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CRUDE OIL PRICE AND EXCHANGE RATE FLUCTUATIONS IN NIGERIA 2021 – 2023

[1]Charity Ifunanya Osakwe
ci.osakwe@unizik.edu.ng

[2] Akunna Racheal Chika
cr.akunna@unizik.edu.ng

[1&2]Department of Banking and Finance, Nnamdi Azikiwe University, Nigeria

Abstract

The paper examined the effect of crude oil price on exchange rate fluctuations in Nigeria from 2021 to 2023. The secondary data used for the study were sourced from central bank statistical bulletin monthly data on crude oil prices, official exchange rates, foreign exchange earnings and foreign exchange supply from the year 2021 to 2023 were used for the analysis. The data was analyzed with ordinary least square regression (OLS) with E-view statistical software version 9.5. the results show that Crude oil prices has a significant negative relationship with exchange rate fluctuations in Nigeria, foreign exchange supply has a significant negative relationship with exchange rate fluctuations in Nigeria while foreign exchange earnings has a significant positive relationship with exchange rate fluctuations in Nigeria. we concluded that crude oil price, foreign exchange supply and foreign exchange earnings are major determinants of exchange rate fluctuation in Nigeria. The study recommends that Government should increase crude oil production to increase her earnings, government must take stringent measure against corrupt officers of CBN who illegally divert forex to the parallel market and to lessen huge dependent on oil and channel investments on gas and non-oil sectors.

Keywords: Crude oil, exchange rate, price, fluctuations, earnings, supply and Nigeria

Introduction

The exchange rate is an economic indicator that determines the value of one currency in relation to another. In Nigeria, the exchange rate has undergone significant fluctuations over the years, heavily influenced by the country's reliance on oil exports, macroeconomic policies, and global economic conditions. Nigeria's exchange rate regime has evolved through various phases. Following independence in 1960, Nigeria adopted a fixed exchange rate system that was pegged to the British Pound. This system provided stability but became unsustainable due to external shocks, particularly the oil price boom of the 1970s. As Nigeria's oil exports surged, the inflow of foreign currency led to an appreciation of the Naira, which subsequently resulted in the decline of the non-oil sector's competitiveness (Ogunleye, 2019).

In response to the economic challenges posed by a fixed exchange rate, Nigeria implemented the Structural Adjustment Program (SAP) in 1986. This program aimed to liberalize the economy and introduced a more flexible exchange rate system, allowing the Naira to float against other currencies. This transition marked a critical juncture in Nigeria's monetary policy, but it also led to heightened volatility. The Naira depreciated significantly during the late 1980s and early 1990s, exacerbated by falling oil prices and increased inflation (Akinlo & Bamidele, 2020). Subsequently, Nigeria adopted a managed float exchange rate system in the late 1990s, which allowed for periodic interventions in the foreign exchange market by the Central Bank of Nigeria (CBN) to stabilize the Naira. Despite these efforts, the currency remained vulnerable to external shocks, particularly

fluctuations in global oil prices, which constitute a major source of foreign exchange earnings for Nigeria (Nwogwugwu & Nwachukwu, 2022).

The establishment of the interbank foreign exchange market marked another significant development in Nigeria's exchange rate policy, allowing commercial banks to trade foreign currencies among themselves and enhancing liquidity in the foreign exchange system. The introduction of the Investors' and Exporters' (I&E) window in 2017 aimed to attract foreign investment and improve liquidity in the foreign exchange market. This initiative allowed market forces to play a more significant role in determining the exchange rate while providing a platform for exporters to access foreign currency at competitive rates (Adebayo et al., 2021). However, despite these measures, the Naira has continued to face depreciation pressures due to persistent economic challenges, including high inflation, a widening trade deficit, and dwindling foreign reserves.

Price instability, characterized by volatile inflation rates and fluctuating exchange rates, poses significant challenges to the growth of the non-oil export sector. Inflation, defined as the sustained increase in the price level of goods and services, has notable implications for Nigeria's non-oil export sector. High inflation rates erode purchasing power and increase production costs, impacting the competitiveness of non-oil goods in international markets. As noted by Ogunleye (2017), inflation leads to increased costs for exporters, who may find it difficult to maintain competitive pricing against foreign producers that do not face similar inflationary pressures. The impact of inflation on export growth manifests in several ways. First, as domestic prices rise, the cost of production for exporters increases. This could compel exporters to raise their prices, potentially making their products less attractive to foreign buyers. Secondly, inflation can discourage foreign investment in the export sector, as investors may perceive economic instability as increasing risk (Martin, 2020). The resultant lower investment can further inhibit the potential for growth in non-oil exports.

The Nigerian Naira has also experienced significant devaluation due to a lack of foreign currency reserves and inconsistent monetary policies. The exchange rate relative to the US dollar from 2016 to 2023 showed significant fluctuations, impacting non-oil exporters. The pandemic further depreciated the Naira, reaching 480 Naira/USD, causing import costs to rise and forcing exporters to balance costs and pricing. By 2023, the Naira had depreciated beyond 700 Naira/USD, it currently exchanges for 1580/USD leading to price increases for imported components and narrowing Nigerian products' global competitiveness.

Nigeria's exchange rate has been characterized by significant fluctuations over the years, primarily influenced by the nation's heavy reliance on crude oil exports, foreign exchange supply, and various economic policies. As a major oil-producing country, Nigeria's economy is highly sensitive to changes in global crude oil prices, which have direct implications for foreign exchange earnings and reserves. These fluctuations have adverse effects on trade, inflation, and overall economic stability, leading to increased interest in understanding the underlying determinants of exchange rate variability. There remain significant gaps in understanding the comprehensive factors that contribute to exchange rate fluctuations in Nigeria. This study aims to fill these gaps by analyzing crude oil prices, Foreign Exchange Supply and foreign exchange earnings are used as the determinants of exchange rate fluctuations.

Review of Related Literature

Crude Oil Prices

The International Energy Agency (IEA) see crude oil as a naturally occurring, unrefined petroleum product composed of hydrocarbon deposits and other organic materials (IEA, 2021), is a significant driver of the Nigerian economy, accounting for about 90% of the country’s foreign exchange earnings and over 60% of government revenue (Central Bank of Nigeria, 2022). This heavy reliance on crude oil exposes Nigeria to the volatility associated with fluctuations in global oil prices, which are influenced by a myriad of

factors, including geopolitical tensions, market demand and supply dynamics, and OPEC policies.

Between 2014 and 2016, the price of crude oil fell from over $100 per barrel to below $30 per barrel due to a combination of oversupply and reduced demand, particularly from China (World Bank, 2020). This drastic decline had severe implications for the Nigerian economy, leading to a recession in 2016, characterized by a contraction of 1.58% in GDP (Nigerian Bureau of Statistics, 2017). The reduced oil revenue during this period resulted in a significant drop in foreign reserves, increased inflation, and a depreciating naira, which all highlighted the interconnectedness of crude oil prices with broader economic indicators. The relationship between crude oil prices and economic stability in Nigeria is further accentuated by the role of government policies and fiscal management. The Nigerian government's budget is largely influenced by crude oil prices, and any significant drop in these prices has immediate implications for public spending and investment (Adewuyi and Akpokodje (2021)). This dependence on oil revenue complicates fiscal planning and often leads to a cycle of budgetary shortfalls and increased borrowing during periods of low oil prices, as witnessed in 2020 during the COVID-19 pandemic, when crude oil prices plummeted to unprecedented lows.

The impact of crude oil prices extends beyond macroeconomic variables to social dimensions. High oil prices can lead to increased government revenues, potentially allowing for greater public spending on infrastructure and social services. Conversely, declining prices can result in austerity measures, affecting public welfare programs and exacerbating poverty levels. Poverty rates in Nigeria increased from 40.1% in 2018 to 43.1% in 2020, coinciding with the fluctuations in crude oil prices and the economic recession that followed (NBS, 2021).

The implications of crude oil price volatility on the Nigerian economy are underscored by its impact on investment decisions. Investors often perceive oil price fluctuations as an indicator of economic stability or instability. Investments in Nigeria's oil sector are sensitive to changes in global oil prices, as higher prices tend to attract more foreign direct investment (Odozi et al., 2020). Conversely, prolonged periods of low prices can deter investment, affecting the country's long-term economic prospects. Geopolitical tensions in oil-producing regions, global economic trends, and shifts in energy consumption patterns are crucial determinants of oil price movements. The decision by the Organization of the Petroleum Exporting Countries (OPEC) to cut production in response to falling prices has historically influenced global oil prices, subsequently impacting Nigeria's revenue. OPEC's strategies in managing oil supply directly affect price stability, which in turn shapes the fiscal landscape of oil-dependent economies like Nigeria (Oyedele, 2021).

Foreign Exchange Earnings

Foreign exchange earnings refer to the income generated from exports and other international transactions, expressed in foreign currency. In the context of Nigeria, foreign exchange earnings are predominantly derived from the exportation of crude oil, which is the cornerstone of the country's economy. Nigeria's economy is heavily reliant on oil exports, which accounted for approximately 90% of the country's total foreign exchange earnings in recent years. This over-reliance on oil creates vulnerabilities in the economy, particularly as global oil prices fluctuate due to market dynamics, geopolitical tensions, and changes in demand (NBS, 2022; Odozi and Adediran, 2021).

Nigeria's foreign exchange earnings have experienced significant volatility over the years, largely influenced by changes in global oil prices. According to the Central Bank of Nigeria (CBN, 2022), Nigeria earned $54.3 billion from crude oil exports in 2019, but this figure plummeted to approximately $27.1 billion in 2020 due to the COVID-19 pandemic and the consequent drop in global oil prices. This decline in earnings had serious implications for

the Nigerian economy, leading to a depletion of foreign reserves and increased pressure on the naira (Nwosa, 2021).

In 2021, remittances to Nigeria were estimated at $23.3 billion, making the country one of the largest recipients of remittances in Africa (World Bank, 2022). These inflows provide an essential source of foreign currency, supporting local economies and contributing to household income. As Akinola and Akinbobola (2022) assert, remittances have significant implications for foreign exchange earnings, as they help stabilize the naira and improve the overall economic situation.

The importance of foreign exchange earnings in Nigeria's economy cannot be overstated. A stable and diversified foreign exchange earnings base is important for sustaining economic growth and ensuring financial stability. The historical context of Nigeria's reliance on oil exports highlights the need for policy measures that promote non-oil sectors and enhance the country's resilience to external shocks. Moreover, the increasing contributions from remittances and agricultural exports demonstrate the potential for diversifying foreign exchange earnings, thereby reducing vulnerability to oil price fluctuations.

Foreign Exchange Supply

Foreign exchange supply refers to the total amount of foreign currency available for trading within a country's economy, influencing exchange rates and international trade dynamic. Foreign exchange supply is defined as the amount of currency available for exchange in the foreign exchange market at a given time (Krugman and Obstfeld (2018). This definition highlights the dynamic nature of foreign exchange supply and its critical role in international trade. Similarly, McKinnon (2017) emphasizes that foreign exchange supply is essential for facilitating trade and investment between nations, ensuring that businesses can operate efficiently in the global marketplace.

In the context of Nigeria, where the economy heavily relies on oil exports, fluctuations in foreign exchange supply significantly impact economic stability and growth. Foreign exchange supply in Nigeria is primarily driven by oil exports, remittances from Nigerians abroad, and foreign direct investments (FDIs), which is a factor in determining the availability of foreign currency in the market (CBN, 2022).

Nigeria's foreign exchange supply has experienced notable fluctuations influenced by global oil prices and domestic economic policies. In 2020, Nigeria faced significant challenges due to a sharp decline in global oil prices amid the COVID-19 pandemic, which led to a decrease in foreign exchange earnings and consequently impacted the supply of foreign currency in the economy (World Bank, 2021). The CBN reported a decline in external reserves from $45 billion in January 2020 to about $33 billion by December 2020, illustrating the pressures on foreign exchange supply during that period (CBN, 2022). This decline highlighted the interconnectedness between oil price volatility and foreign exchange supply, as oil exports account for over 90% of Nigeria’s foreign exchange earnings (Odozi & Adediran, 2021).

Theoretical Review

Purchasing Power Parity Theory

The Purchasing Power Parity theory, originally propounded by Gustav Cassel in 1921, asserts that the exchange rate between two currencies is determined by the relative price levels in the two countries. When the price level in one country rises compared to another, the value of its currency should depreciate to maintain parity in purchasing power. As stated by Sodersten and Reed (1999), PPP serves as a benchmark for evaluating currency value in relation to economic fundamentals, indicating that long-term exchange rates are driven by inflation differentials. This principle highlights how inflation rates can affect exchange rate stability. Adebayo et al. (2022) posits that while PPP holds in the long run,

short-term fluctuations can be influenced by various factors, including interest rates, political stability, and market sentiment. This viewpoint emphasizes that while PPP is a foundational theory, it should be integrated with other models for a comprehensive understanding of exchange rate movements.

The relevance of the Purchasing Power Parity theory to the study of exchange rate fluctuations is diverse. First, it provides a foundational understanding of how inflation differentials can affect currency values, helping researchers and policymakers evaluate the long-term sustainability of exchange rates. Second, by recognizing that exchange rates can deviate from PPP in the short term, the theory encourages the incorporation of additional factors such as interest rates, political risk, and economic performance into the analysis of currency movements.

Empirical Review

Tunggal and Abd Kadir (2024) examined the long-run relationship between exchange rate and its determinants in Malaysia using annually data spanning the period 1969 to 2014. Exchange rate plays an important role in international trade and finance. The exchange rate can be considered as a crucial channel that links the macroeconomic of an open domestic country to its trading partners. Through the Autoregressive-Distributed Lag (ARDL) approach, we find that there are a long-run relationships between nominal exchange rates and its determinants, namely relatives of money supply, income, interest rate and current account for Malaysia vis-à-vis United States. The notable results are only money supply shows significant impact on exchange rate while the other fundamentals do not have significant impact upon exchange rate.

Munir and Iftikhar (2023) comprehensively examined the macroeconomic determinants that influence the real exchange rate in Pakistan over an extended temporal horizon. By

employing quarterly data spanning from the first quarter of 1980 to the fourth quarter of 2020, this study employs the autoregressive distributed lag (ARDL) methodology to discern both immediate and enduring determinants of the real exchange rate. The findings distinctly reveal that variables such as money supply, trade openness, workers' remittances, and productivity collectively constitute the long-term determinants of the real exchange rate in the context of Pakistan. Specifically, an augmentation in money supply and an escalated level of economic openness manifestly contribute to the reduction of the real exchange rate, whereas an inflow of remittances and heightened productivity exhibit the propensity to elevate the real exchange rate over an extended duration.

Agada and Benwari (2023) examined the determinants of exchange rate crises in Nigeria between 1986 and 2021. In particular, we investigate how the trade balance (LNBOP), oil price (COP), external debt (LNEXDS), and private sector credit (LNPSC) influence Nigeria's exchange rate (EXR). The statistical bulletin of the Central Bank of Nigeria and the Nigeria Bureau of Statistics provided the study's data. At the 5% level, descriptive statistics, the stationarity test, Johansen cointegration, VAR, and VAR Block Granger Causality were utilized. The variables were integrated at first difference for the stationarity test, yielding the Johansen cointegration test, which indicates a co-integrating relationship. LNEXDS and LNPSC are negative and significant in relation to EXR, whereas LNBOP and COP are negative but not significant. Only LNPSC and LNEXDS support REER for the VAR Block Granger Causality test, but all variables support EXR collectively. External debt and private sector credit are the primary determinants of the naira exchange crisis in Nigeria.

Pratiwik and Prajanti (2023) analyzed the determinants and impacts of exchange rate shocks. Inflation (INF), Money Supply (LJUB), Open Market Operations (OPT), Foreign Exchange Reserves (LCD), Expected Inflation (LEHU) and Interest Rates (SB) were used

to analyze the determinants of Exchange Rate (NT) through Auto Regressive Distributed Lag (ARDL). The impact of NT shocks was analyzed using Vector Auto Regressive (VAR) by LEHU, Residential Property Price Index (PIHPR), Stock Transactions (LTRANS), and Banking Credit Volume (VK). The Expected Inflation variable and incorporation of ARDL-VAR are novelties in this study. In the secondary time series data for 2014M1 – 2022M9 period, the ARDL results showed that INF and LJUB had positive effect on NT in both long and short run, while OPT, LCD and SB had negative effect. LEHU had negative effect in the short run, but positive in the long run. The speed of adjustment in the model was 49.86% per month. Shock of NT had impacted VK until 15 months, PIHPR at 7 months, LTRANS at 10 months, and LEHU at 14 months. Based on these results, it can be implied that the monetary authority must maintain stability of NT, especially by INF and LJUB transmission. Next, shock's impact must also be overcome, especially on VK.

Ojomolade et.al (2023) evaluated foreign exchange rate volatility determinants and their relationship with Non-Oil Export in Nigeria. Effect of Exchange rate volatility has been controversial empirical issues on this premise, the driving forces (determinants) of exchange rate volatility was investigated. The study collected time series data covering 36 years (1982-2017) from CBN, 2019. The dataset collected from secondary source was analyzed using descriptive statistics as well as co-integration analysis (Autoregressive Distributed Lag). The study also used Autoregressive Conditional Heteroscedasticity (ARCH) and Generalized Autoregressive Conditional Heteroscedasticity (GARCH) model to determine the presence of volatility in the exchange rate. Augmented Dickey Fuller (ADF) and Phillips Perron Test (PPT) were used to test the unit roots and determine the non-stationarity among the variables. Autoregressive Distributed Lag and bound test was used to determine long run co-integration among the dependent and independent variables. The volatility of exchange rate on the non-oil export in Nigeria was determined through ARCH and GARCH 1(1) model. The results derived from the analyzed data showed that foreign exchange rate, bank rate, inflation and foreign exchange volume have positive

relationship with non-oil export, however, GDP, M2 and Government expenditure has negative coefficient and statistically insignificant. Exchange rate and inflation have, respectively, the most variable effects on non-oil export in Nigeria, according to the ARCH (1)1 and ARDL models.

Patrick and Athanasius (2023) examined the major determinants of nominal effective Exchange rate and how those factors influence the exchange rates in Uganda. The study focused on four specific objectives namely; inflation, money supply, external debt and exports. To examine the relationship, an OLS method was employed to examine the relationship and influence of variables for the period of 26 years. Some variables such as money supply, external debt and exports were transformed into logarithmic variables to allow normal distribution of error variance and homoscedasticity. The study involved the use of a quantitative research approach using secondary data for the period 1994-2019. Main findings indicate that trade log exports have a negative significant relationship and low on nominal exchange rate, log external debt has a negative insignificant relationship and low influence on nominal exchange rate while log money supply has a positive significant relationship and high influence on nominal exchange rate and inflation has a positive insignificant relationship and also high influence on nominal exchange rate. Several diagnostic tests were conducted to determine the econometric properties of the variables such as Multicollinearity, Autocorrelation, heteroscedasticity, normality and stationarity. Cointegration test were also carried out using ARDL Bound test and it was found out that there is cointegration equation (long-run relationship exists).

Ebhotemhen (2023) empirically investigated the determinants of Real Exchange Rate in Nigeria. The study relied on the dynamic model of Real Exchange Rate determination and to empirically test the implications of changes in the possible determinants of the Real Exchange Rate in Nigeria using the data covering the period 1981 to 2021 being the sampled years. The Ordinary Least Squares technique was used to test the proposed

hypotheses. In line with the expectations, the outcomes suggest that the nominal exchange rate and the terms of trade had the expected sign and found statistically significant at the five per cent level, hence they appeared most important determinants of Real Exchange Rate in Nigeria.

Methodology

Ex post facto research design was adopted for the study. The time series data were obtained from Central Bank of Nigeria (CBN) Annual Report and statistical bulletin. Monthly data obtained include: crude oil prices, official exchange rates, foreign exchange earnings and foreign exchange supply from the year 2021 to 2023.

The Model for the study was stated as follows

The model for the study can be implicitly modified as follows:

EXRF= f (COP, FXE, FXS) ……..……....……. (1)

The econometric form of equation 1 is represented as:

$EXRF = \alpha_0 + \alpha_1 COP + \alpha_2 FXE + \alpha_3 FXS + \mu$ ……..……..….. (2)

Where;

EXRF= Exchange Rate Fluctuations

COP= Crude Oil Prices

FXE= Foreign Exchange Earnings

FXS= Foreign Exchange Supply

μ = Stochastic Disturbance (Error Term)

α_0 = Intercept of relationship in the model/constant

$\alpha_1 - \alpha_3$ = coefficients of each of the independent variables

Data was analyzed using Augmented Dickey Fuller (ADF) unit test and ordinary least square regression OLS with E-view statistical software version 9.5. The criteria for analyzing and interpreting the results include; the regression coefficients, the t-statistic and p-values, the prob(F-statistic), the r-squared and the Durbin Watson.

Results

Table 1: ADF Unit Root Analysis

	ADF	Critical Value	Prob. Value	Order of integration
Variables	**t-statistic**	**5%**	**5%**	
EXRF	-6.073879	-2.951125	0.0000	1(1)
COP	-5.383880	-2.951125	0.0001	1(1)
FXE	-3.336070	-2.948404	0.0207	1(0)
FXS	-8.718436	-2.951125	0.0000	1(1)

Source: researcher's computation from EVIEWS

The unit root test result shows that all the variables are stationary. Hence, we can go on with using the data for further analysis.

Table 2: Regression Result

Dependent Variable: EXRF

Method: Least Squares

Date: 10/15/24 Time: 10:51

Sample: 2021M01 2023M12

Included observations: 36

Variable	Coefficient	Std. Error	t-Statistic	Prob.
COP	-3.977874	1.862766	-2.135467	0.0405
FXE	0.074063	0.034285	2.160209	0.0384
FXS	-0.280591	0.043068	-6.515089	0.0001
C	838.3542	114.6759	7.310637	0.0001

R-squared	0.572208	Mean dependent var	499.6973
Adjusted R-squared	0.532103	S.D. dependent var	163.1387
S.E. of regression	111.5917	Akaike info criterion	12.37201

Sum squared resid	398486.9	Schwarz criterion	12.54796
Log likelihood	-218.6962	Hannan-Quinn criter.	12.43342
F-statistic	14.26759	Durbin-Watson stat	1.607855
Prob(F-statistic)	0.000004		

Source: EViews Output

Decision Rule: If the Prob. Value is less than 0.05, we reject the null hypothesis. If not we accept the null.

Crude oil prices has no significant relationship with the exchange rate fluctuations in Nigeria

The coefficient of correlation result in table 2 above shows the existence of a negative relationship between crude oil price (-3.977874) and exchange rate fluctuations. The probability value for the slope coefficient shows that (x_1= 0.0405 < 0.05). This implies that crude oil price has a statistically significant relationship with exchange rate fluctuations in Nigeria at 5% level of significance. Therefore, we reject the null hypothesis, accepting the alternate.

Foreign exchange earnings has no significant relationship with exchange rate fluctuations in Nigeria.

The coefficient of correlation result in table 2 shows the existence of a positive relationship between foreign exchange supply (0.074063) and exchange rate fluctuations. The probability value for the slope coefficient shows that (x_1= 0.0384 < 0.05). This implies that foreign exchange supply has a statistically significant relationship with exchange rate fluctuations in Nigeria at 5% level of significance. Therefore, we reject the null hypothesis, accepting the alternate.

Foreign exchange supply has no significant relationship with the exchange rate fluctuations in Nigeria.

The coefficient of correlation result in table 2 shows the existence of a negative relationship between foreign exchange earnings (-0.280591) and exchange rate fluctuations. The probability value for the slope coefficient shows that (x_1= 0.0000 < 0.05). This implies that foreign exchange supply has a highly statistically significant relationship with exchange rate fluctuations in Nigeria at 5% level of significance. Therefore, we reject the null hypothesis, accepting the alternate.

The coefficient of determination obtained is 0.5722, this implies that 57.22% change in exchange rate in Nigeria is explained by crude oil price, foreign exchange supply and foreign exchange earnings while 42.78% was explained by unknown variables that were not included in the model. The Durbin-Watson statistic of 1.60785 indicates a positive auto-correlation.

The Prob (F-statistic) of 0.000004 which is less than 0.05 indicating that the overall regression is statistically significant at 5% level of significance. This implies that crude oil price, foreign exchange supply and foreign exchange earnings are determinants of foreign direct investment in Nigeria.

Discussion of Findings

The result of the findings show that the existence of a negative relationship between crude oil price and exchange rate fluctuations. This implies that for every 1 unit rise in crude oil prices, exchange rate decreases by 3.9778 unit. The significant value shows that this relationship is statistically significant. Crude oil sale is Nigeria major source of revenue and foreign exchange, as crude oil price rises, this result in more money for the government and more foreign exchange for international trade. This findings is inconsistent with that of Agada and Benwari (2023)

Alao, the findings revealed the existence of a negative relationship between foreign exchange supply and exchange rate fluctuations. This implies that for every 1 unit rise in foreign exchange supply, exchange rate decreased by -0.280591 unit. The significant value shows that this relationship is statistically significant. The forex market is a free-market economy where the rates of international currencies are determined by the law of demand and supply. An increase in foreign exchange supply in the forex market will boost the value of the Naira; through, this means, the Central Bank of Nigeria is able to defend the value of the Naira by supply significant amount of dollar to meet market demands.

Finally, findings showed the existence of a positive relationship between foreign exchange earnings and exchange rate fluctuations. This implies that for every 1 unit rise in foreign exchange earnings, exchange rate increased by 0.074063unit. The significant value shows that this relationship is statistically significant. The demand for foreign exchange in Nigeria is enormous, leading to pressure on the value of the Naira. However, when the nation earns foreign exchange through its activity in the international market, the value of the naira is boosted as demands in the forex market is met through these earnings.

Conclusion

With reference to the results above, we therefore conclude that crude oil price, foreign exchange supply and foreign exchange earnings are major determinants of exchange rate fluctuation in Nigeria.

Recommendations

1. Crude oil is a major source of foreign exchange in Nigeria; therefore, the government must take advantage of the rise in crude oil by producing more crude oil for the international market so as to increase our earnings.

2. The government must deal decisively with the corrupt practices in the CBN by strengthen anti-corruption agencies, such as the economic and financial crimes commission EFCC to investigate and prosecute corrupt cases of illegally channeling forex to the parallel market, thereby ensuring every foreign that comes through the CBN were accounted for.
3. Nigeria should lessen her depend on oil; the government should invest heavily in gas production and distribution and non-oil sectors.

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