities and Social Sciences Communication*, 11(1). 11.101057/S41599-023-02526-9.