

## Exchange Rate and Economic Growth in Nigeria

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DOI 10.56201/ijebm.v10.no11.2024.pg127.141

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### Abstract

*Exchange rate being the value for which the Naira could exchange for another has been found to be volatile in Nigeria as it accounted for the sluggish economic performance and distorted growth pattern. The study set out to find if a relationship exist between the gross domestic product and exchange rate using time series data from 1980 – 2024 and it was discovered that a significant positive relationship exist as the independent variables jointly accounted for the variation in the dependent variable. The value of  $R^2 = 0.645219$  implies that about 64 % of the total variation in gross domestic product is explained by the independent variables. The remaining 36% is attributed to the variables not included in the model. The  $F^* = 13.73480$  with (31, 2) degree of freedom  $> F_{0.05}$  value (3.32), i.e.  $F_{cal} = 13.73480 > F_{0.05} = 3.32$ . On this account, the null hypothesis is rejected and the alternative hypothesis accepted. This indicates that F-statistics is statistically significant implying that the explanatory variables are significant. Overall, the Durbin-Watson test result of  $0.080360 < 2.50$  bench mark signifies absence of auto-correlation in the model. From the result, exchange rate management should be taken very seriously while government officials are advised to shun corruption in the system as government creates atmosphere for stability of the exchange rate of the Naira. On interest rate, a total reduction will improve investment and productive activities to create employment and increase output of goods and services.*

**Keywords:** *Exchange rate, Interest rate, Naira, Fluctuations, Economic growth,*

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## Background to the study

Over the years, the matter with identifying with the appropriate economic policy on handling the problems associated with exchange rate remains a topical issue in the country and the choice of an appropriate exchange rate policy is a crucial component of macroeconomic policy in a country (Alasha, 2020; Mahonnye and Tenda, 2019; Ayobami, 2019). As a policy related matter, policy makers is therefore is concerned with shaping and strengthening the stability of the Naira exchange rate to cause or engineer speedy growth and sustainability of the economy. There has been in place different exchange rate regime: rigid and flexible exchange rate in Nigeria with each having different relevance to the economy (Alagidede and Ibrahim, 2017; Adeniran, Yusuf and Adeyemi, 2014). In Nigeria, the power to maintain healthy exchange rate and stable balance of payment rest squarely with the Central Bank of Nigeria as enshrined in the Central Bank OF Nigeria (CBN) Act of 1959, the Exchange Control Act of 1962, Decree 24 and Decree 25 as was amended in the decrees (Asteriou, Masatci and Pilbeam, 2016; Udeh, Ugwu and Onwuka, 2016). Central to the management of exchange rate is the maintenance of the following objectives as specified in the CBN documents which entails maintaining larger and robust external reserve position, preserving the value of the domestic currency (Naira), maintenance of internal and external balance and achieve a robust macroeconomic stability in areas of Balance of payments, full employment, economic growth and price stability (Avdjiev, Bruno, Koch and Shin, 2019). However, further findings seem to suggest that the successive Nigerian's exchange rate policies rather have encouraged overvaluation of the Naira from ₦1 to 0.90 cents in 1981 to ₦755.00 in 2022. This situation, invariably, encourages imports and discourages non-oil export and over-dependence (Aidi, Saidu and Suleiman, 2018; Ufoeze, Okuma, Nwakoby and Alajekwu, 2018). An economy which its import exceeds export will experience an unfavorable balance of payment, and such economy's currency will be devalued against other country currencies involved in trades. For instance, the Nigerian Naira to dollars is \$1 to ₦755.00 while the pounds-sterling is £1 to ₦945.00 in 2022

(Ani and Udeh, 2021), This situation has also been linked to the sharp drop in foreign earnings and national revenue of Nigeria due to the continuous fall of crude oil price in the world market from \$111.63 in 2012 per barrel to \$41.96 and \$70.68 per barrel in 2020 and 2021 respectively (Isola, Oluwafunke, Victor and Asaleye, 2016). This further weakened Nigeria's foreign earnings and revenues to finance priority sectors that will create jobs, boost economic activities, increase per capita income, and improve living standards (Bakhshi and Ebrahimi, 2016; Alasha, 2020; Omoregie, 2022). In every economy, macroeconomic policies and goals are too numerous and the apex banks bears in mind that prices and wages sometimes do tend to adjust in order to stabilize the economy and under the regime of floating exchange rate, the economy may respond rapidly to upturn the system as the apex bank strive to put in place effective monetary policy to check the fluctuations in the exchange rate (Iyeli and Clement, 2017; Emerah, Adeleke and David, 2015; Ewubare and Ushang, 2020; Fauceglia, 2020). Again, the CBN also can fight inflation so that any economic yield accruing to the system will not be erupted by inflation and these uncertainties can be curtailed using monetary policy to avoid damages to the exchange rate (Lawal, Atunde and Ahmed, 2016; Jadoon, Guang, 2019). It should be noted that much as devaluation of the Naira exchange rate is good to strengthen the domestic economy, retaliation by a trading

partner might spell doom for the economy and could cause domestic inflation to rise beyond unmanageable height (Abdulkadir, Ali, Ajibola, Omotosho, and Abiola 2015; Fang, 2020; Olawuni, 2020). In Nigeria like any other country which manipulated her exchange rate to boost economic growth had the policy greeted with low economic response as other trading partners resorted to such policy as retaliatory measure (Mileva and Stracca, 2017). The case of China against the US\$ was a case in point. The Yuan was reduced against major currencies like dollar and euros to finance its rapid economic growth and this brought a negative impact on the economy of China. Nigeria had recently devalued the Naira exchange rate against major currencies and as a nation that does not produce any exportable goods at the global market she stands to lose if she devalues her currencies of the Nigerian economy on imported input over exported output (Alasha, 2020; Mahonnye and Tenda, 2019; Abdoh, Yusuf, Zulkifli, Bulot and Ibrahim, 2016).

### **Statement of the Problem**

Since September 1986, when the market determined exchange rate system was introduced via the second tier foreign exchange market, the naira exchange rate has exhibited the features of continuous depreciation and instability. This instability and continued depreciation of the naira in the foreign exchange market has resulted in declines in the standard of living of the populace, increased cost of production which also leads to cost push inflation. It has also tended to undermine the international competitiveness of non-oil exports and make planning and projections difficult at both micro and macro levels of the economy. A good number of small and medium scale enterprises have fizzled out as a result of low dollar/ naira exchange rate and so many other problems resulting from fluctuations in exchange rates can also be identified. This movement of the exchange rate along the path of depreciation since 1986 has raised a lot of questions on the impact of exchange rate policies on the Nigerian economy. Exchange rate being the price of one currency in terms of another constitute a means through which nations exchanges one commodity and another using the currency operational in the country. At one time in Nigeria, fixed exchange rate made the naira to be relatively stable especially between 1970 – 1980 which was a period oil boom reigned in Nigeria. Equally, there was a rise in the agricultural sector as total export generated enough revenue for the country but this scenario was not to last for too long as oil took over the economic life wire of the country. This was as a result of the oil revenue and the fluctuating nature of its price at the international oil market. The over dependence on sales of oil bought Dutch disease and resources curse plaguing the nation and this underscores the problem in the deterioration of the gross domestic product. The citizens became different so much so that laziness and wealth without work was the order of the day in Nigeria. The pre-SAP era had a moderate exchange rate compare to the era of SAP which tended to over-value the Naira exchange rate with other countries' currencies. In the SAP era, the value of the naira to a cent was ₦ 1.00 to a 0.90 cent by 1980 to 1983. The implication of this policy was the discouragement of export in the non-oil sector and encouragement of imports to the domestic economy. Fluctuations therefore have been noticed in the exchange rate in the post –SAP era due to excessive exposure of the Naira to external shocks against other world currencies. An unprecedented change occurred in the exchange value of the Naira during and after the global economic/financial crash making the Nigerian exchange rate more volatile in nature in the foreign market. Today the exchange rate of

the Naira to a Dollar is ₦250.00 to a US\$1.00 and the explanation to this may not be far from the crash in the prices of oil at the global oil market. Currently, the price of oil per barrel is ₦45.00 below the bench mark of ₦65.00 as stipulated in the budget. Consequently, the rise in the pump price of petroleum product (fuel) to say the least stands to spell doom for an oil producing country like Nigeria and the over-dependence on oil with its attendant fall in price, neglect of the non-oil sector, economy of high import content alongside a fluctuating exchange rate underscores the fact that a problem exist in the economy of Nigeria.

### **Objectives of the Study**

The set out objective to be achieved in this study are as follows;

1. examine the effect of exchange rate on the gross domestic product in Nigeria,
2. investigate the outcome of inflation rate on the gross domestic product in Nigeria,
3. investigate the effect of interest rate on the gross domestic product in Nigeria.

### **Research Hypotheses**

Based on the objectives of the study, the following hypotheses were formulated.

H<sub>1</sub>: there is no significant relationship between exchange rate and the gross domestic product in Nigeria,

H<sub>1</sub>: there is no significant link between inflation rate and the gross domestic product in Nigeria,

H<sub>3</sub>: there is a significant affiliation between interest rate and the gross domestic product in Nigeria.

### **Theoretical Literature**

Exchange rate has been defined variously by different authorities but within the same context conveying the same meaning. Eze and Okpala (2014) opined that the underlying element in an exchange rate is in terms of the price of one currency to another, thereby measuring the worth of a domestic economy in terms of another currency. According to Iheanachor and Ozegbe (2021), exchange rate is one crucial macroeconomic variable necessitating the conduct of policy making as regards to general economic performance in Nigeria. Generally, it connects price systems of different countries thereby enabling businesses to flourish as prices are directly compared which stands to promote exports and health Balance of payment including import reduction strategies. Three exchange rate theories shall be examined here and these are;

#### **The Portfolio Balance Theory**

The emphasis of the Portfolio Balance of Trade theory of exchange rate is hinged on the assumption that residents do distribute their wealth in tripartite assets form like monetary base, domestic bonds and foreign bonds. When the values of these assets are in their desired proportions, exchange rate will be in equilibrium. The government budgetary is in balance when the private sector is fully satisfied as the holding of financial assets becomes a reflection of the current account balances. Thus if the government is unable to sell bonds to foreigners without a noticeable and substantive fall in bond prices, the reflection becomes obvious in the overall balance of payment deficits. This is therefore the whole import of the Portfolio analysis of the exchange rate theory.

### **The Purchasing Power Parity (PPP) Theory**

The Purchasing Power Parity theory or the monetary approach states that spot exchange rate between currencies will definitely change to the differential in inflation rate between countries. The import of this theory centered on the fact that equilibrium exchange rate is entirely determined between two inconvertible paper currencies by the equality of the purchasing power or best still, by the relative change in the price levels in the two countries (Odoh, Ugwoke, Onyeonu (2023). Competition at the global market is measured in one common currency by comparing relative prices of goods in the two countries. The purchasing power parity path therefore is the nominal exchange rate which explains the path that would keep competitiveness constant overtime as countries having higher domestic inflation compared to their competitors would be made to face a depreciating nominal exchange rate and countries having lower domestic inflation than their competitors would face appreciating exchange rates.

### **The Balance of Payments Theory**

Nwude (2012) opined that under a free exchange rate regime, a country's exchange rate depends wholly on its Balance of Payments. If the Balance of Payments is favourable, it raises the exchange rates and BOP is unfavourable, exchange rate is reduced to create stability in the BOP of a country. From economic theory, exchange rate is determined by the demand and supply of foreign exchange and by this, any adjustments in the balance of payments can be made through devaluations and revaluations of some currencies in the case of deficits and surpluses in the balance of payments.

### **Empirical Literature Reviewed**

This study by Ezeunwo (2024) examined the effect of exchange rate dynamics on economic growth in Nigeria from 1985 to 2021. The study utilized secondary data sources from the World Development Indicators (WDI) and the Central Bank of Nigeria (CBN) Statistical Bulletin. It employed real gross domestic product as a measure of economic growth. In addition to the official exchange rate as a proxy for exchange rate dynamics, the study integrated other domestic factors that can affect economic growth, such as trade openness and external reserves. The econometric techniques employed in the study were unit root tests, co-integration, and autoregressive distributed lag (ARDL)/bound techniques. Following the outcome of the bound test, it was reported that a long-run relationship exists between economic growth, exchange rate, trade openness, and external reserves. The long-run ARDL results reveal that the exchange rate had a positive and statistically significant effect on real GDP in Nigeria, with a unit increase in the exchange rate raising the real GDP by 0.3986 units in the long run; trade openness had a positive and not statistically significant impact on real GDP in Nigeria, suggesting that a unit increase in trade openness increases real GDP by 0.0025 units in the long run; and external reserves had a positive and statistically significant impact on real GDP in Nigeria, indicating that a unit increase in external reserves increases real GDP by 0.4007 units in the long run. Based on the results, the study recommends that the government should develop policies that stabilize the exchange rate. This could involve enhancing foreign exchange reserves management, improving the transparency and predictability of foreign exchange interventions, and possibly considering a more flexible exchange rate regime that can adapt to external shocks while maintaining stability. Policies should focus on gradually opening up the economy to international trade through strategic trade agreements that protect key domestic industries while promoting sectors where Nigeria has a

competitive advantage. This approach will help mitigate any negative short-term impacts while capitalizing on long-term benefits. Odoh, Ugwoke, Onyeonu (2023) study examines the relationship between exchange rate fluctuations and economic development in Nigeria. The Nigerian government has implemented various exchange rate regimes over the years, shifting from controlled to deregulated systems. The transition from fixed exchange rates to a free-floating regime was undertaken in the late 1980s as part of broader economic reforms. The objective was to promote economic growth and stability by adopting flexible exchange rates. This paper explores the impact of these exchange rate fluctuations on Nigeria's economic development, considering factors such as price stability, balance of payments, employment, income distribution, and overall growth. The findings contribute to the understanding of the effects of exchange rate policies on the Nigerian economy and provide insights for policymakers. Iheanachor and Ozegebe (2021) examined the effects of persistent exchange rate fluctuations on Nigeria's economic performance. It was motivated by the quest to ascertain why concerted efforts of the monetary authorities in Nigeria to pursue internal and external balances yielded little or no positive results in recent periods. The study employed the autoregressive distribution lag (ARDL) technique to test the short-run and long-run effects of exchange rate fluctuations on economic growth using annual time series data from 1986 to 2019. The empirical result revealed that the exchange rate, net direct foreign direct investments, and inflation rate had a significant adverse impact on Nigeria's economic growth in the long run. By implication, the net effect of this study established that excessive exchange rate fluctuations are detrimental to Nigeria's economic growth. On the premise of the empirical findings, the study recommends export diversification in agriculture and agro-investment in Nigeria. The author also stated should influence the foreign exchange system through credible reforms that would reduce the adverse effects of an unstable foreign exchange system on the Nigerian economy. Ewubare and Ushang (2020) study examined the relationship between exchange rate and economic growth in Nigeria between 1981 and 2020. The specific objectives are to determine the effects of exchange rate, inflation and interest rate on gross domestic product (GDP). The data on the variables were obtained from the Central Bank of Nigeria (CBN) Statistical Bulletin and World Development Indicators, and analyzed using descriptive statistics, unit root as well as bounds co-integration tests and ARDL model. The unit root test results showed that the variables are mixed integrated. While inflation is stationary at levels, the other variables in the model were stationary at first difference. The bounds co-integration test showed that long run relationship exists between GDP growth and the underlying explanatory variables. The findings showed that exchange rate and inflation negatively impacted on economic growth. This finding indicates that increase in exchange rate and price level is detrimental to the growth of the Nigerian economy. There is evidence of a significant positive effect of interest rate on GDP growth. This finding explains the reality in Nigeria, where businesses and households tend to borrow even as interest rate increases, but tend to cut corners by reducing the quality of their products and services or pass-on the increased costs of borrowing to consumers by increasing prices. Given the findings, this study recommends amongst others that the federal government through the CBN should ensure that exchange rate policy should be consistent to provide opportunity for a realistic and stable exchange rate capable of driving economic growth in Nigeria. Anifowose (2021) examines effect of exchange rate on economic growth in Nigeria with emphasis on asymmetric relationship among the variables (Gross Domestic Product, Exchange Rate and

Inflation Rate) using data from 1981 to 2020. The study applied the Non Linear Autoregressive Distributed Lag Model (NARDL) approach to examine asymmetric relationships among variables. The study found that, in the long-run, economic growth is positively affected by positive shocks to exchange rate. However, the result shows that both negative and positive shock to inflation rate was found to have adverse non contemporaneous effect on growth in the long-run. Ani and Udeh (2021) examined the effect of exchange rate on the economic growth of Nigeria. It specifically looked at effect of exchange rate on gross domestic product (GDP), gross national product (GNP) and unemployment. Secondary data from the Central Bank of Nigeria Statistical Bulletin were collected for a period of ten years, 2009 to 2018. Ex-post facto research design was utilized. While some diagnostic tests were carried out to confirm the integrity of the data and their relatedness in both short and long term basis, Ordinary Least Square technique was employed in the analysis of hypotheses. It was found that while exchange rate had significant effect on GDP and GNP, it was non-significant on unemployment. This implies that micro economic indices of GDP and GNP could be used to consciously adjust standard of living of the citizens. The study concludes that exchange rate should be handled with utmost concern by experts in the field to avoid unnecessary fluctuations that may inflict unbearable economic consequences on the Nigerian people. The study recommends, among others, the adoption of policies that will affect GDP in such a way that the welfare of the people can be upgraded. Henry, Murtadho & Bhaumik (2020) examine the relationship between the exchange rate fluctuations and economic growth in Nigeria between 1997 and 2017. The study adopted the descriptive research design. The study used Secondary data on gross domestic product (GDP), exchange rate and inflation rate it obtained from the Central Bank of Nigeria (CBN) bulletins. Ordinary least square method and Pearson's product moment correlation were used to analyzed the data collected. The study revealed decline in Nigeria economic growth since 2002 as shown by continuous drop in GDP. The findings of the study indicated a multiple regression coefficient ( $R = 0.042$ ), which means that inflation rate was found to be positive and high but without significant relationship to economic growth. Alasha (2020) examined the relationship between exchange rate fluctuations and its impact on the Nigerian economic growth using exchange rate, interest rate, inflation rate and trade balance as variables. Data was sourced from Central Bank of Nigeria statistical bulletin & publications from the National Bureau of statistics. The analysis was done using the classical least regression model and ordinary least square method (OLS) and other techniques such as the Augmented Dickey Fuller test, Co-integration and Granger Causality test. Findings indicated that inflation rates and exchange rates negatively impacts GDP while interest rates had positive impact on GDP. Thomas (2019) examined the effect of exchange rate fluctuations on the Nigerian economic growth using yearly time series data from 1986-2016. The data used were from secondary sources and were obtained from Central Bank of Nigeria statistical Bulletin. Data analysis was done with the use of the Ordinary Least Squares (OLS). Findings from the study showed that exchange rate and GDP growth had a negative relationship. Musa, Muhammad, Mohammed and Adamu (2019) examine foreign exchange rate and economic growth. The study used Autoregressive Distributed Lag model (ARDL) on time series Data, for the period 1981-2017. The correlation test result shows that the highest correlation is between money supply and oil revenue while the lowest correlation is between inflation rate and foreign direct investment. The ARDL Co-integration test revealed the existence of long-run relationship among the variables. ARDL test results reveal that real effective

exchange rate is negatively and significant in explaining economic growth in Nigeria in the long-run. In the short-run, the lag value of real effective exchange rate is insignificant in explaining the changes in the current rate of economic growth. Mahonnye and Tenda (2019) examined the exchange rate impact on output and inflation. This research looked at the inflationary effect of currency devaluation and its contractionary effect on real output growth in Zimbabwe. The study used quarterly data from 1990 – 2006 and used the Johansen co-integration regression test and Vector Error Correction Model (VECM). The study found that in both the short run and long run, fluctuations in the real exchange rates are significant on real output growth and expansion. Koirala (2018) examines the Impact of Real Effective Exchange Rate on Economic Growth of Nepal. The study uses annual time series data for the period of 1975 to 2015. Engle Granger residual based test and error correction model was used to detect the impact of REER on real GDP of Nepal. The explanatory variables used in the study are real effective exchange rate, broad money supply, trade openness and gross fixed capital formation. The results of the study reveal that real effective exchange rate has positive impact on the real GDP of Nepal. Aidi, Saidu and Suleiman (2018) examined the relationship between exchange rate volatility and manufacturing sector performance in Nigeria using quarterly time series data spanning from 1980Q1 to 2016Q4. The study relied on the use of OLS multiple regression technique for analysis while exchange rate volatility was generated using Exponential Generalized Autoregressive Conditional Heteroskedasticity (EGARCH). The result showed that exchange rate volatility is inversely related to manufacturing sector performance (using manufacturing sector contribution to GDP as a proxy) in Nigeria. Furthermore, trade openness was observed to have a negative sign (though statistically insignificant) while exchange rate and interest were also found to be strong and significant positive drivers of manufacturing sector performance in Nigeria. The study recommended that the Nigeria government and other stakeholders are advised to hasten efforts to arrest the perennial fluctuations in exchange rate in the country in order to stimulate expansion of productivity in manufacturing sector. In other words, a percentage change in GDP growth will decrease EXC by 0.324593. However, the probability value of GDP growth was found to be not statistically significant at 5%. The author recommends that strict foreign exchange control policies should be put in place in order to help proper determination of the value of the exchange rate which would in the long run help to strengthen the value of the Naira. Ufoeze, Okuma, Nwakoby and Alajekwu (2018) investigated the effect of exchange rate fluctuations on Nigerian economy under the fixed and floating exchange rate system in which the economy has fairly better. The time period covered was 1970 to 2012. The study employed the ordinary least square (OLS) multiple regression technique for the analysis. The coefficient of determination (R<sup>2</sup>), F-test, t-test, beta and Durbin-Watson were used in the interpretation of the results. Findings from the study revealed that about 85% of the changes in macroeconomic indicators were explained in the fixed exchange era. In the floating exchange era, 99% was explained while the whole periods had 73% explanatory power. The authors surmised that the floating exchange era (1986 to date) was more effective in explaining economic trends in Nigeria. Anyanwu, Ananwude & Okoye (2017) studied the impact of exchange rate policy on Nigeria's economic growth for the period 1986 to 2015 showed a positive but insignificant relationship between real exchange rate and economic growth. However, real exchange rate significantly impacts manufacturing capacity utilization within the period. They recommended the use of strict exchange rate policy controls to stabilize the value of the Naira exchange rate. Nsofor,



Takon and Ugwuegbe (2017) investigated exchange rate volatility in Nigeria and its effect on economic growth. The data employed in this study comprised of Exchange Rate, Gross Domestic Product, Government Expenditure, External Reserve, and Foreign Direct Investment which was generated from the Central Bank of Nigeria Statistical Bulletin covering the period of 1981-2015. The study employed GARCH (1,1) model in estimating the volatility of exchange rate in Nigeria and found persistence volatility in naira exchange rate with that of US Dollars. The study also employed the Generalized Method of Moments (GMM) in estimating the impact of volatility and economic growth in Nigeria and the result showed that volatility and FDI has negative and significant impact on the growth of the Nigerian economy. Government Expenditure and External Reserve has positive and significant impact on the growth of the Nigerian economy for the period under study. Iyeli and Clement (2017) examined the effect of exchange rate volatility on Economic Growth in Nigeria from 1970 to 2011. The model formulated depicts Real GDP as the dependent variable while Exchange Rate (EXR), Balance of Payment (BOP) Oil Revenue (OREV) and inflation (INF) are independent variables. These data were sourced and extracted from CBN Statistical Bulletin. We employ the Johansen Co-integration estimation techniques to test for the short and long runs effect of the variables used. The ADF test reveals that all the variables are stationary. From the parsimonious model, the results show that OREV and EXR are positively related to GDP. Further findings reveal that there exist two equations at 5% level in both trace and Max Eigen statistic. This implies that exchange rate volatility and oil revenue contribute positively to GDP in the long run.

### Data Analysis

With regards to the model, gross domestic product (GDP) is regressed against two (2) independent variables namely: Exchange rate and Interest rate (ITR). Time series data for the period 1980 – 2014 was used. The Ordinary Least Square (OLS) technique of multiple regressions was applied on the time series data of the aforementioned variables to estimate the model. Various tests were carried out. The coefficient of determination ( $R^2$ ) was used to test for the goodness of fit of the regression or the explanatory power of the model. The F statistics was used to test the statistical significance of the  $R^2$ . The t-statistics and the standard error tests were both employed to test the statistical significance of the parameter estimates ( $\beta_0$ ,  $\beta_1$ , and  $\beta_2$ ) at 5% level. Finally, the Durbin-Watson statistics was used to test for the presence of autocorrelation in the variables of the model. Autocorrelation was discovered to be absent in the model.

### Model Specification

The model of this study is stated thus:

$$GDP = f(ECXR, INFR, INTR) \dots\dots\dots (1)$$

The mathematical representation becomes

$$GDP = \beta_0 + \beta_1 EXR + \beta_2 ITR + U_i \dots\dots\dots (2)$$

Log linearizing, equation two becomes

$$\text{Log GDP} = \text{Log}\beta_0 + \text{Log}\beta_1 ECXR + \text{Log}\beta_2 INFR + \text{Log}\beta_3 INTR + U_i$$

Where:

GDP = Gross Domestic Product

ECXR = Exchange rate

INFR = Inflation rate

INTR = Interest Rate

$\beta_0$  = Intercept or autonomous GDP when ECXR, INFR and INTR are held constant.

$\beta_1$  = Coefficient or parameter estimate of the exchange rate

$\beta_2$  = Coefficient or parameter estimate of the inflation rate

$\beta_3$  = Coefficient or parameter estimate of the interest rate

$U_t$  = Stochastic or Error term.

A-priori Expectations

The explanatory variables  $\beta_1, \beta_2, \beta_3$ , should have outcome with the following expected signs, i.e.  $\beta_1 > 0$  and  $\beta_2 < 0$ . i.e.  $\Delta GDP/\Delta ECXR > 0$  and  $\Delta GDP/\Delta ITR < 0$ .

### Regression Result

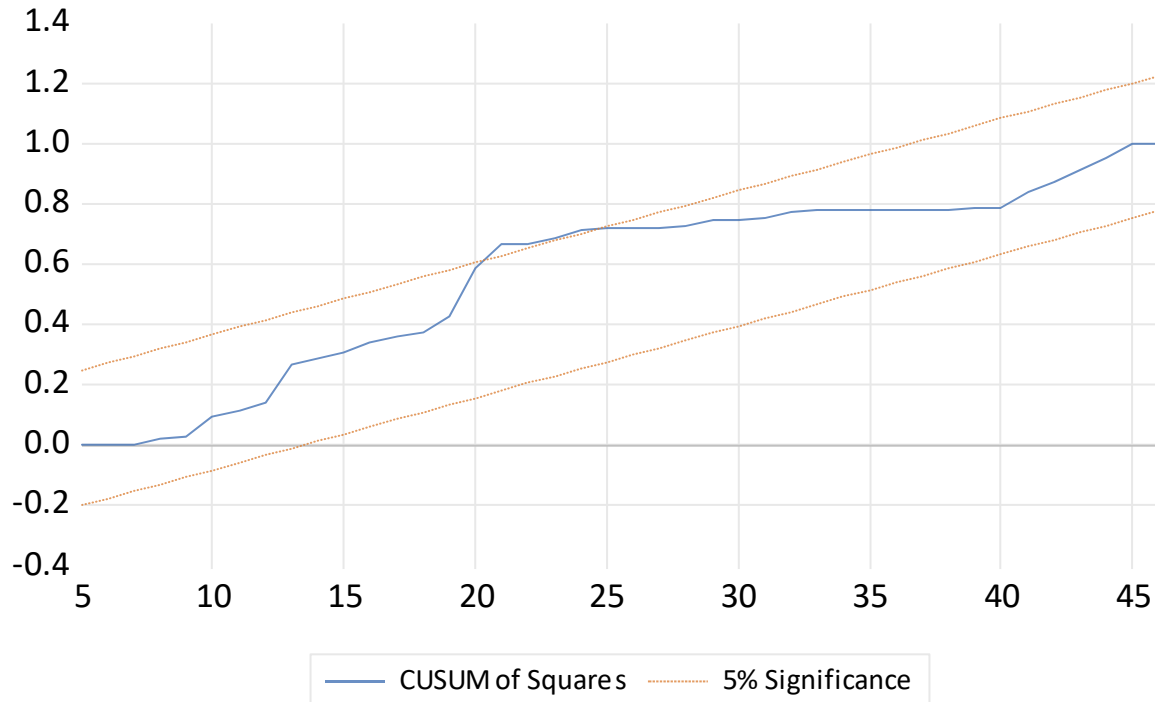
**Table 1. Short Run Multiple Regression Result at OLS**

Variables	Coefficient	Std Error	t-Statistic	Prob.
C	-0.471625	11.9418 6	-0.039493	0.968 7
EXR	0.040838	0.04499 3	0.907648	0.369 2
IFR	-0.349771	0.19057 5	-1.835341	0.073 5
ITR	3.735655	0.66897 8	5.584124	0.000 0
$R^2 =$ 0.645219	<b>DW</b> = 0.080360		<b>F*</b> = 13.73480	

**Source: Computed Result (E-View 13.0)**

From the result, exchange rate coefficient was 0.040838 and had a positive link with gross domestic product. An increased exchange rate increases gross domestic product. However, it was not significant. Inflation rate appear with the right sig of -0.349771. A decrease in inflation rate increases gross domestic product. It is however not significant at 5 percent level. Interest rate is 3.735655. Increase in interest rate increases gross domestic product. Interest was significant at 5 percent level of significance.

## Stability Test



The study was equally found to be stable from 1980-2023 given the CUSUM of Squares test.

## Conclusion

Result shows that it is only interest rate that became positive and had significant relationship with gross domestic product, government should therefore lower interest rate to encourage domestic production by the manufacturing sectors in the economy. Thus, there is need to maintain a stable exchange rate, curtail inflation, maintain and boost export of domestic commodities and above all, sustain a steady growth of the economy.

## Policy Recommendations

Stability of the exchange rate plays a crucial role in strengthening the economy. These study premised on findings from estimated result, recommended as follows:

- 1 Government should ensure that fiscal and monetary discipline is maintained in the foreign exchange market and an attempt to allow parallel foreign exchange market should be stopped and punitive measures be taken against offenders as this will help to achieve a realistic foreign exchange market for the Naira.
- 2 Subsidy should be removed for us to know the actual impact and cost of the only marketable product (oil) in and out of Nigeria. This will check and cushion corruption in that sector.

- 3 Based on the findings, government should devalue its currencies as this has been found to be plausible given the fact that gross domestic product and exchange rate were found to statistically insignificant. What this implies is that such reduction in the value of the domestic currency will improve on export promotion and reduce importation.
- 4 A reduction in interest rate would be a welcome development as it can improve the purchasing power of the citizenry but should not fall so low since it has its negative implications. Moderate interest rate is suggested as this study finding has shown a positive relationship between gross domestic product and interest rate.
- 5 The government should encourage the export promotion strategies in order to maintain a surplus balance of trade. Enough infrastructural facilities is a necessary sine qua non for foreign direct investment in a country. This should be partnered by government and private investors. Strict foreign exchange control policies should be adopted in order to help in determination of appropriate exchange rate value. This will go a long way to strengthen the naira. Economic reforms that will reduce the adverse effect of unstable foreign exchange rate on the Nigerian economy with respect to trade flow.

## REFERENCES

- Abdoh, W. M. Y. M., Yusuf, N. H. M., Zulkifli, S. A. M., Bulot, N., & Ibrahim, N. J. (2016). Macroeconomic factors that influence exchange rate fluctuation in ASEAN countries. *International Academic Research Journal of Social Science*, 2(1), 89-94.
- Abdulkadir., Ali, I. O. Ajibola, B. S. ,Omotosho, Olutope O. A. & Abiola O. A. (2015). Real exchange rate misalignment and economic growth in Nigeria. *Journal of Applied Statistics*, 6 (2), 103 – 131.
- Adeniran, J. O., Yusuf, S. A., & Adeyemi, O. (2014). The impact of exchange rate fluctuation on the Nigerian economic growth: An empirical investigation. *International Journal of Academic Research in Business and Social Sciences*, 1(1), 1 – 5.
- Aidi, H. O.1, Saidu, I.A., and Suleiman, Hussein, I. (2018). Exchange rate volatility and the Nigerian industrial sector performance. *Saudi Journal of Economics and Finance*, 208-215.
- Alagidede, P., & Ibrahim, M. (2017). On the causes and effects of exchange rate volatility on economic growth: Evidence from Ghana. *Journal of African Business*, 18(2), 169-193.
- Alasha, R. U. (2020). The Impact of exchange rate fluctuations on economic growth in Nigeria. Department of Economics, Faculty of management and Social Science, Baze University, Abuja. Project Paper.
- Ani, G. A., & Udeh, S. N. (2021). *Exchange rate and economic growth in Nigeria. Advance Journal of Management and Social Sciences*, 5 (5), 18-26.
- Anifowose, A.D (2021) Economic growth and exchange rate dynamics in Nigeria. *Imo State University /Business & Finance Journal*, 12(1), 23-34.

- Anyanwu, F. A., Ananwude, A. C., and Okoye, N. T. (2017). Exchange Rate Policy and Nigeria's Economic Growth: A Granger Causality Impact Assessment. *International Journal of Applied Economics, Finance and Accounting*, 1(1), 1 – 13.
- Asteriou, D., Masatci, K., & Pilbeam, K. (2016). Exchange rate volatility and international trade: *International evidence from the MINT countries. Economic Modelling*, 58(3), 133-140.
- Avdjiev, S., Bruno, V., Koch, C., & Shin, H. S. (2019). The dollar exchange rate as a global risk factor: evidence from investment. *IMF Economic Review*, 67(1), 151-173.
- Ayobami, O. T. (2019). Exchange rate volatility and the performance of manufacturing sector in Nigeria (1981 – 2016). *African Journal of Economic Review*, 7(2), 27–40.
- Bakhshi and Ebrahimi, 2016). The effect of real exchange rate on unemployment. *Marketing and Branding Research*, 3(1), 4 - 13.
- Cassel, V. A. I. (2017). An Empirical investigation into the relationship between exchange rate volatility and economic growth in Liberia (1980 to 2012). A Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of Master of Science in Economics of the University of Namibia, 1 – 74.
- Emerah, A. A., Adeleke, E. & David, J. O. (2015). Exchange rate volatility and economic growth in Nigeria (1986-2013). *Journal of Empirical Economics*, 4(2), 109-115.
- Ewubare, D. B & Ushang, A. U. (2020). Exchange rate fluctuations and economic growth in Nigeria (1981 - 2020). *International Journal of Development and Economic Sustainability*, 10(1), 41-55.
- Ezebunwo, N. (2024). Impact of exchange rate on economic growth in Nigeria. *International Journal of Advanced Economics*, 6(6), 243-256.
- Fang, Y. (2020). Research on the impact of RMB exchange rate fluctuation on employment in my country. *Academic Journal of Business & Management*, 2(6), 87-99.
- Fauceglia, D. (2020). Exchange rate fluctuations and quality composition of exports: Evidence from Swiss product-level data. *The World Economy*, 43(6), 1592-1618.
- Henry, E., Murtadho, A.M & Bhaumik, A. (2020). The relationship between the exchange rate fluctuations and economic growth in Nigeria. *International Journal of Management and Human Science (IJMHS)*, 4(4), 11-18.
- Idaka, S. E., Ugwoke, R. O., Ajuh, A. I. and Onyeonu, E. O. (2021). Effect of economic variables on the financial performance of listed firms manufacturing consumer's goods in Nigeria. *Universal Journal of Accounting and Finance*, 9(6), 1235 – 1246.
- Iheanachor, Nkemdilim; Ozegbe, Azuka Elvis (2021). The consequences of exchange rate fluctuations on Nigeria's economic performance: An autoregressive distributed lag (ARDL)

- approach. *International Journal of Management, Economics and Social Sciences*, 10(2-3), 68- 87.
- Isola, L. A., Oluwafunke, A. I., Victor, A., & Asaleye, A. (2016). Exchange rate fluctuation and the Nigeria economic growth. *Euro Economica*, 35(2), 127-142.
- Iyeli, I. I., & Clement, U. (2017). Exchange rate volatility and economic growth in Nigeria. *International Journal of Economics, Commerce and Management*, 5(7), 583-595.
- Jadoon, A., & Guang, Y. (2019). The effect of exchange rate fluctuations on trade balance of Pakistan. *International Journal of Economic Sciences*, 8(1), 68 - 80.
- Koirala, S. (2018) An Analysis of the Impact of Real Effective Exchange Rate on Economic Growth of Nepal. *Parvaha Journal of Economic Management*, 3(5), 206-216.
- Lawal, I.A., Atunde, I. O. & Ahmed, A.A. (2016). Exchange rate fluctuation and Nigeria economic growth. *Euroeconomica*, 135 (2), 1 – 15.
- Mahonnye, N., & Tenda, Z. (2019). Exchange rate impact on output and inflation: A historical perspective from Zimbabwe. *African Journal of science, Technology and development*, 53, 717- 725.
- Mileva, M. M., E., & Stracca, L. (2017). The real exchange rate and economic growth: Revisiting the case using external instruments. *Journal of International Money and Finance*, 73(6): 386-398.
- Musa, K.S., Muhammad, A., Mohammed, N., & Adamu S.(2019) Foreign exchange rate and economic growth nexus: New evidence from Nigeria (1981 to 2017). *Journal of Economics and Sustainable Development*, 10(18), 78-89.
- Nsofor, E. S., Takon, S. M., & Ugwuegbe, S. U. (2017). Modeling exchange rate volatility and economic growth in Nigeria. *International Journal of Finance*, 2(3), 50-60.
- Odoh, C; Ugwoke, O.V., & Onyeonu, E. O. (2023).Exchange rate fluctuations and economic development in Nigeria. *International Journal of Mechanical Engineering and Technology (IJMET)*, 14 (03), 46-61.
- Olawuni, J. O. (2020). Exchange rate and macro-economic aggregates in Nigeria. *Journal of economics and sustainable development*, 3(2), 111-121.
- Udeh, S. N., Ugwu, I. J., & Onwuka I. O. (2016). External debt and economic growth: The Nigeria experience. *European Journal of Accounting Auditing and Finance Research* 4, 33 – 48.
- Ugochukwu, P. U. (2015). Exchange rate volatility and economic growth. *Research Journal of Economics*, 3(3), 1-15.

Ufoeze, L. O., Okuma, C. N., Nwakoby, C., & Alajekwu, U. B. (2018). Effect of foreign exchange rate fluctuations on Nigerian economy. *Annals of Spiru Haret University Economic Series*, 1(3), 33-345