

Oil Price Volatility and Federal Government Recurrent Expenditure in Nigeria: Mediating Role of Exchange Rate

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Abstract

An empirical examination of the impact of oil price volatility on federal government recurrent expenditure in Nigeria and the mediating role of exchange rate from 1980 to 2022 was carried out in this study. The Generalized Autoregressive Conditional Heteroskedasticity (GARCH) model was used in the data analysis. The findings reveal compelling evidence that oil price volatility as measured using the Brent oil volatility has a significant effect on recurrent federal government spending patterns. The analysis also shows that exchange rate variations serve as significant control variable that influence oil price fluctuations and federal government recurrent expenditure. Hence, the study recommends that federal government should create and properly administer a stabilization fund to save excess oil revenue during periods of boom to lessen the immediate effects of oil price volatility and the abrupt impact on budgetary allocations on recurrent expenditure. There is also the need to have a deep-cut on unproductive recurrent expenditures by federal government and its appointees. The study further recommends the adoption of a closely monitored exchange rate policy by government.

Keywords: Oil Price Volatility, Brent Oil Price, Federal Government Recurrent Expenditure, GARCH.

1. Introduction

Over the years, various governments across the globe have been grappling to meet their financial obligations due to the ever increasing needs of the populace. According to the Central Bank of Nigeria (CBN)'s Fourth Quarter 2022 Economic Report (2023a), the Federal Government of Nigeria's fiscal position remained constrained as retained revenue fell by 18.2% in comparison to 2022Q3, as a result of falling crude oil exports and rising cost recovery payments.

Nigeria is one of the largest oil producers in Africa and relies heavily on oil exports as a major source of government revenue, foreign exchange earnings and economic stability. From the standpoint of economic policy, it is clear that Nigeria's large reliance on oil revenue exposes the nation to serious dangers due to oil price volatility. Although, many institutions and businesses have shifted to alternative

renewable energy sources including wind, nuclear, and solar power, the demand for crude oil in the global economy has not decreased significantly to this point (Drebee & Razak, 2022).

Government expenditure planning and execution are made difficult by uncertainties associated with fiscal and monetary policies of government and other micro and macro-economic factors. Such uncertainties include oil price volatility and exchange rate fluctuations. Oil prices are known for their volatility due to various global factors. The volatility of oil prices in the global market makes public finances and spending vulnerable to external shocks (Ogbonna, 2018). Adenikinju (2015) asserted that the resulting economic shocks from oil price volatility, including inflation and reduced growth prospects, can have adverse effects on broader population, exacerbating poverty and unemployment. In addition, Oyinlola and Alege (2017) opined that fluctuations in oil prices can lead to significant revenue shortfalls, disrupting the government's ability to fund its operations and meet budgetary commitments.

Budgetary commitments of governments include capital expenditures such as roads bridges, hospitals etc. and recurrent expenditures such as personnel costs, pensions and other overhead costs used on running the public facilities such as schools, hospitals, etc. These expenditures keep increasing due to increasing population and revenue fluctuations. Further problems faced in managing recurrent expenditures include: corruption (Mauro, 1998), rising personnel costs (Tavares, 2004), demographic pressures ((Bloom *et al.*, 2010), among others. Challenges related to recurrent government expenditure are common across many countries and can impact fiscal sustainability and service delivery. In order to tackle the shortage of public sector financing generally, many governments are compelled to turn to domestic and foreign borrowing to achieve sustainable development (Ojukwu *et al.*, 2021).

Oil plays a crucial role in the global economy, which makes its pricing a hotly debated topic. Oil price volatility refers to the unpredictable and fluctuating nature of crude oil prices in the global market. Oil prices are known for their volatility, which can result from various factors, including geopolitical tensions, supply and demand dynamics, production disruptions, and global economic conditions. Therefore, oil price volatility is a source of concern to governments, policy makers across the globe as well as researchers. Oil price volatility is proxied in this paper using the Brent oil price volatility in Nigeria. The study covers the fiscal years 1980

to 2022, concentrating on a period characterized by shortage of resources, price volatility, illegal economic activity, and terrorist acts.

Exchange rate fluctuations can affect the volume of funds that is available for government to spend, since sale of crude oil is usually denominated in foreign currency particularly United States Dollars (USD). This study explored the mediating role of exchange rate fluctuations on the effect of Brent oil price volatility on federal government recurrent expenditure.

In Nigeria, there is a complex and dynamic link between exchange rates, federal government spending, and oil price volatility. Crude oil prices and exchange rates are crucial factors in determining the government's revenue stream, which in turn affects how the public sector is financed. Additionally, exchange rates may affect the federal government's ability to finance recurrent expenditures due to variations in the value of foreign debt and the cost of imported goods (Lane, 2001). The price of subsidies, especially those pertaining to imported items like fuel, is affected by exchange rate changes. Moreover, exchange rates can have an impact on inflation by changing the prices of imported goods and services (Taylor, 2000).

Furthermore, exchange rate fluctuations can affect the competitiveness of a country's exports. Businesses engaged in international trade or having foreign operations face exchange rate risk. In recent years, Nigeria has experienced unprecedented exchange rate fluctuations since the history of the country, according to Moses-Ashike (Business Day Friday 21, 2023). The naira kept deprecating reaching a record low of N1,050 to the dollar on Thursday 21st Sept. 2023 in the parallel market and sells at the official CBN rate the same day at N738.22 per U.S. Dollar (CBN, 2023b). Comparatively, on 21st of Sept. 2022, the CBN official rate was selling at N 430.71 (CBN, 2023b) while in the parallel market on the same date, it was selling at N710.00 (Brand Spur, 21 Sept., 2022).

This study aims to investigate the effect of oil price volatility on federal government recurrent expenditure in Nigeria. The main objective of the study is to investigate the effect of Brent oil price volatility on federal government recurrent expenditure in Nigeria. The study sets to achieve another specific objective of examining the moderating effect of exchange rate on the effects of oil price volatility and federal government recurrent expenditure in Nigeria.

To achieve these objectives this paper is structured in five (5) sections. This section introduced the subject of the research. The next section discussed the literature

review by highlighting the theoretical foundation of the study, the conceptual and empirical reviews. The third section looks at the methodology. Section four (4) analyzed and discussed the results. Section five (5) concluded and made recommendations.

2. Literature Review

2.1 Conceptual Framework.

Federal Government Recurrent expenditure

Recurrent expenditures are also referred to as revenue expenditures as well as current expenditure (CurEx). Federal government recurrent expenditure encompasses government spending on recurrent operations such as salaries and wages, repairs and maintenance expenses, transport and travel expenses, interest payments, donations and grants given out, and other overhead expenditures aligning with the contemporary requirements of modern society. Nwinee and Torbira (2012) opined that when money is spent and the amount involved is charged on some operating items, goods, or services that are used up over a short time, it is called recurrent expenditure. Federal government recurrent expenditures can be managed by governments and government officials by maintaining fiscal discipline to avoid excessive recurrent spending when oil prices are high. Clear rules and guidelines for spending windfall revenues should be implemented (Van-der-Ploeg, 2016).

Oil Price Volatility

According to Hamilton (2009) oil price volatility encompasses sudden and substantial changes in oil prices due to factors such as supply disruptions, geopolitical tensions, and changes in global demand. The Nigerian government's budget is significantly reliant on oil-related revenues, making it susceptible to fluctuations in oil prices (Ross, 1999). From the standpoint of economic policy, it is clear that Nigeria's large reliance on oil revenue exposes the nation to serious dangers due to oil price volatility. Diversifying the economy away from oil becomes essential to reducing these risks and ensuring stable public spending.

Brent Oil Price Volatility

Brent Oil Price refers to the market price of Brent crude oil, which is a major trading classification of sweet light crude oil. The name "Brent crude" comes from a Shell oil exploration title on a North Sea oil field that Shell certified on behalf of Exxon Mobil and Royal Dots Shell (Oluwagbade et al., 2023). Brent crude oil is one of

the two most commonly used benchmarks for pricing oil globally, the other being West Texas Intermediate (WTI) crude oil (British Petroleum, 2023). The Brent oil price is quoted in terms of the cost per barrel in U.S. dollars. It is widely used as a reference point for pricing oil in Europe, Africa, and parts of Asia (Energy Information Administration (EIA), 2023). The Brent oil price is a critical indicator for the energy market and serves as a reference point for pricing various oil products, including gasoline and diesel fuel, as well as for valuing exploration and production activities in the oil and gas industry. The volatility of Brent Oil prices are highly dynamic and can change rapidly due to various factors.

Exchange Rate as a Mediating Variable

The exchange rate is a crucial economic indicator that affects the macro and micro levels of the economy in a significant way. It is a crucial component of international trade and finance since it shows how much one currency is worth in relation to another. Foreign exchange fluctuations, often referred to as currency exchange rate volatility, can pose significant challenges for individuals, businesses, and economies. These fluctuations can affect international trade, investments, and economic stability. The inclusion of exchange rate as a control variable in this study is justifiable for several reasons. According to Auboin and Ruta (2013), a rise in the local currency's value can make domestic products more expensive for foreign buyers, potentially reducing exports, whereas a fall can make them cheaper and thus increase exports. Foreign direct investment and portfolio investment in a nation can be impacted by exchange rate fluctuations. Foreign investors seeking lower risks could be attracted to a stable exchange rate, while being turned off by a fluctuating one (Allegret *et al.*, 2012).

2.2. Theoretical Review

2.2.1 Fiscal Vulnerability Theory

The Fiscal Vulnerability theory focuses on how fluctuations in commodity prices, like oil, affect government revenue and fiscal stability. It argues that countries with a high dependence on a single commodity face significant fiscal vulnerabilities, as oil price volatility can disrupt budgetary plans and lead to deficits or reduced public spending (Hussein, 2017). Nigeria's reliance on oil exports exposes it to the fiscal vulnerability, whereby windfall revenues from oil can lead to corruption, inefficiency, and neglect of other sectors, making the public sector financing vulnerable to oil price volatility.

2.3 Empirical Review

The relationship between government spending and oil price fluctuation in Nigeria and worldwide is well documented but shows mixed results (positive and negative), thus, creating gaps in knowledge that needs to be filled by further studies such as this.

Oriakhi and Osaze (2013) studied the effects of fluctuating oil prices on the growth of the Nigerian economy from 1970 to 2010. Using quarterly data and the Vector Autoregressive (VAR) method, the study discovered that of the six variables used, oil price volatility had an impact on real government spending, real exchange rate, and real import directly as well as indirectly through other variables, most notably, real government spending, real GDP, real money supply, and inflation. This suggests that fluctuations in the price of oil affect the volume of government spending, which in turn affects how quickly the Nigerian economy expands.

Ogundipe et al. (2013) studied oil price and exchange rate volatility in Nigeria using annual data covering the period 1970 to 2011. Unit root tests, the Johansen co-integration approach, and the Vector Error Correction Model (VECM) were the econometric tests that were used. The time series data investigated revealed that a proportionate change in the price of oil was shown to cause a higher than proportionate change in the volatility of the currency rate in Nigeria, suggesting that the exchange rate is sensitive to variations in the price of oil.

The exchange rate is another critical variable intertwined with the Nigerian economy's reliance on oil. Exchange rate fluctuations can have profound effects on government spending, as they can influence the cost of imports, inflation rates, and the overall economic stability of the nation. Ighodaro (2015) asserted that a weaker local currency brought on by unfavorable exchange rate changes result in higher inflation, which could then affect the government's ability to spend money, especially on areas like infrastructure, healthcare, and education.

According to the result of Jarzabek (2016), high oil prices were reflected in high military spending in Gulf Cooperation Council (GCC) states, but a decline in oil prices did not lead to a decrease in military spending. Furthermore, study by Edo and Atanbori (2016) revealed that sudden drops in oil prices result in significant revenue shortfalls, hence, disrupting the government's ability to meet its fiscal commitments and deliver essential services. Su et al. (2019) found that financial liquidity relies on the oil prices.

In another related study, the effect of real oil price volatility on the growth in real GDP for 17 OECD member countries was examined by Van-Eyden et al. (2019) using over a 144-year period from 1870 to 2013. The study used a variety of panel data estimators, including fixed effects, bias-corrected least squares dummy variables (LSDVC), generalized methods of moments (GMM), feasible generalized least squares (FGLS), and random coefficients (RC). The study's key finding is that the sampled OECD countries' economic growth is negatively and statistically significantly impacted by oil price volatility. Additionally, oil-producing nations, most notably Norway and Canada, are severely harmed by oil price volatility when slope heterogeneity is taken into account.

Jibir and Aluthge (2019) studied the determinants of government expenditure in Nigeria. Using the Autoregressive Distributed Lag (ARDL) model, time series data were examined from 1970-2017. According to their findings, a number of factors, including oil revenue, GDP, population, trade openness, oil price, taxation, and inflation have a significant impact on how much money Nigeria's government spends.

Gazdar et al. (2019) examined the link between Oil price volatility, Islamic financial development and economic growth in Gulf Cooperation Council (GCC) countries. Using panel data random effect method, the study gave an empirical evidence of a strong positive link between oil terms of trade growth volatility and economic growth by studying a sample of five GCC nations during the years 1996–2016. The findings also suggest that the rise of the Islamic banking sector strengthens the impact of oil terms of trade growth volatility on economic expansion.

Bentour (2020) assessed how government spending affects GDP in the face of fluctuating oil prices in a sample of 18 Arab oil exporting and importing nations. The researcher specifically separated the expenditure multipliers in two examples of periods of rising and falling oil prices using the Structural Vector Autoregressive Model (SVAR) technique. The findings demonstrate that when oil prices fall, spending multipliers are significantly higher than when they rise, and for many nations in the sample, they may exceed one in the near term while exceeding the value of two in the long term. Additionally, it observed that, on average, during periods of low oil prices, spending multipliers in oil exporting countries are greater than those in oil importing countries, whereas the opposite is true during periods of high oil prices.

Adenekan *et al.* (2020) examined oil price, exchange rate and stock market performance using the Vector Autoregressive (VAR) based technique. The result of the Johansen cointegration test showed the absence of any long-term relationships between the factors. Shares responded favorably to shocks to the crude oil market in the first two periods, but these effects were barely noticeable after these times. A one (1) standard deviation shift in the exchange rate, however, had a negative effect on the price of the shares, suggesting that exchange rate instability may cause uncertainty in the stock market.

Insightful research of the complex interplay between oil prices and government spending in Saudi Arabia, Kuwait, and the United Arab Emirates (UAE) from 1991 to 2017 was conducted by Faheem *et al.* (2022). The study unearthed an asymmetric behavior in oil prices that significantly influences fiscal decisions regarding public expenditures. The study used both symmetric and asymmetric Autoregressive Distributed Lag regression test (ARDL) approaches as well as Granger causality processes. The findings support the asymmetric behavior of the oil price, which was a major factor that fiscal authorities use when deciding public expenditures.

In Kazakhstan, Moldabekova *et al.* (2022) directed their academic inquiry by analyzing Kazakhstan's economy's sensitivity to fluctuations in oil prices during the period from 2009 to 2014. Through the application of system of simultaneous equation, the study found that Kazakhstan's economy is highly vulnerable to changes in oil prices.

Oluwagbade *et al.* (2023) whose study domiciled in Nigeria as well examined the effect of oil price volatility on federal government capital expenditure for the period 1993 to 2022 using Bounds test and ARDL test. The federal government's capital expenditure in Nigeria was not significantly impacted by the volatility of the Brent UK crude oil price, the OPEC spot rate crude oil volatility, or the West Texas Intermediate crude oil price, according to the model's long-term results.

It can be seen from the empirical studies above that the existing literatures on the causal relationship between oil price volatility and government expenditure particularly and the economy generally present inconsistent results. Some researchers found positive influence (Drebee & Razak, 2022; Nwani *et al.*, 2016; Ogundipe *et al.*, 2013) while Oluwagbade *et al.* (2023) found that federal government's capital expenditure in Nigeria was not significantly impacted by the oil volatility in the long run. Furthermore, Bentour (2020) found a negative

influence between oil price and government expenditure. These varied findings may be attributed to differences in study periods, statistical tests employed, data sources, jurisdictions, and much more. A notable gap in the various researches lies in the absence of comprehensive analyses on the effect of specific volatilities of Brent crude oil price on federal government recurrent expenditure using exchange rate variation as the control variable especially in Nigeria. This study aims at bridging these gaps and provide a more coherent understanding of the impacts of oil price volatility on federal government recurrent expenditure in Nigeria and the mediating role of exchange rate.

3. Methodology

Ex-post facto research design is the method used in this study. This method enables a thorough comprehension of the phenomena being studied without changing any factors by evaluating historical events and conditions. The study used secondary sources for its data and annual time series data covering the years 1980 to 2022. The data were analysed using Generalized Autoregressive Conditional Heteroskedasticity (GARCH) model. GARCH is a regression model in which the conditional variance is modeled as an autoregressive moving average (ARMA) process (Gray, 2023).

The three variables in this study are Federal Government Recurrent Expenditure (FGRE) the dependent variable; Brent Oil Price Volatility (BOPV) the independent variable and Exchange Rate Variation (EXRV) the Control variable. The time series data has been sourced from several reputable organizations, including: Central Bank of Nigeria Statistical Bulletins for FGRE data and EXRV, and the Organization of the Petroleum Exporting Countries (OPEC) annual reports for BOPV data.

Model Specification

The following econometric model is designed and GARCH model used in the analysis to determine the impact of oil price volatility on federal government recurrent expenditure with exchange rate as the mediating variable.

$$\Delta \text{FGRE} = \beta_0 + \beta_1 \Delta \text{BOPV} + \beta_2 \Delta \text{EXRV} + \epsilon \quad (\text{i})$$

Where:

ΔFGRE : Growth rate of Federal Government Recurrent Expenditure (Dependent variable)

Δ BOPV: Growth rate of Brent Oil Price Volatility (Proxy for Oil Price Volatility - Independent variable)

Δ EXRV: Growth rate of Exchange Rate Variation (Mediating variable)

β_1, β_2 : Regression coefficients to be estimated

ϵ : Error term

Generalized Autoregressive Conditional Heteroskedasticity (GARCH) Model Interpretation

GARCH models excel in capturing and quantifying volatility clustering, making them particularly suited for analyzing financial and commodity market data where volatility plays a vital role (Bollerslev, 1986). Hence, the Generalized Autoregressive Conditional Heteroskedasticity (GARCH) model is particularly suitable for this study on the effect of oil price volatility on federal government recurrent expenditure. Oil prices are renowned for their volatility, which can have cascading effects on government revenues and spending.

$$\text{Log}(\sigma_t^2) = \omega + \sum_{j=1}^q \beta_j \log(\sigma_{t-1}^2) + \sum_{i=1}^r \gamma_i \frac{\mu_{t-1}}{\sqrt{\sigma_{t-1}^2}} + \sum_{k=1}^s \rho_k \left\{ \frac{|\mu_{t-1}|}{\sqrt{\sigma_{t-1}^2}} - \sqrt{\frac{2}{\pi}} \right\}$$

Logarithmic form ($\log \sigma_t^2$) is used to express the GARCH model. With the logarithm, even if the parameters are negative (σ_t^2), it will be made positive. It permits for asymmetries, in the event that there is a negative correlation between the volatility of oil prices and federal government recurrent expenditure, γ will be negative. Therefore, $\gamma < 0$ suggests the existence of leverage effects, wherein negative information results in more volatility than positive information. β measures how long volatility last, so, $\beta \approx 1$ signifies high persistency for previous events and leads to volatility in the current time.

4. Results and Discussion

4.1 Stationarity Results

The tabulated presentation of the stationarity results for Federal Government Recurrent Expenditure (FGRE), Brent Oil Price Volatility (BOPV), and Exchange Rate Variation (EXRV) are stated below. The Augmented Dickey-Fuller (ADF) test statistics and p-values are presented for both levels and first differences.

Table 1: Augmented Dickey-Fuller (ADF) test statistics and p-values are presented for both levels and first differences

Variable	Stationarity at Level	Stationarity at First Difference
FGRE	ADF = -1.345, p = 0.607	ADF = -3.957, p = 0.002**
BOPV	ADF = -4.732, p < 0.001***	ADF = -6.123, p < 0.001***
EXRV	ADF = -2.238, p = 0.192	ADF = -3.872, p = 0.004**

Extracted from Eviews-10 Output

Where: **FGRE**: Federal Government Recurrent Expenditure, **BOPV**: Brent Oil Price Volatility, and **EXRV**: Exchange Rate Variation

Significance Level: **: Significant at the 5% level, ***: Significant at the 1% level

These results provide a clear and concise representation of the stationarity properties of the variables. FGRE and EXRV are stationary at the first difference (I(1)), while BP is stationary at level (I(0)).

Generalized Autoregressive Conditional Heteroskedasticity (GARCH)

Given the mixed stationarity, the study carried out the Autoregressive test. To evaluate the volatility effect of oil price, GARCH test was also employed. The Generalized Autoregressive Conditional Heteroskedasticity (GARCH) analysis of the model involving Federal Government Recurrent Expenditure (FGRE), Brent Oil Price Volatility (BOPV) and Exchange Rate Variation (EXRV). The results are presented with coefficients and standard errors for both the mean and volatility equations.

Mean Equation

Variable	Coefficient	Standard Error	t-value	P-value
Constant	2.341	0.453	5.168	0.000
BOPV	0.578	0.098	5.892	0.000
EXRV	-0.423	0.121	-3.498	0.001

Volatility Equation (GARCH (1,1))

Variable	Coefficient	Standard Error	t-value	P-value
Constant (ω)	0.143	0.032	4.467	0.000
GARCH (α_1)	0.128	0.045	2.844	0.005
ARCH (β_1)	0.761	0.053	14.377	0.000

Extracted from Eviews-10 Output

BOPV: Brent Oil Price Volatility has a positive and significant effect on FGRE. A 1% increase in BOPV leads to a 0.578% increase in FGRE. This finding aligns with results of Oriakhi and Osaze (2013) as well as Drebee and Razak (2022).

EXRV: Exchange Rate Variation has a negative and significant effect on FGRE. A 1% increase in EXRV leads to a 0.423% decrease in FGRE corroborating with Adler and Dumas (1984).

Volatility Equation

Constant (ω): This parameter captures the long-run average volatility in the series. The significant positive coefficient suggests persistent volatility.

GARCH (α_1): This parameter represents the persistence of volatility from one period to the next. The significant value of 0.128 indicates the existence of a GARCH effect, implying that past volatility plays a role in current volatility.

ARCH (β_1): This parameter captures the reaction of volatility to shocks in the return series. The significant coefficient of 0.761 indicates that shocks to the system have substantial and lasting impact on volatility.

The above results, derived from the GARCH(1,1) model, reflect the dynamic relationship between the variables in terms of both mean and volatility. They provide insights into how Brent oil price volatility and exchange rate variation affect the federal government recurrent expenditure (FGRE), and how the volatility in FGRE behaves over time. The model demonstrates significant persistence in volatility, pointing to the importance of considering conditional heteroskedasticity in policy analysis and forecasting efforts in the context of federal government recurrent expenditure financing in Nigeria.

The significant relationship between oil price volatility and FGRE demands policy intervention. As oil price volatility positively affects FGRE, policymakers need to build a buffer against price fluctuations to stabilize the economy. Exchange rate variation's negative impact also requires prudent management to safeguard foreign reserves and stabilize the local currency. The findings suggest that FGRE is vulnerable to oil price volatility and exchange rate fluctuations. It underscores the need for a deeper understanding of how global commodity prices like crude oil might affect the availability of public funds for the smooth running of federal institutions and facilities for the good of the citizenry.

Hence, fluctuations in these variables can have broad implications for economic growth, development, and stability in Nigeria. The study adds to the theoretical understanding of how external economic variables such as oil prices and exchange rates interact with domestic fiscal policy. It supports the view that commodity-dependent economies are susceptible to external shocks, which has been a subject of debate in economic literature.

5. Conclusion and Recommendations

Utilizing a GARCH model analysis, the study found that Brent oil price volatility significantly influences Federal Government Recurrent Expenditure (FGRE) in Nigeria. This relationship was evidenced in the responsiveness of FGRE to changes in Brent Oil Price Volatility. Moreover, the influence of exchange rate variation was also established as a significant mediating variable. The findings align with Fiscal Vulnerability theory which is the theoretical underpinning of this work that states that fluctuations in commodity prices, like oil, affect government revenue and fiscal stability (Hussein, 2017).

The positive effect of oil price volatility on FGRE highlights the importance of natural resources in driving fiscal policy in nations with abundant natural resources. The understanding of how oil price volatility propagate through the economy has implications for developing risk mitigation strategies in both public and private sectors. The insights provided are timely and critical, especially in a global economic landscape characterized by uncertain oil markets and exchange rate dynamics. The government and stakeholders must leverage these insights to craft resilient and adaptive fiscal policies, aiming for sustainable economic growth and development.

- i. Federal government should create and properly administer a stabilization fund to save excess oil revenue during periods of boom. This will help to lessen the

- immediate effects of oil price volatility on federal government spending. This would make financial planning easier and lessen the abrupt impact on budgetary allocations on federal government recurrent expenditure.
- ii. Adopting a closely-monitored exchange rate policy where demand for exchange rates should be closely and strictly monitored by government agents.
 - iii. There should be efficient public administration to reduce high recurrent costs. Streamlining administrative processes and reducing bureaucracy is crucial to managing recurrent expenditure as overspending on recurrent items can lead to budget deficits and long-term fiscal imbalances.
 - iv. Nigeria must diversify its economy and lessen its reliance on oil revenues given the enormous impact that oil price volatility has on federal government recurrent spending. Investments in non-oil industries including agriculture, manufacturing, technology, and tourism can help achieve this. Producing enough goods and services for export is crucial as this will yield the much needed foreign exchange in order to reduce pressures on foreign exchange that triggers exchange rate fluctuations.
 - v. A framework for the ongoing evaluation and monitoring of the federal government policies on oil pricing, exchange rate, and recurrent expenditures that have been implemented must be in place. This would enable prompt modifications and guarantee that the measures continue to be successful despite the ever-changing global oil markets.

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