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IMPACT OF CURRENCY DEVALUATION ON ECONOMIC GROWTH IN NIGERIA

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----------ABSTRACT----------
This paper investigated the impact of currency devaluation on economic growth in Nigeria from 2003 to 2022, employing an ex-post facto research design. Data on exchange rates, inflation rates, and gross domestic product (GDP) were sourced from reputable institutions such as the Central Bank of Nigeria Statistical Bulletin and the World Bank Indicator. Utilizing multiple regression analysis with Eviews 9.0, the study found significant impacts of both the exchange rate and inflation rate on GDP, contradicting the null hypotheses. Specifically, an increase in the exchange rate was associated with increased GDP, echoing previous empirical findings. Similarly, a rise in inflation rates corresponded to a decrease in GDP, affirming the importance of price stability for sustained economic growth. These findings suggest that currency devaluation significantly impacts economic growth in Nigeria. The study underscores the necessity for policymakers to implement measures to stabilize the exchange rate, such as implementing prudent monetary policies and fiscal measures. Additionally, efforts to control inflation through effective monetary and fiscal policies are essential to fostering a conducive environment for sustainable economic growth.
KEYWORDS: *Currency devaluation, Economic growth, Exchange rate, Inflation rate,*----------

1.INTRODUCTION

The Nigerian economy, one of the largest in Africa, faces a multifaceted set of challenges hindering its sustained growth and development. These challenges extend beyond economic diversification and include high unemployment rates, persistent inflation, heavy reliance on oil revenue, and a significant foreign debt burden. Addressing these impediments requires in-depth analysis and strategic solutions to unlock the nation's potential (Okaro, 2017). Foremost among these challenges are the persistently high rates of unemployment and underemployment, which hinder individual prosperity and the nation's ability to leverage its human capital for economic growth (Anyanwu & Duru, 2021). Moreover, consistent inflation rates exceeding desired levels erode citizens' purchasing power, limiting their ability to invest, save, and contribute meaningfully to the economy (Anidiobu et al., 2018). Nigeria's heavy reliance on oil revenue also leaves it vulnerable to global oil price volatility, hampering economic diversification efforts and exposing the country to economic shocks (Akpokerere & Ekane, 2022). Meanwhile, the mounting foreign debt burden poses fiscal challenges, with a significant portion of the national budget allocated to debt servicing, diminishing financial stability and hindering sustainable growth (Yusuf & Mohd, 2023).

In response to these challenges, scholars such as Momodu and Akani (2016), Okaro (2017), and Ali (2019) have suggested that currency devaluation, if judiciously managed, can offer potential benefits such as enhancing competitiveness, boosting exports, and attracting foreign investment, thereby contributing to economic growth. According to Financial Times News, Nigeria has reportedly devalued its currency dramatically for the second time in eight months (February 1, 2024). The West African nation is attempting to improve its convoluted exchange rate system and attract investment to its failing economy (Adeoye, 2024).

Devaluation, as described by Khan et al. (2016), refers to a deliberate reduction in the worth of a domestic currency compared to foreign currencies. This results in higher prices for imported goods and lower prices for exported goods. This policy aims to make exports more competitive globally while making imports relatively more expensive domestically (Momodu & Akani, 2016). However, it is essential to distinguish between devaluation and depreciation, as the former involves a deliberate government action to reduce the currency's value. In contrast, the latter occurs due to market forces in floating exchange rate systems (Nurudeen, 2016).

Momodu and Akani (2016) contend that devaluation might enhance a country's export competitiveness by reducing the cost of its goods while simultaneously increasing the price of imports, discouraging the purchase of foreign products domestically. However, while devaluation may seem beneficial, it can have negative consequences, including protecting inefficient domestic industries from foreign competition and potentially leading to inflation due to increased aggregate demand. Nevertheless, the impact of devaluation on aggregate output, particularly in developing economies like Nigeria, remains a topic of debate (David & Oluseyi, 2017). While some researchers argue that currency devaluation can stimulate economic growth (Ali, 2019), others caution against its adverse effects, such as inflationary pressures and price increases (Ehinmowo et al., 2017; Adekoya & Fagbohun, 2016; Bakari & Mabrouki, 2017). Thus, this study aims to examine the impact of currency devaluation on economic growth in Nigeria, considering the various perspectives and potential outcomes. Specifically, this paper aims to examine the following objectives:

1. To examine the impact of exchange rate on gross domestic product in Nigeria.
2. To determine the impact of inflation rate on gross domestic product in Nigeria.

The following hypotheses were constructed in null form:

1. Exchange rate has no significant impact on gross domestic product of Nigeria.
2. The inflation rate does not have a statistically significant impact on gross domestic product of Nigeria.

The subsequent part of this study will continue with a literature review. Section 3 presents the study methodology and data, while Section 4 examines and analyses the findings. Section 5 provides the concluding part of the investigation.

2.LITERATURE REVIEW

Currency Devaluation

The exchange rate is a crucial metric for assessing the value of a currency in relation to other currencies. It is the rate at which one country's currency may be exchanged for another. This metric, delineating the value of a currency concerning another, undergoes fluctuations over time owing to the appreciation or depreciation of diverse currencies. Devaluation occurs when one currency's value declines in comparison to another (Nurudeen, 2016). According to Saleh and Olasunkanmi (2017), currency devaluation occurs when the government decides to lower the value of her currency systematically compared to another. According to Adekoya and Fagbohun (2016), devaluation is a strategy used by governments to reduce the cost of exporting commodities to manage trade imbalances. This approach fosters advantageous competitiveness in the global market.

To address what Saleh and Olasunkanmi call "fundamental disequilibrium," the International Monetary Fund (IMF) allows member governments to lower their currency (2017). It is a reasonable strategy for re-establishing a currency's exchange rate in light of the present state of supply and demand. According to Akindiyo and Olawole (2015), the devlauation of the Nigerian naira follows the principle put out by Copernicus and Gresham, namely that "inferior currency displaces superior currency."

Benefits of Currency Devaluation

Increase the Demands for Domestic Produced Goods: The Keynesian school of thought and other conventional macroeconomic theories stress the beneficial effects of devaluation on production and GDP growth. According to this theory, devaluation benefits the product since it raises overall demand and production, affecting the product. By allocating resources away from non-tradable goods and towards tradable ones, the devaluation was supposed to encourage the development of exportable commodities. The positive effects of devaluation might boost production and economic growth, according to Berhe and Gebrehiwot (2020). Devaluation has an expansionary effect by facilitating the switching of expenditures and diminishing their overall impact. Furthermore, in the event of devaluation of the currency in a nation, the cost of imported commodities will rise, while the cost of local products will decline. Consequently, this will lead to an upsurge in the exportation of goods.

Encourage a Competitive Market: Devaluation may stimulate economic development by fostering enhancements in pricing competitiveness. His analysis might have prompted companies to reallocate resources from improving productivity to increasing production by lowering their relative price, resulting in profit-maximizing enterprises. As the price of imported items rises, individuals will transition to purchasing local goods. Consequently, the devaluation will lead to a rise in international market prospects and an increase in domestic demand, ultimately decreasing production costs (Berhe & Gebrehiwot, 2020). Consequently, companies will provide more affordable pricing to boost their profits and enhance their competitiveness in the market.

Encourage investment-led growth: Firms that participate in both domestic and international markets might benefit from devaluation, according to Berhe and Gebrehiwot (2020). The firm's profit in the overseas market increases when the currency's value declines when converted to the local currency. Revenue increases could fund further in-depth studies of existing technology and the creation of brand-new ones. Adopting and enhancing novel technologies driven by monetary benefits will lead to a drop in past expenditures and increased production.

Encourage Local Material Producers and Suppliers: Devaluation in the manufacturing business yields favorable outcomes for local manufacturers engaging in domestic and international markets, contributing to economic growth. This provides a competitive edge for local material and equipment producers and suppliers, allowing them to thrive and flourish within the local market. The profitability of a domestic corporation operating in a foreign market will rise when the currency is depreciated and exchanged for the local currency. The augmented earnings might be allocated towards advancing research and exploring novel technologies (Berhe & Gebrehiwot, 2020).

Control Economic Depreciation: Devaluation may be used as a strategy to promote economic development by stabilizing the economy via the increase of exports, enhancing the current account, and managing the overvaluation of the exchange rate, which leads to a rise in imports of goods (Berhe & Gebrehiwot, 2020).

Exchange Rate

The exchange rate indicates how much one country's currency is worth in relation to other currencies. It controls the private sector's participation level in the domestic market and the pricing of commodities produced within the country. Particularly among developing countries, discussions over interest and exchange rates continue dominating international finance. These factors are important in economics since trade liberalization is necessary for economic growth (Ani & Udeh, 2021). Various scholars have defined exchange rates in various ways, each with their perspective. Mishkin and Eakins (2021) state that the exchange rate measures the relative worth of currencies. An important aspect of international trade and finance is the exchange rate, which reveals the relative market worth of one country's currency to another. An exchange rate is the current market price for one currency relative to another (Madura, 2019). The provided study emphasises the critical role of exchange rates in enabling international trade.

The international monetary system is highly dependent on exchange rates. They significantly affect several economic operations, such as allocating monetary resources between nations and setting product and service pricing in international markets. Exchange rates are vital in enabling international trade by impacting the comparative expenses of products and services between nations. A robust local currency may increase the cost of a country's exports for international purchasers, leading to decreased demand for the products. On the other hand, a devalued home currency might enhance exports and raise the price of imports, affecting domestic consumers (Ani & Udeh, 2021). Exchange rates play a crucial role in global finance. Fluctuations in currency exchange rates may result in profits or losses for firms involved in international transactions and investors who own overseas assets. Moreover, exchange rates are intricately linked to a nation's macroeconomic policies. Central banks often use exchange rate interventions or modifications in interest rates to attain diverse economic goals, such as managing inflation or stimulating economic growth.

Inflation Rate

Inflation is defined as a persistent rise in the overall price level of an economy. Moreover, it signifies an upsurge in the costs associated with daily life. It is widely agreed that excessive and unpredictable inflation may negatively affect individual businesses, customers, and the entire economy (Okoth, 2022). The inflation rate is typically used to measure the economy's price stability. When inflation is low, the value of a currency grows relative to other currencies, leading to a higher exchange rate and more purchasing power (Gudmundsson, 2021). According to Okoth (2022), inflation has direct and indirect effects on every segment of the economy. It includes variables like the exchange rate, interest rates, and unemployment. According to Bakaert and Engstrom (2018), investors become risk-averse during inflationary periods and become extremely risk-averse during recessionary periods due to economic uncertainty. Increased risk aversion combined with a growing trend in inflation would result in high equity risk premiums and poor equity prices.

An upward movement in the overall price level indicates a reduction in the buying ability of the currency. Nevertheless, as the general price level escalates, the purchasing power of each currency unit diminishes concerning goods and services. Inflation impacts various segments of the economy disparately, resulting in hidden costs and benefits for different individuals owing to the erosion of monetary value. For instance, when inflation

occurs, those sectors of society that possess tangible assets like real estate, stocks, and so on profit from the increase in the price/value of their holdings, while those seeking to buy them pay extra. Their capacity to do so will be contingent upon their income being set to a certain extent. For example, wage and pension increases frequently lag behind inflation, and some people's incomes are fixed. Additionally, people or organizations holding cash assets will see their cash's purchasing value erode. Price increases (inflation) weaken the actual worth of money (the functional currency) and other things with a monetary component (Wolde et al., 2014).

Economic Growth

Economic growth denotes the augmentation or rise in the market worth of goods and services generated within an economy within a defined period, with inflation playing a role. One prevalent method employed by statisticians to gauge growth involves examining the percentage rate increment in real GDP, which stands for gross domestic product. A common way to measure growth is in real terms, which considers inflation adjustments (Momodu & Akani, 2016). This helps reduce inflation's impact on the cost of produced items. Changes in GDP as a percentage each year illustrate the positive as well as negative consequences of economic growth. For the purpose of comparing national economic growth rates, particularly with regard to per-capita income, the GDP-to-population ratio is a popular statistic. An increase in a country's overall production is known as economic growth. Increases in overall output often, but not always, correspond with increased average marginal productivity. As a result, there is a rise in income, which motivates people to spend more money on purchasing goods and services, improving the tangible components of their standard of living or quality of life. In economics, economic growth is often represented as a result of the labour force, technology, human capital, and physical capital. In essence, enhanced economic productivity may be attained by augmenting the size or caliber of the working-age populace, the accessible resources, and the ability to integrate labour, capital, and raw materials. This study measures economic growth using gross domestic product as the metric.

Theoretical Framework

The Elasticity Approach

The elasticity approach recognises devaluation as a means by which a nation can enhance its trade balance. The elasticity of imports and exports is the only factor determining a devaluation's impact. Marshall-Lerner (ML) condition and Bickerdike-Robinson-Metzler (BRM) model are the two main components of the elasticity theory (Cooper, 2019).

Understanding how imports and exports react to price changes is made easier with the help of the Bickerdike-Robinson-Metzler (BRM) model, which examines the interplay between consumer knowledge, devaluation, and these factors. Improving the balance of payments requires a lower exchange rate and a stronger total price elasticity of demand for imports, both locally and globally. This happens because the devaluation of the currency causes changes in the relative prices of local and foreign commodities, affecting consumption and output through substitution effects (James & Hazel, 2020). Imported items become more expensive inside the country, and exported goods become less expensive in the global market when the government devalues its currency. Hence, devaluation serves to rectify a nation's trade imbalance by bolstering exports and reducing imports. According to Gandolfo and Gandolfo (2016), a nation's economic performance is dictated by the degree to which domestic demand for imports and exports is price elastic. If the combined price elasticity of demand for a country's imports and exports exceeds one, according to the Marshall-Lerner criteria, the trade balance is expected to improve. i.e. $ex + em > 1$

Devaluation exacerbates the imbalance in the balance of payments (BOP) when there exists a disparity in the demand elasticity between exports (ex) and imports (em). However, if the absolute value of the combined price elasticity of demand for exports and imports is less than one, i.e., $ex + em > 1$, then. Devaluation will only affect the BOP if the absolute export and import elasticity values equal 1. An economic principle known as the Marshall-Lerner condition allows a nation to reduce its balance of payments deficit by purposefully devaluing its currency. When a country's currency loses value compared to others, the value of its exports falls. Exports and price decreases have a favourable association. The extent to which export demand grows is contingent upon the elasticity of export demand. Market conditions and the characteristics of the exported goods also have a role in the outcome. If a nation controls the supply of a scarce resource or produces goods with a short shelf life, its export demand elasticity will be low (Cooper, 2019).

Suppose a country engages in the exportation of equipment, tools, and industrial goods to compete with other nations. In that case, the demand for its products will exhibit a high degree of responsiveness to fluctuations in price, indicating that it will be very elastic. In this scenario, the devaluation of the nation's currency will effectively

contribute to the equilibrium of a deficit. Devaluation causes a rise in domestic import prices, which in turn reduces the quantity of imported goods. The demand elasticity of imports determines the magnitude of the decrease in imports. The type of goods the country purchases determines the demand elasticity of imports, ultimately leading to the devaluation of its currency. If the purchases consist of consumer products, raw materials, and industrial inputs, the demand for imports will be less elastic. Devaluation alone addresses a balance of payments imbalance only if there is a substantial change in the demand for the specific imported product. Gomes et al. (2016) discovered that for a devaluation to have a positive impact on a country's trade balance, the combined responsiveness of demand for exports and imports must exceed one.

Empirical Review

The impact of currency devaluation on Nigeria's economic growth was investigated in a research by Momodu and Akani (2016). The study used statistics from the National Bureau of Statistics and the Central Bank of Nigeria Statistical Bulletin, which covered the years 1986–2012. This investigation used the Johansen cointegration method, which combines multivariate estimates. According to the multivariate cointegration test, the link between economic growth and the independent variables has at least one cointegrating vector. According to the study, currency devaluation improves the balance of payments and initially boosts productivity. However, despite devaluation's positive effects on productivity and the balance of payments, higher prices offset these gains in the long run.

From 1980 to 2014, Adekoya and Fagbohun (2016) studied how devaluation of the Nigerian currency affected the growth of industrial output in the country. Based on the study's methodology, stationarity can be assessed using the Augmented Dickey-Fuller test. Long-term correlations can be examined through the Engel-Granger cointegration test. For long-term estimations, ordinary least squares regression can be employed. Additionally, causal relationships can be explored using the Granger causality test. There seems to be a long-term link between the variables, despite the fact that they all exhibit stationarity initially. All variables, with the exception of imports, were shown to affect industrial output growth positively, according to the study.

David and Oluseyi (2017) examined the impact of currency devaluation on Nigerian macroeconomic variables from 1986 to 2016. They checked for stationarity of the model's variables using the Augmented Dickey-Fuller (ADF) and Philip Peron (PP) tests. The research also used the Johansen cointegration test to ensure the model variables were related over the long run. The discovery of consecutive integration and initial stationarity at the first difference I(1) for each variable was also made. As a further advantage, the cointegration test showed that the variables were related over the long run. According to the findings, the macroeconomic variables looked at, including Nigeria's economic growth, are significantly and positively affected by the devaluation of the currency. The impulse response analysis results showed that a currency devaluation positively affected RGDP, the devaluation of the currency previously, the money supply, foreign reserves, interest rates, and the balance of payments. Nevertheless, these shocks negatively affected inflation, trade openness, and exports of goods other than oil. The currency's devaluation also helped the balance of payments considerably. According to previous research, it has a detrimental effect on exports that do not include oil.

Ehinmowo et al. (2017) investigated the relationship between currency depreciation and rice importation in Nigeria by evaluating time series data from 1980 to 2015. Methods for analysis in the research included descriptive statistics, vector error correction, and cointegration. The descriptive study showed a clear pattern regarding the amounts of rice imported over time, with less consistency and less increase. In addition, research using vector error correction and cointegration has shown a strong and positive long-term relationship between a decline in the value of the local currency and an increase in rice imports. On top of that, these investigations showed that adaptation and convergence toward equilibrium occurred at a remarkable speed over a long period. During the period under consideration, the research found that rice imports benefited from the devaluation of the naira and other fluctuations in exchange rates compared to other currencies.

The connection between trade in goods and services and economic growth in Panama was studied by Bakari and Mabrouki (2017). This was achieved using the Vector Auto Regression Model's Johansen cointegration analysis and Granger-Causality tests on yearly data from 1980 to 2015. The research shows that Panama's exports, imports, and economic growth are unrelated. The study reveals a strong correlation between exports and economic development and imports and economic growth.

Okaro (2017) analysed the influence of currency depreciation on Nigeria's economic expansion. The research investigated the correlation between three variables—private domestic investment in Nigeria, real gross domestic

product, and Nigerian foreign debt—and currency depreciation. The study accomplished this by conducting a comprehensive literature review and various tests to evaluate the proposed hypotheses. This analysis utilized a longitudinal dataset spanning from the years 2000 to 2015. The research employed the Ordinary Least Squares (OLS) regression technique and was conducted using the EViews 8.0 software program. The analysis's findings corroborated the presumptions. In particular, it demonstrates that the devaluation of the Nigerian currency is strongly associated with Nigeria's real gross domestic product and its external debt. According to the research, an association between the devaluation of the Nigerian naira and private domestic investment could be found.

Using time series data analysis, Ali (2019) investigated how the devaluation of the domestic currency affected GDP growth. The existence of both long-term and short-term associations was investigated using the ARDL bound test technique. Data gathered from Pakistan, spanning the years 1990 to 2018, was used in the study. CUSUM and CUSUMSQ tests were used to guarantee the stability of the model. Devaluation is significantly associated with economic growth, according to the study's findings. In addition, the ARDL-Bound test confirms this association in both the short and long term.

The relationship between the naira devaluation and the growth of the Nigerian economy was investigated by Samuel et al. (2018). Based on secondary data collected between 2000 and 2015, the research used the Classical Linear Regression Model (CLRM). Compared to other widely used, conventional, and analytical tests, Ordinary Least Square is often considered the gold standard. The main predictors account for 92% of the GDP variance in the model analysis, as shown by the coefficient of determination (R2). The research found that the exchange and inflation rates positively and statistically significantly correlated with GDP. However, public investment and foreign debt had a weak and insignificant correlation. The research showed that devaluation occurs worldwide, not just in Nigeria. According to the findings, devaluation affects Nigeria since it is too reliant on foreign sources, which means it needs the right conditions to benefit from it.

Berhe and Gebrehiwot (2020) investigated the effects of devaluing the native currency on trade balances in Ethiopia between 1974 and 2016. The researchers used the ARDL and Error Correction Model methods to achieve this objective. Lending interest rates, real domestic income, and the real effective exchange rate are all shown to be persistently related in the ARDL bound test. With a loan interest rate, real domestic income, and real effective exchange rate that are all positive, trade balances are positively impacted. Government deficit spending and increases to the money supply, however, make trade imbalances worse.

Ojuolape et al. (2020) did research that explicitly investigated the real effects of currency devaluation in both the short and long term. They used panel data analysis to examine their results. The following seven nations were considered: South Africa, Ghana, Mexico, Malaysia, Pakistan, and the Philippines. Currency devaluation occurred in these nations during the time frame under review. Several cointegration methods were used to conduct cointegration tests to evaluate long-term impacts and links. Immediate effects were evaluated using the Error Correction Model and Fully Modified OLS (FMOLS). The research used longitudinal data from 1981 to 2010. The empirical data suggest no significant association between currency depreciation and short-term production growth. Nevertheless, an adverse correlation exists between the depreciation of currency and the sustained expansion of the economy over an extended period.

Ogu et al. (2021) used time series data collected from the CBN from 1999 to 2017 to examine the impact of inflation on the growth of the Nigerian economy. The study investigated the correlation between inflation, interest rates, and Nigeria's GDP growth. Results from the Nigerian research showed that inflation had no significant impact on GDP growth. This result was achieved using a regression model known as Ordinary Least Squares (OLS). Moreover, the research demonstrated that interest rates significantly and adversely affect the economic growth in Nigeria.

Oranefo (2022) determined how inflation affected GDP growth in Nigeria. The main focus of the research was to find out how inflation affected GDP and GNP in Nigeria. The data from 2012–2020 were gathered from the CBN's Statistical Bulletin. E-View 9.0 was used for the regression analysis. While inflation does affect Nigeria's gross national expenditure (GNE) significantly, the study found no statistically significant effect on GDP.

3.METHODOLOGY

An ex-post facto research design was utilized in this investigation. Using the ex-post facto research method is suitable for examining how currency devaluation affects economic growth in Nigeria. This approach enables the examination of actual economic occurrences that have occurred spontaneously during the selected period. In

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addition, using historical data allows for an analysis of the impact of currency devaluation on Nigeria's economic growth. From 2003 until 2022, this research gathered data on Nigeria's GDP, inflation rate, and exchange rate using a secondary data collection method. The data was gathered from reputable sources, such as the World Bank Indicator and the Central Bank of Nigeria Statistical Bulletin. Nigeria's GDP, inflation rates, and currency rates were determined using data from 2022 to ensure consistency and reliability in the analysis. The 2023 quarterly GDP forecasts were purposefully left out. The lack of comprehensive gross domestic product data for 2023 provided credence for this. Using Eviews 9.0, descriptive and inferential analyses using multiple regression on the collected data were conducted.

Model Specification

The functional relationship between the variables is thus delineated in accordance with the aims of this research:

GDP = *f*(EXC, INFL) ……. (I)
The econometric model of this study is given below:
$GDP = \beta_0 + \beta_1 EXCR + \beta_2 INFL + e$ ……,,….. (II)
$LogGDP = \beta_0 + \beta_1 LogEXCR + \beta_2 LogINFL + \varepsilon$ …….. (III)

GDP = Gross Domestic Product at time t
EXCR = Exchange Rate (official exchange rate)
INF = Inflation Rate
ε = stochastic error term
β_0 = intercept (constant)
$\beta_1 - \beta_2$ = coefficients of the independent variables.

4.RESULTS AND DISCUSSION

Descriptive Statistics

Table 1: Summary of Descriptive Statistics

	EXCR	INF (%)	GDP (N'B)
Mean	5.256345	2.488290	11.08161
Median	5.045693	2.516796	11.23569
Maximum	6.053063	2.936513	12.20275
Minimum	4.768838	1.684545	9.504353
Std. Dev.	0.437751	0.317673	0.778850
Skewness	0.631326	-0.756399	-0.452228
Kurtosis	1.811776	3.170892	2.190132
Jarque-Bera	2.505140	1.931470	1.228271
Probability	0.285769	0.380703	0.541109
Sum	105.1269	49.76580	221.6321
Sum Sq. Dev.	3.640899	1.917404	11.52553
Observations	20	20	20

Source: Eviews 9.0 output

Table 1 presents comprehensive descriptive statistics of a dataset spanning from 2003 to 2022, including the exchange rate (EXCR), inflation rate (INF), and gross domestic product (GDP).

The mean value of the exchange rate (EXCR) is approximately 5.26, with a low value of 4.77 and a high value of 6.05. The standard deviation is 0.44, suggesting a moderate degree of variability. The positive skewness coefficient (0.63) suggests the distribution has a slightly rightward skew or a larger right tail. The kurtosis score of 1.81 indicates that the distribution is less peaked than normal. The Jarque-Bera test yielded a test statistic of 2.51 and a p-value of 0.29, indicating no significant deviation from normalcy.

The inflation rate (INF) ranges from 14.94% to 17.12%, with 16.22% being the average. A relatively low amount of variability is shown by the standard deviation of 0.52%. The negative skewness coefficient of -0.76 shows that the distribution has a leftward skew or a longer left tail. The kurtosis value is 3.17, indicating a more peaked distribution than a normal distribution. The Jarque-Bera test yielded a test statistic of 1.93 and a p-value of 0.38,

indicating no substantial deviation from normality. The average value of gross domestic product (GDP) is approximately 11.08 billion naira, ranging from a minimum of 9.50 billion naira to a maximum of 12.20 billion naira. The standard deviation is 0.78 billion naira, suggesting a modest level of variability. The negative skewness coefficient of -0.45 suggests a minor leftward skewness or a larger left tail in the distribution. The kurtosis value is 2.19, indicating that the distribution has a considerable level of weakness. The Jarque-Bera test for normality yields a test statistic of 1.23 and a p-value of 0.54. This indicates that the distribution is not substantially deviating from a normal distribution at commonly used significance levels.

Table 2: Regression Results
Dependent Variable: GDP
Method: Least Squares
Date: 02/16/24 Time: 09:22
Sample: 2003 2022
Included observations: 20

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.587020	0.995699	3.602516	0.0022
EXCR	1.788231	0.208404	8.580603	0.0000
INF	-0.765574	0.287179	-2.665840	0.0163

R-squared	0.816834	Mean dependent var	11.08161
Adjusted R-squared	0.795285	S.D. dependent var	0.778850
S.E. of regression	0.352393	Akaike info criterion	0.889344
Sum squared resid	2.111080	Schwarz criterion	1.038704
Log likelihood	-5.893445	Hannan-Quinn criter.	0.918501
F-statistic	37.90609	Durbin-Watson stat	0.665410
Prob(F-statistic)	0.000001		

Source: Eviews 9.0 Output
Table 2 presents the impact of currency devaluation on Nigeria's GDP growth from 2003 to 2022, as analyzed through regression using ordinary least squares. The coefficients of the model were derived utilizing the least squares method.

A t-statistic of -3.602516 and a p-value of 0.0022 indicate that the constant term (C) coefficient of 3.587020 is statistically significant. Even when all independent variables are set to zero, a positive intercept that is statistically significant signals a substantial impact on GDP. The t-statistic is 8.580603, the p-value is 0.0000, and the exchange rate coefficient (EXCR) is 1.788231, indicating a significant statistical association between the two variables. Accordingly, a 1.788231 unit rise in GDP is equivalent to a one-unit increase in the exchange rate. At the accepted 5% level of analysis, a regression coefficient of -0.765574 for the inflation rate (INF) indicates statistical significance ($p = 0.0163$). This is consistent with the trend where GDP declines as inflation increases. Inflation has a negative impact on GDP growth, as seen by the negative coefficient.

The R-squared value of 0.816834 indicates a strong fit of the model, implying that the independent variables can account for a substantial proportion of the variance in GDP. Considering the number of independent variables, the adjusted R-squared value of 0.795285 suggests significant interaction. The whole model is statistically significant, as shown by the F-statistic of 132.4648 and a probability below 0.05 ($p < 0.05$).

Discussion

The first hypothesis posited that the exchange rate had an insignificant impact on the gross domestic product (GDP) of Nigeria. Nevertheless, the analysis showed that the exchange rate statistically impacts Nigeria's gross domestic product. This suggests that fluctuations in the currency exchange rate substantially impact the overall value of goods and services produced in a country, known as the gross domestic product. A positive coefficient indicates a direct correlation between exchange rate fluctuations and GDP variations. The results of this research agree with those of Momodu and Akani (2016) and David and Oluseyi (2017), who also found that the exchange rate has a statistically significant impact on GDP.

The second hypothesis suggests that the inflation rate does not significantly impact Nigeria's gross domestic product (GDP). However, the study disproved the hypothesis by demonstrating that inflation significantly impacted Nigeria's GDP. What this means is that changes in the inflation rate significantly affect GDP. The correlation between inflation and GDP is inverse when the coefficient is negative. As seen above, a decrease in GDP occurs when inflation increases. The results are consistent with those of Samuel et al. (2018), who also found that exchange rates and inflation significantly affected economic growth in Nigeria.

5.CONCLUSION AND RECOMMENDATIONS

The study examined the impact of currency devaluation on the economic growth of Nigeria from 2003 to 2022 using an ex-post facto research technique. The research proved that the naira devaluation significantly impacted Nigeria's GDP growth. Findings showed that inflation and the exchange rate significantly impacted GDP, rejecting the null hypotheses. This study's results imply that currency devaluation impacts Nigeria's economic growth significantly. The study's results inform the following recommendations:

1. Policymakers should implement measures to stabilize the exchange rate, ensuring a conducive environment for sustainable economic growth.
2. Policymakers should prioritize inflation control measures. This involves implementing prudent monetary policies and fiscal measures to curb inflationary pressures. The government can create a favorable climate for economic growth by maintaining price stability.

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