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RELATIONSHIP BETWEEN OIL PRICE FLUCTUATION AND ECONOMIC GROWTH IN NIGERIA

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Abstract

The nature of the data used is secondary data from Bureau of Statistics (NBS), World Bank Development Indicators, Central Bank of Nigeria (CBN) Statistical Bulletin and Organization of Petroleum Exporting Countries (OPEC) for Real Gross Domestic Product, Crude Oil Prices, Inflation Rate, Interest Rate, Exchange Rate Government Expenditure. Based on ARDL method, the result shows evidence of long run positive relationship between the variables. The key finding of this study concludes that there is a positive long-run relationship between all the variables. The findings revealed that oil price, interest rate and government expenditure are both positive and significantly related to Real Gross Domestic Product (RGDP) while exchange rates and inflation rate both have negative relationships and significant in influencing economic growth in Nigeria.

Key words: Oil price fluctuation, Economic Growth, Exchange Rate, Interest rate, Inflation and Autoregressive Distributive Lag.

1. Introduction

The international oil market is a complex and dynamic system, with prices influenced several factors, including global demand and supply, geopolitical events, and economic trends. The Organization of the Petroleum Exporting Countries (OPEC) plays a significant role in shaping the global oil market, with its country's members accounting for a substantial portion of the world's oil production. Fluctuations in global oil prices have far-reaching implications for the world economy, affecting not only oil-producing countries but also oil-importing nations.

The relationship between oil price fluctuations and economic growth has continued to attract the attention of scholars, although empirical evidence presented by the authors suggests that

exogenous shocks to oil prices have a significant effect on economic growth. The impact of increasing oil prices on the economic activities of a country and the extent of such impact depends largely on whether the country is an importer or exporter of oil. For example, exporter of oil like Nigeria, Kuwait, Saudi Arabia and Libya are on the gaining side because the receipt from exports add to their foreign reserves and improve their balance of payments positions.

Nigeria, Africa's largest economy, has been heavily reliant on crude oil exports since the 1970s making it vulnerable to fluctuations in global oil prices, with the oil sector accounting for a significant portion of the country's GDP and government revenue. The Nigerian government has implemented various policies aimed at diversifying the economy and reducing its reliance on oil exports, but the country remains heavily dependent on the oil sector. Despite research on the topic, gaps remain in the literature, including limited focus on exchange rates where many studies have focused primarily on the impact of crude oil prices on economic growth, with less attention paid to the role of exchange rates. This study aims to contribute to the existing literature by examining the impact of oil price fluctuations on economic growth in Nigeria.

2. literature Review

This section therefore reviews the theoretical, conceptual, and empirical literature on the relationship between oil price fluctuations and economic growth in Nigeria. It begins with a conceptual clarification of the key variables, followed by a theoretical review that highlights the main economic frameworks linking oil prices and growth. Thereafter, empirical studies both foreign and Nigerian are examined to identify consistencies, contradictions, and gaps in existing research.

2.1 Conceptual Issues

Oil price fluctuations refer to the changes in the price of crude oil over time. According to Shin et al. (2013), oil price fluctuations define in terms of their pass-through effect on inflation, examining how changes in crude oil prices influence domestic aggregate prices. According to Wardhana, and Makaliwe (2023) defined cyclical oil price movements (CCOM) as a downward upward movement in crude oil prices. Such movements are triggered by macroeconomic fundamentals like exchange rates, inflation rate, domestic demands, global demands, political unrest/change in government

Manasseh et al (2019) described cyclical oil price movements as persistent and consistent upward or downward fluctuations in the prices of crude oil over time. These cyclical variations are primarily influenced by global market forces, production decisions by major oil-exporting countries, and shifts in international demand. However, the overall impact of crude oil price fluctuations on national economic performance and enterprise development largely depends on how effectively the government manages its past and current oil revenues (Ighosewe, Akan, &

Agbogun, 2021). In other words, prudent fiscal management and diversification policies determine whether oil windfalls translate into sustainable growth or economic vulnerability during downturns.

Furthermore, fluctuations in crude oil production levels also have a significant influence on Nigeria's macroeconomic performance. As the largest oil producer in Africa and the sixth largest globally, Nigeria's economic fortunes are intricately tied to developments in the international oil market (World Bank, 2022; Olofinbiyi, Eze, & Yakubu, 2021). Hence, both oil price volatility and production variability play critical roles in shaping government revenues, foreign exchange earnings, and overall economic stability.

Maganya et al. (2020) defined economic growth as an increase in the monetary total value of all goods and services produced in a country within a specific period, usually a year. The definition given by Maganya et al. (2020) serves as the working definition of this study. According to the Solow-Swan model, economic growth is driven by three key factors: capital accumulation, labor force growth, and technological progress. The Solow-Swan model emphasizes that while capital and labor are crucial for economic growth, technological progress is the ultimate driver of long-term, sustainable growth. Without technological innovation, an economy will experience diminishing returns and eventually reach a point where growth stalls.

2.2 Theoretical Review

2.2.1 Rentier State Theory

The rentier state theory, introduced by Mahdavy (1970), describes states that derive substantial government revenue from external rents rather than domestic production and taxation. These states often suffer from weak institutions, economic inefficiencies, and overreliance on resource wealth (Beblawi & Luciani, 1987). Nigeria fits this model as oil revenue contributes over 85% of government earnings and 90% of foreign exchange earnings (World Bank, 2021). The country's economic growth fluctuates in response to changes in global oil prices, demonstrating its dependence on oil rents. The rentier state theory explains how economies that rely heavily on natural resources, especially oil, become vulnerable to price fluctuations, leading to economic instability.

2.2.2 The Dutch Disease Theory (DDT)

This refers to the economic phenomenon where a boom in the natural resource sector leads to a decline in other sectors such as manufacturing and agriculture. Kawai (2017) categorized the extent the Dutch disease affects the economy into resource and spending effect movements. Resource movements place premium on the various aspects of the resources that trigger oil prices to increase marginally, which in turn increases wage rates. This in turn shrinks the operations of

various sectors of the economy. It suggests that high oil prices can lead to an appreciation of the real exchange rate, potentially undermining the competitiveness of non-oil sectors such as agriculture and manufacturing (Corden & Neary, 1982). This theory is particularly relevant for addressing questions about sectoral performance and economic impacts. It provides a framework for understanding how volatility in oil prices affects government revenues, economic growth, and the implementation of effective diversification strategies (Auty, 1993; Sachs & Warner, 2001).

2.2.3 Theoretical Framework

Having reviewed the theories, this study considered the Dutch Disease theory as its theoretical framework. The theory stresses that if oil prices change, oil-exporting countries' industrial sector will change alongside. Thus, the import concentration reduces the extent of competitiveness of the domestic producers (Ighosewe et al 2021). In Nigeria, the influx of oil revenue tends to appreciate the exchange rate, making non-oil exports less competitive, thus undermining broad-based economic growth.

2.3 Empirical Review.

Anakwue et al. (2025) investigates the **i**mpact of Oil Price Fluctuations on Nigerian Economic Growth and Sectoral Performance for a time series data from 1995 to 2024. The study used Vector Error Correction Model (VECM) and Variance Decomposition Analysis, and the findings shows that oil prices influence Nigeria's economic growth, with about 2.36% of real GDP variations in the long term. The agricultural sector showed resilience to oil price changes, while the manufacturing sector exhibited increasing vulnerability. Government revenues were notably affected by oil price fluctuations, especially in the medium term.

Ogbuagu (2024) study the impact of crude oil price fluctuations on economic growth in Nigeria, using the method of Error Correction Mechanism (ECM) and Generalized Autoregressive Conditional Heteroskedasticity (GARCH) model for analyzing data from 1981 to 2018, the study found that oil price and OPEC supply significantly impact Nigeria's economic growth. Oil prices had a positive relationship, while OPEC supply had a negative relationship with economic growth. Similarly, Ayangbemi and Obi (2024), Analyzes the asymmetric impact of carbon Emission, oil price shocks on economic growth in Nigeria between 1981 to 2022. The study used Nonlinear Autoregressive Distributed Lag (NARDL) model, and the result of their findings shows that oil price shocks have a positive and statistically significant impact on Nigeria's economic growth in both the short and long run. While carbon emissions negatively affect economic growth in the long run.

Okeke (2024) examined the relationship between oil shocks and stock market performance in Nigeria, Egypt, South Africa, and Tunisia, utilizing data from Q1:2010 to Q4:2020. Using a Panel ARDL approach, the study revealed that oil price shocks negatively impact stock market performance in the long run, emphasizing the vulnerability of these economies to oil price fluctuations. Moreso, a positive long-run relationship is observed between exchange rates and stock market performance, while inflation rate shocks exert a negative effect.

Hadji and Ben Abderrahmane (2024) using a dynamic autoregressive distributed lag (ARDL) model, Vector Autoregression (VAR), Impulse Response Functions (IRFs), Variance Decomposition, and Toda-Yamamoto causality test for a time series data from 1970 to 2022. The study found a strong positive relationship between oil prices and Algeria's economic growth. Though the impact is moderate on inflation and exchange rates. Oduola et al. (2023) carried out their study on oil wealth and economic growth in Nigeria. They used Autoregressive Distributed Lag (ARDL) model and found a positive and significant relationship between oil revenue and economic growth in the long run. However, the effect was statistically insignificant in the short run.

Udoh et al. (2023) Oil Price Fluctuation, Business and Economic Growth Effect, Analyzing daily data from 2012 to 2022 in Nigeria. The study used the method of Structural Vector Autoregressive (SVAR) and Autoregressive Distributed Lag (ARDL) models and found that oil price shocks have persistent effects on Nigeria's macroeconomic indicators and business climate in both the short and long run. In the same vein, Zeynalov and Tiron (2022) applied the method of Vector Autoregression (VAR) model on the Russia Macroeconomic Performance of Oil Price Shocks in Russia with a time series data from Q1,2004 to Q3, 2021. The study revealed that oil price shocks significantly influence Russia's macroeconomic indicators, particularly industrial production, exchange rates, inflation, and interest rates.

Darma et al (2022), study the macroeconomic impact of oil price shocks on government expenditure and economic growth in Nigeria. Generalized Method of Moments (GMM) and Vector Error Correction Model (VECM) were used for the analysis of time series data from 1986 to 2018. The study found a direct and significant relationship between oil prices, government expenditure, and economic growth. The exchange rate and exports were identified as channels through which oil price shocks impact the economy. The study also confirmed the presence of Dutch Disease in Nigeria and recommended a shift towards economic diversification to reduce dependence on oil revenue.

Conversely, Umeghalu et al. (2022) Oil Price Uncertainty and Industrial Output in Nigeria using the method of Ordinary Least Squares (OLS) and Exponential Generalized Autoregressive

Conditional Heteroskedasticity (EGARCH) model for a time series data from 1981 to 2019, the study found that oil price volatility negatively impacts industrial output in Nigeria. Government oil revenue fluctuations also lead to significant decreases in industrial output. Chen et al. (2021) study the effects and structural change of oil price shocks on industrial output of China using a time series data from 2006 to 2017. A method of time-varying parameter models and the study revealed that the impact of oil price shocks on China's industrial output varies over time and is influenced by structural changes within the oil industry.

However, Elhassan (2021) Study the impact of Oil Price Fluctuations on Economic Growth in Saudi Arabia using a time series data from1970-2020 with the application of Nonlinear Autoregressive Distributed Lag (NARDL) model and the study revealed that positive oil price shocks significantly boost Saudi Arabia's economic growth in both the short and long term, while negative shocks have a less pronounced effect. In the same vein, Arku et al. (2021) in their study, on the Dynamic Relationship of Crude Oil Prices on Macroeconomic Variables in Ghana of a time series data from 2000 to 2018 and the method of Autoregressive Distributed Lag (ARDL) bounds testing was used. The study found a positive long-run relationship between crude oil prices and inflation in Ghana. Additionally, it identified a negative relationship between crude oil prices and interest rates, suggesting that oil price increases could lead to lower interest rates in the country.

Umar and Abdulhakeem (2021). The impact of oil price volatility and macroeconomic stability in Nigeria. The techniques for the analysis used were of Generalized Autoregressive Conditional Heteroskedasticity (GARCH) model. The study confirmed that oil price volatility, rather than levels alone, poses a significant threat to macroeconomic stability in Nigeria. Output and inflation were highly susceptible to sudden price swings.

3. Methodology

This section presents the research methodology adopted in examining the relationship between oil price fluctuations and economic growth in Nigeria. The methodology provides a detailed explanation of the research design, data sources, model specification, estimation techniques, and analytical procedures employed in the study. The purpose is to ensure that the empirical investigation is carried out in a systematic, transparent, and replicable manner.

The study used ARDL methods by applying the Johansen co-integration testing method to determine the kind of relationship between oil price fluctuation, economic growth, Exchange Rate, Inflation Rate and Government Expenditure in Nigeria. The time series data ranges from 1985 to 2023. The data were source from the Central Bank of Nigeria (CBN) and National Bureau of Statics (NBS) and World Bank Development Indicators. Variables of interest collected, analysed

and presented are: Gross Domestic Product (GDP) proxy for economic growth, Oil Prices (Brent) proxy for oil price levels, Exchange Rate, Inflation Rate and Government Expenditure.

3.1 Model Specification

To achieve objective of this study "the relationship between oil price fluctuation and economic growth in Nigeria, the model is specifying in an econometric form:

$RGDP = f(OPF, INFR, EXCR, INTR, GEX)$ ..... (1)

$RGDP_t = \emptyset_0 + \emptyset_1 OPF_t + \emptyset_2 INFR_t + \emptyset_3 INTR_t + \emptyset_4 EXCR_t + \emptyset_5 GXP_t + \mu_t$ ..... (2)

Where: RGDP =Real Gross Domestic Product, INTR= Interest Rate

RGDP= Real Gross Domestic Product, *EXCR*= Exchange Rate

OPF= Oil Prices Fluctuations, *GEX* = Government Expenditure

INFR= Inflation Rate, μ = Error term

$\emptyset_0$ = intercept, $\emptyset_1$ - $\emptyset_5$= Coefficient to estimate and *t=Time period*

3.2 Measurement of Variables

This section describes and explains how each variable in the model is measured, including its definition, proxy, and expected relationship with economic growth in Nigeria. The model specified for the study is expressed as:

RGDP=f (OPF, INTR, EXCR, GEX, INFR)

Where: RGDP represents Real Gross Domestic Product (economic growth), OPF stands for Oil Price Fluctuations, INTR represents Interest Rate, EXCR denotes Exchange Rate, GEX signifies Government Expenditure, and INFR stands for Inflation Rate.

Each variable is measured as follows:

3.2.1 Real Gross Domestic Product (RGDP)

Measurement**:** Real GDP represents the total value of all goods and services produced within Nigeria, adjusted for inflation. It serves as the dependent variable and a proxy for economic growth.

Expected Relationship: It is expected to increase with higher oil prices, effective government spending, and stable macroeconomic conditions.

3.2.2 Oil Price Fluctuations (OPF): Oil price fluctuation is measured as the percentage change or volatility in the international crude oil price (Brent or Bonny Light) over time. It captures both upward and downward swings in oil prices.

Expected Relationship**:** A positive relationship is expected between oil prices and economic growth since rising oil prices typically increase export earnings and government revenue in Nigeria.

3.2.3 Interest Rate (INTR)

Measurement**:** Interest rate is proxied by the monetary policy rate (MPR) or prime lending rate, reflecting the cost of borrowing in the economy.
Expected Relationship: The relationship with RGDP may be negative if higher interest rates discourage investment and consumption, though it can be positive if it attracts savings and improves financial stability.

3.2.4 Exchange Rate (EXCR)

Measurement: Exchange rate is measured as the official nominal exchange rate of the naira against the U.S. dollar (₦/USD). It reflects external competitiveness and currency stability.
Expected Relationship: A negative relationship is expected between exchange rate depreciation and economic growth since currency weakening tends to raise import costs and inflationary pressures.

3.2.5 Government Expenditure (GEX)

Measurement: Government expenditure is measured as total government spending (both recurrent and capital expenditures) as reported in annual national accounts.
Expected Relationship: A positive relationship is anticipated since productive public spending can stimulate investment, infrastructure development, and aggregate demand.

3.2.6 Inflation Rate (INFR)

Measurement: Inflation rate is measured by the annual percentage change in the Consumer Price Index (CPI), representing the general price level of goods and services.
Expected Relationship: Inflation is expected to have a negative relationship with economic growth since persistent price increases erode purchasing power and discourage investment.

4. Results and Discussions

This Section presents, analyzes, and discusses the empirical results obtained from the study on the relationship between oil price fluctuations and economic growth in Nigeria. The analysis is based on the data and estimation techniques described in Chapter Three. The purpose of this chapter is to interpret the statistical outcomes in line with the study's objectives and hypotheses, thereby providing evidence on how oil price dynamics and selected macroeconomic variables

4.1 Unit Root Test

The unit root test was conducted by checking whether the variables are stationary or not using Augmented Dickey-Fuller (ADF) Test and Phillip Perron (PP) approach.

Table 1: Results of unit root test for stationarity

H_0: the data is not stationary

Variables	PP Levels	PP Difference	ADF level	ADF Difference	Remarks
LOG(EXCR)	-0.4574	-5.6088	-3.4595	-5.6301	I (1)
LOG(GEX)	-0.6492	-5.6594	-0.4499	-5.6311	I (1)
LOG(INFR)	-2.9634	-6.1398	-3.2310	-5.4189	I (1)
LOG(INTR)	-5.1472	-7.3644	-5.1487	-7.0790	I(0)
LOG(OPF)	-2.8185	-6.6114	-2.7382	-5.4713	I(1)
LOG(RGDP)	-1.5791	-3.8951	-2.0486	-3.9937	I(1)

PP Critical Value at 5% =3.5370 **ADF Critical Value at 5% =3.5370**

Source: Author's Computation, (2025) E-views 9.0.

The Philip Peron (PP) and Augmented Dickey Fuller (ADF) the test was conducted with trend and intercept at level and first difference. The result shows only interest rate stationary at levels while the rest became stationary after differenced once suggesting that they are integrated of different order of I(0) and I(1).

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Bound Test Result. This study applied the appropriate cointegration method which is the bound test. Due to different order of integration I (0) and I (1) variables as regressors obtained from the unit root result, the Johansen cointegration method is not applicable.

Table 2 ARDL Bounds Test for the model

Computed F Statistics	K	5% critical Bound Test value		Critical Bound Test Value 10%	
		Lower Bound	Upper Bound	Lower Bound	Upper Bound
6.044667	5	2.62	3.79	2.26	3.35

Source: E-views 9.0 output: Author's Computation, 2025

Given the F-statistics value of 6.044667 in Table 2 which is greater than both the upper and lower critical bound value clearly demonstrated the rejection of the null hypothesis at 5% level of significance. Thereby, showing long-run relationship among the variables under study.

Table 3: ARDL Long Run Estimate

VARIABLES	Coefficient	Std. Error	t-Statistics	Prob.
LOG(EXCR)	-0.175235	0.156439	-1.120151	0.2725

LOG(GXP)	0.227033	0.130490	1.739844	0.0933
LOG(INFR)	-0.262532	0.139118	-1.887113	0.0699
LOG(INTR)	0.354912	0.248401	1.428788	0.1645
LOG(OPF)	0.228392	0.126713	1.802429	0.0827
C	8.934644	1.055053	8.468429	0.0000

Source: *Author's Computation, (2025) E-views 9.0*

The result of table 3 shows that there is a long-run relationship between the dependent variable (RGDP) and the other regressors. The long run coefficient of oil prices, interest rate, and government expenditure are positive. While exchange and inflation rate coefficients are negative. A unit change in the oil price, interest rate and government expenditures would result in about 0.22, 0.35 and 0.22 percent increases in RGDP respectively during the period under study. On the other hand, a unit change in exchange rate and inflation rate will decrease RGDP by 0.17 percent and 0.26 percent respectively.

Table 4 ARDL Short Run Estimate

Dependent Variable =DLOG(RGDP)				
Variables	Coefficient	Std. Error	t-statistics	Prob.
DLOG(EXCR)	-0.061390	0.020935	-2.932376	0.0068
DLOG(GXP)	0.028890	0.019919	1.450380	0.1585
DLOG(INFR)	-0.022413	0.009841	-2.277470	0.0309
DLOG(INFR(-1)	0.026816	0.009837	2.726014	0.0111
DLOG(INTR)	0.045163	0.037868	1.192654	0.2434
DLOG(OPF)	0.029063	0.016607	1.750066	0.0915
ECT (-1)	-0.127252	0.033886	-3.755328	0.0008
R-squares=0.623191, R-Squared=0.497589, F-statistic=4.961602, P-Value=0.000557				

Source: Author's Computation, (2025) E-views 9.0

Table 4 shows the short run coefficients of the model. From the results, the coefficient of the Error Correction term (ECT) is negative and significant (-0.127252) which means that any disequilibrium in the dependent variable (RGDP) or the entire system in the previous year would be automatically corrected in the current year at 12 percent speed. Furthermore, the result reveals that oil price, interest rate and government expenditure are both positive and significantly related to Real Gross Domestic Product (RGDP while exchange rates and inflation rate both have negative relationships and are significant in the short run. Precisely, a unit change in government expenditure, inflation, and oil price fluctuation would result in about a 0.28%, 0.45% and 0.29% increase in Real Gross Domestic Product respectively for the said period of study in the short run.

On the other hand, a one or small unit change in the exchange rate would result in about a 0.61% decrease in Real Gross Domestic Product which is negative but statistically significant at the 5 percent level. In the same vein a unit change in inflation at lag 0 would result in about 0.22% decrease in Real Gross Domestic Product and hence statistically significant at 5 percent level but at lag 1 the result revealed that inflation has a positive but statistically not significant at 5 percent level, that is a unit change in inflation would result in about 0.26% increase in Real Gross Domestic Product.

The constant co-efficient have a positive and statistically significant with RGDP (Real Gross Domestic Product) in Nigeria at 5 percent level. This means that when variables such as oil price, exchange rate, inflation rate, interest rate and government expenditure are set to be zero Real Gross Domestic Product would be constant. The finding clearly reveals those variables (oil price, exchange rate, inflation rate, interest rate and government expenditure) mentioned above are good predictors for Real Gross Domestic Product. The overall result given value of 0.62 R- Square and 0.49 value as an Adjusted R-square of the model revealed that the independent variable significantly impacts on the dependent variable. The dependent variable in the estimated model has 0.62 percent explained within the model. That is 62 percent changes in RGDP are explained by the independent variables. The adjusted coefficient of determination shows that the estimated model can be used for prediction and the F-statistic value of 4.961602 with probability value of 0.000557 indicate joint significance of the variables used in the model, meaning that the independent variables all are significant in in influencing the changes in the dependent variables. The Durbin- Watson (DW) value of 1.732932 statistics from the ARDL result show the absence of negative serial correlation in the residuals.

The ARDL regression results on the relationship between the independent variables (oil price, exchange rate, inflation rate, interest rate and government expenditure) and the dependent variable (economic growth) proxy by RGDP in Nigeria in table 5 showed an overall p-values of 0.000557 which is less than 0.5 level of significance. The combined probability value for the model proved that there is a statistically significant relationship between oil price fluctuation and economic growth in Nigeria. Also, from table 3 and 4, ARDL regression results on both short run and long run estimate shows the impact of each variable on the economic growth of Nigeria. Looking at the overall p-values of 0.000557, which is less than 0.5 level of significance.

Table 5: Diagnostic Test result

Test	Result	Prob.
Breusch-Godfrey LM Test	0.516502	0.6020
Heteroscedasticity BPG	1.593409	0.1823
Heteroscedasticity Test ARCH	0.538870	0.4682

Ramsey RESET Test	1.345661	0.1885

Source: Author's Computation, (2025) E-views 9.0

The diagnostic test results based on the residuals of the long-run equation presented in table 5 which shows no evidence of serial autocorrelations. The null hypothesis of no serial autocorrelation is accepted by the Breusch-Godfrey test. Likewise, the Breusch-Paga Godfrey test for Heteroscedasticity also revealed no evidence of Heteroscedasticity. The test for model misspecification, the Ramsey RESET test result revealed that the model was well specified as no evidence of model misspecification.

4.2 Discussion of Findings

Descriptive statistics showed that the variable used in the study exhibits significant variation in terms of magnitude, which suggests that Ordinary Least Square estimation may produce bias results. The correlation matrix revealed that there is perfect relationship between dependent variables in relation to independent variables and all the variables used in the study are self-determining and moved in different direction. Serial correlation and heteroscedasticity test in the model using the Breusch Pegan-Godfrey LM test for serial correlation, ADF and PP test revealed that the percentage annual growth rate of the Real Gross Domestic Product, oil price, exchange rate, inflation rate and government expenditure are stationary at first difference I (1), while only interest rate were stationary at level I (0). The variables used for the study exhibit long-run relationships as revealed by the error correction model. Therefore, the variables have the capacity to converge to equilibrium in the long. The ECT negative coefficient means that there is an adjustment in the system if any disequilibrium occurs. Hence, any disequilibrium in the dependent variable in the past years is automatically fixed or corrected in the present year at the speed of 12 percent. Oil price fluctuations exerted a positive but statistically insignificant influence on real gross domestic product (RGDP) at the 5% level of significance. Exchange rate was found to have a negative but insignificant relationship with economic growth, suggesting that exchange rate instability tends to dampen economic performance, though not strongly enough to be statistically conclusive. Government expenditure showed a positive relationship with growth, indicating that increased public spending can stimulate economic activity, albeit the impact was statistically weak.

Inflation rate displayed a negative and marginally significant relationship with growth, implying that rising prices exert downward pressure on output and purchasing power in the economy. The interest rate variable had a positive but insignificant effect, suggesting that the current interest rate structure may not be sufficiently aligned to promote productive investments and economic expansion.

5. Conclusion and Recommendations

This section presents the summary of major findings, conclusions, and policy recommendations derived from the empirical analysis of the study. The study examined the relationship between oil price fluctuations and economic growth in Nigeria using key macroeconomic variables such as exchange rate, government expenditure, inflation rate, interest rate, and oil price fluctuations. The findings indicate that while oil price movements and macroeconomic indicators collectively influence Nigeria's economic performance, their effects are largely insignificant at the 5% level. This outcome underscores the vulnerability of Nigeria's economy to oil market volatility and highlights the need for prudent fiscal management, economic diversification, and structural reforms to enhance resilience and sustainable growth.

5.1 Conclusions

This study concludes that while oil price fluctuations have a positive but insignificant relationship with Nigeria's economic growth, the country's heavy reliance on crude oil revenue continues to expose it to external shocks and economic instability. The insignificant effects of key macroeconomic variables such as exchange rate, interest rate, inflation, and government expenditure highlight weaknesses in policy effectiveness and the fragile structure of the Nigerian economy. Overall, the findings suggest that sustainable growth in Nigeria requires reducing dependence on oil, promoting economic diversification, and implementing sound fiscal and monetary policies that can cushion the impact of oil price volatility and stimulate broad-based economic development.

5.2 Recommendations

Based on the results, the study made the following recommendations:

I. Nigeria should reduce her dependence on crude oil by diversifying into non-oil sectors such as agriculture, manufacturing, and technology to achieve more stable and inclusive growth.
II. Government should promote fiscal discipline by managing oil revenues transparently and channeling public spending toward productive sectors like infrastructure, education, and healthcare.
III. The Central Bank of Nigeria should ensure exchange rate stability and strengthen monetary coordination which are essential to curb inflation and encourage investment.
IV. Finally, transparency and institutional reforms should be deepened to ensure that oil earnings are used efficiently and contribute meaningfully to long-term economic development.

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