



THE IMPACT OF EXCHANGE RATE, INFLATION AND INTEREST RATE ON ECONOMIC GROWTH OF NIGERIA

¹PADONU, Noah, ²OBI, Jonah Ukpechukwu and ³ELESHO, Yusuf Alade

College of Applied and Social Science, Department of Business Administration and Management, Lagos State University of Science and Technology, Ikorodu Lagos.
Email: npadonu@gmail.com, Tel: +2348036630210.

College of Applied and Social Sciences, Department of Banking & Finance, Lagos State University of Science and Technology, Ikorodu Lagos.
Email: jones4real89@gmail.com, Tel: +2347062670809

Registry Department, Lagos State University of Science and Technology, Ikorodu Lagos.
Email: yusfaithe@yahoo.com, Tel: +2348023369042

Abstract

A nation aspiring to fulfill macroeconomic objectives in established and emerging economies must have economic stability; it is considered a crucial determinant or prerequisite for economic growth and development. This has been a major concern of the government and the citizenry, considering its impact on the people and the nation at large. In Nigeria, inflation has been a macroeconomic issue that has seemed intractable over time. As a result, the government has pursued numerous measures, including monetary and fiscal ones, with a view to stop or slowing down inflation growth to an acceptable level. The impact of persistent increases in the inflation rate, interest rate, and exchange rate on Nigeria's economy cannot be overstated. This study is therefore aimed at examining how Nigeria's economic growth is impacted by these three macroeconomic variables (exchange rate, inflation rate, and interest rate). To achieve this aim, the researcher examined the impact of these macroeconomic variables on Nigeria's economic growth. The research adopts the use of secondary data, which was sourced from Central Bank of Nigeria (CBN) periodicals, the National Bureau of Statistics, and the World Development Index (WDI), respectively. Descriptive statistics such as mean, standard deviation, skewness, and kurtosis aim at drawing a reliable inference on the impact of independent variables on Nigeria's economic growth. The model is then estimated using ordinary least squares (OLS) techniques using the computer software Econometric View (E-View). Based on this, a multiple regression analysis model was employed to evaluate the proxy variables for economic growth on the one hand and the proxy variables for inflation, interest rate, and exchange rate on the other. The research established that the significance of effective monetary policies in the nation's economy cannot be overemphasized; hence, a frantic effort needs to be made by the government to address the various monetary policies in the nation to curb the incessant and recurrent monetary issues so the nation can enjoy the benefits associated with exchange rate stability, as well as inflation rate reduction and control, and economic stability.

Keywords: Inflation, Gross Domestic Production (GDP), Interest Rate, Exchange Rate, Macroeconomics, Economic Growth

1.1 Introduction

In order to fulfill macroeconomic objectives, both established and emerging economies must have economic stability as a crucial determinant or prerequisite for growth. These objectives could be the attainment of decent economic growth, a low inflation rate, a drop in the unemployment rate, stable balance of payments equilibrium, the preservation of development equality, and an increase in social welfare. Due to this, economists around the world have kept up their advocacy for monetary and fiscal policies that are both balanced. As a result, many emerging nations implemented monetary and fiscal policies to control and alter their nation's economic activity with a view to achieving a certain goal. This was done in an effort to achieve accelerated economic growth and sustainable development. Since gaining its independence in 1960, Nigeria has used a combination of monetary and fiscal policies to manage its economy (Victor and Eze, 2013).

Economic growth and development are the major concern of government and the citizenry, considering its impact on the people and the nation at large, and towards positioning the nation in rightful position in the global circle. The economic growth of a nation reflects its capability to boost its services and production capacity. Therefore, the simplest definition of economic growth is the increase in Gross Domestic Product (GDP); hence, nominal GDP is usually adjusted for inflationary factor, this is aimed at reflecting the real GDP (Jameela, 2010).

On the other hand, one of the macroeconomic growth-promoting factors is the interest rate, and the inflation rate and the interest rate's volatility are strongly related. Its high or low rate has an impact on both the economic boom (high GDP) and the rate of economic growth. Given this, it is essential to take the corporate world's interest rate trend into account. Nigeria's interest rate policy has changed over the years, beginning with the period immediately following independence, when the country maintained a fixed parity with the British pound, continuing through the 1970s oil boom and the 1986 flotation of the national currency in response to the fragile state of the economy between 1982 and 1985. Real income, inflation, the balance of payments, and the structural evolution of the economy were all significantly impacted by the economic and political forces influencing exchange rate policy during each time period (Omankhanlen, 2011).

In an effort to keep the economy in balance, the government and the populace work to implement the right policies that not only ensure sustainability but also boost economic growth. Therefore, in order to improve living conditions, the country must work diligently to increase its per capita income and set aside a portion of that income for use in the future. Due to the low level of capital formation in less developed nations, this goal can only be achieved through investment; as a result, one of the strategies to be used is to primarily rely on foreign direct investment (FDI) to boost the economy of the country.

Adegbite and Ayadi (2010), who claimed that FDI helps to fill the domestic revenue generation gap in a developing economy and thereby generates enough money to cover their expenditures,

further supported this claim. One of the main goals of international trade is to promote economic growth, but recently, this has not been the case for the Nigerian economy, which continues to experience some aspects of economic instability, such as price instability and a negative balance of payments.

As a result, the impact of inflation, interest rates, and exchange rates on economic growth has long drawn the attention of academics and policymakers. There is a common belief that one of the primary causes of economic instability worldwide is exchange rate volatility in developing economies (Babatunde, et al., 2010). The fluctuations in the currencies of the major economic powers of the world, such as the United States of America, have a significant impact on it and how it affects a global economy like Nigeria. This imbalance also leads to significant economic distortions, trade pressure that is protectionist, and an unavoidable sharp currency reversal (Philippe et al., 2006).

Babatunde et al. (2010) went on to establish that the liberalization of capital flows in developing nations over the past few decades and the enormous rise in cross-border financial transactions have significantly increased the magnitude of the exchange rate in the majority of these nations with underdeveloped capital markets and inconsistent economic policies. For the last two decades, currency crises in emerging markets have been a major worry for developing nations and emerging economies. For instance, as of April 2023, the official market rate of the Nigerian naira against the dollar has never before occurred in the history of the nation, the Nigeria Naira falls to the tone of ₦460 to a dollar in the official market.

In Nigeria, inflation rise has been a macroeconomic issue that has seemed intractable over time. As a result, the government has pursued numerous measures, including monetary and fiscal ones, in an effort to stop or slow down inflation growth to an acceptable level. One cannot overstate the importance of understanding the effects of persistent increases in inflation, interest rates, and exchange rates on Nigeria's economy. Therefore, the purpose of this study is to examine how Nigeria's economic growth is impacted by the exchange rate, inflation rate, and interest rate. The following aims will be adopted by the research in order to meet the goal:

1. To examine the impact of exchange rate on Nigeria economic growth
2. To examine the impact of inflation on Nigeria economic growth
3. To examine the impact of interest rate on Nigeria economic growth
4. To examine the joint impact of exchange rate, inflation rate and interest rate on Nigeria economic growth

1.2 Significance of the Study

The research is important for a variety of reasons. Given the nature of Nigeria's economy, this has over time made the citizens' ability to engage in economic activity intolerable. Nigeria's economy is experiencing an imbalance that could be easily financed for domestic goods, making borrowing from abroad necessary. The negative effects of Nigeria's external debt and problems with economic growth are becoming intolerable.

In order to inform Nigerians and decision-makers on the best course of action to follow in order to curb the country's ongoing inflation, this study would be essential. Because inflation affects consumer buying power and because excessive inflation rates can lead to social unrest and economic instability, it is important to understand this (Ajayi & Oyewole, 2019). The study will demonstrate how inflation and exchange rates affect the nation's economic development.

The study will also assist in examining the country's interest rate issues. For instance, a persistent fiscal deficit may cause a very high interest rate, while maintaining an artificially low interest rate may cause an increase in inflation, a rise in credit demand, and significant distortions in resource allocation. In order to prevent an avoidable collapse of the country's economy, measures to lower the interest rate must be carefully studied. It is crucial to remember that economic growth depends on a variety of variables, including the management of the inflation rate, interest rate, and other variables. Therefore, this research will serve as the foundation for examining the significant impact of the aforementioned.

Because monetary policies are essential tools for achieving macroeconomic stability in a country, it is important to note that this study will be relevant to other developing countries as well as Nigeria as a whole. The research will also add to the body of knowledge on how monetary policies affect a country's ability to grow economically. The study can help guide policy decisions and encourage sustainable economic growth and development by identifying the elements that limit the effectiveness of monetary policy in Nigeria.

Overall, the study's conclusions will assist the government and its stakeholders in making wise policy decisions that will improve economic stability and aid in the creation of a sound financial system that can foster Nigeria's long-term economic growth and development.

CONCEPTUAL FRAMEWORK AND LITERATURE REVIEW

2.1 Conceptual Framework

2.1.1 Inflation

Inflation is a social ill as well as a pervasive economic process, and everyone is affected by it across all economic sectors. Since any attempt to address the economic issue would necessitate making trade-offs with other complementary macroeconomic and social variables like employment, economic growth, balance of payments, and social safety nets, attempts to address inflation problems have proven to be particularly challenging.

The first time inflation was attributed to monetary metal imports from the Spanish colonies in South Africa was by Jean Bodin in Western Europe. Following extensive investigation in the 18th century by John Locla, David Hume, and Richard Contillon, this theory entered the mainstream of the orthodox monetary tradition. The main argument for this theory is the quantity theory of money. According to an American economist named Professor Ivring Fisher, changes in the amount of money in circulation play a major role in determining changes in the general level of commodity prices. According to the theory, the total amount of money (m_1 , m_3 , and m_3) in an economy determines the value of that currency.

The theory holds that as money becomes more plentiful, its purchasing power (value) decreases, which leads to an increase in the average price of commodities. In contrast, when money is in short supply, purchasing power increases and the level of prices generally declines. The theory's equation is written as follows:

$$MV=PT$$

Where m =the stock of money in circulation

V =commodity prices

T =the volume of Trade.

According to the equation presented above, the rate of money in circulation determines how much things cost (the volume of trade). Wyoming (1984), in his symposium, sponsored by the Federal Reserve Bank of Kansas City, emphasized that when a nation's inflation rate is considerably high for a sustained period of time, its rate of money supply growth will also be

high. This is evidence in support of Wyoming's theory. Thus, inflation is a phenomenon related to money supply rate.

2.1.2 Exchange rate

An exchange rate, which in theory indicates how expensive one currency is in comparison to another, is used to describe how many naira are required to purchase one unit of another country's money, such as the dollar, in Nigeria (Campbell, 2010). The management of any country's foreign exchange market is governed by its foreign exchange policy, which is defined by Obaseki (2001) as the entirety of the institutional framework and actions taken to direct exchange rate fluctuations towards desired levels in order to boost the productive sectors, lower inflation, maintain internal balance, increase export levels, and attract direct foreign investment and other capital inflows.

As a result, the institutional framework, method of determining the exchange rate, allocation of foreign exchange rate fluctuations, and policy alternatives for managing the exchange rate fluctuations are all reflected in exchange rate policy. The mechanism for delivering foreign currency to end users is likewise determined by exchange rate policy. According to Amadeo (2018), economic growth is the gradual rise in an economy's capacity to generate products and services.

2.1.3 Interest Rate

The term "interest rate" can be somewhat perplexing to those who are unfamiliar with the financial markets. There are many different interest rates; a few examples include call deposit rates, term deposit rates, repurchase agreement (repo) rates, base rates, policy rates, bank rates, government bond rates, corporate bond rates, negotiable certificates of deposit (NCD) rates, Treasury bill (TB) rates, corporate/commercial paper (CP) rates, fixed interest rates, floating interest rates, discount rates, coupon rates, real rates, nominal rates, effective rates, risk-free rates, and more.

Confusing? Yes, but there is a way to demystify the terminology and they are all related. This text's goal is to achieve that. It clarifies the important part that interest rates play in the economy. We start by pointing out that only debt and deposit instruments are subject to interest rates (there are a few exceptions, such as preference shares). We must give a brief overview of the financial system in order for you to understand this.

2.1.4 Economic Growth

A significant body of research has been devoted to explaining how economic growth can be achieved, which has long been considered to be a crucial objective of economic policy (Fadare, 2010). Scholars have paid a lot of attention to economic growth. Traditional studies suggest that economic growth is largely correlated with labor and capital as factors of production, according to Khorravi and Karimi (2010). The development of the endogenous growth theory has led experts to question the significance of other factors in explaining the phenomenon of economic growth.

The expansion of a country's potential GDP or output is represented by economic growth. Tax policies that promote growth, for instance, can increase the growth rate and levels of utility if the social rate of return on investment exceeds the private rate. The best tax system depends on the characteristics of services in growth models with public services (Olopade and Olopade, 2010). Economic growth has shed light on why states experience varying rates of growth over time, and

as a result, the government is better able to choose tax rates and spending levels that will affect growth rates.

2.2 Literature Review

The result for Nigeria shows that there were no appreciable effects on the inflation rate from domestic credit or changes in the money supply. An empirical research that spanned the years 1960–1959 along with a thorough review of the literature on Nigerian inflation generated results that are in line with Bodin and Mishkin. According to him, the money supply and its tagged values, adjustments in domestic credit, real output, net exports, and net government spending all have an impact on the inflation rate. He said that changes in real output, especially industrial outputs, the amount of money on hand, domestic food prices, and exchange rate fluctuations were the key contributors to inflation in Nigeria.

An empirical study on "The Impact of Monetary Measures on Inflation" was conducted by Daly (2007). He employed the money supply as well as the interest rate, high-powered money, and the tagged money supply. When he regressed these variables against inflation, he produced a poor result ($R^2 = 44.93\%$). In other words, changes in the five explanatory variables account for 44% of the variation in inflation. His conclusion has factors that prevent the use of efficient financial measures. He continued by saying that inflation cannot be attributed to a single cause but rather to a collection of independent variables.

An empirical study on "An evaluation of the effect of inflation on the Nigerian economy covering the period 1980-2002" was conducted by Aso (2004). Using OLS regression techniques, she used the money supply and inflation rate as explanatory variables. She draws the conclusion that the Nigerian economy has been significantly impacted by inflation. According to Udabah (1998), who examined "The Evaluation of the Effectiveness of Monetary Policy in the Nigerian Economy" for the years 1995 to 1997, the central bank monetary policy tools significantly aided in achieving some level of macroeconomic stability, he comes to the conclusion that the central bank should adjust these instruments for a more effective outcome.

"The choice of exchange rate regime in the Middle East and North Africa (MENA) countries: a profit analysis," says Daly (2007) in his research. He used a profit analysis to examine 17 MENA countries' selection of exchange rate regimes between 1990 and 2000. The study's findings demonstrated that a country's exchange rate regime is significantly influenced by its level of economic development and its stock of foreign reserves.

The findings of numerous research papers were contrasted by Sebastian (2016), in his study, which analysed the impact of choice of exchange rate regimes and their impact on economic growth between 1990 and 2014. The study was conducted across various levels of country development. The choice of exchange rate regime has no statistically significant effect on economic growth, according to a cross-sectional analysis used in the study. The study therefore, concluded that there has been little change in the exchange rate regime or the monetary policy targets.

Oladapo and Oloyede (2014) looked at how exchange rate management affected Nigeria's economic growth from 1990 to 2012. The results of the study, which used the ECM (error correction model) and OLS (ordinary least squares) methodologies, show that the money supply, imports, exports, and exchange rates are all positively correlated with economic growth. Eze and Okpala (2014) used annual data spanning the years 1980–2012 to test the effects of the two

exchange rate policies (fixed and floating) applied in Nigeria. It was reassuring to learn that, over time, exchange rates tend to move in the same general direction as trade. The research divided the time period into two parts: before and after the SAP's introduction. A chow test was used to demonstrate that the exchange rate regime has no statistically significant impact on economic growth. They argued that the administration of such policy was what really mattered.

Isola et al. (2016) looked into how changes in exchange rates affected economic growth between 1990 and 2014. Based on their sample and their use of the autoregressive distributed lag model (ARDL), they concluded that exchange rate fluctuations have no long-term impact on economic growth. However, there is a short-term impact. A similar study that examined the effects of various regimes on economic growth discovered that Nigeria's fixed exchange rate system restrains growth (Obi, Oniore, and Nnamdi, 2016).

Ferrando (2011) examined the relationship between changes in the exchange rate and economic development in China using annual data from 1987 to 2008. Utilising the Generalised Method of Moment (GMM) technique, the study found that exchange rate and import rates negatively affect China's economic growth. Akoku (2009) looked at the effects of changes in the money supply and exchange rates on the expansion of the Nigerian economy using annual data from 1975 to 2008. The findings of the research utilising the Ordinary Least Square technique demonstrated that the money supply and exchange rate had a favourable impact on Nigeria's economic growth.

2.2.1 Inflation and Economic Growth

It is impossible to overstate the effect that inflation has on economic activity. The impact of inflation on economic activity and, ultimately, welfare is a major concern for policymakers and has been the subject of extensive research. Analysts have argued over whether a rise in inflation will accelerate or decelerate economic growth.

Kaldor (1961) found permanent differences between countries in terms of the growth rate of per capital output in his endogenous growth model. Rising inflation rates, in accordance with Kaldor's observations, restrain economic growth. Haslay (1997), a senior economist and policy adviser at the Federal Reserve Bank of Dallas, asserted a correlation between inflation and economic growth. He reiterates that a positive link between total demand and the rate of money expansion is the primary factor. As a result, quicker money growth leads to both inflation and faster economic growth.

According to Iyoha (2004), all social stability and development in a capitalist economy should center on the issue of inflation. He claims that this is the case because the main obstacle to economic growth in a contemporary capitalist economy continues to be inflation. According to neoclassical economist. Iyoha (2004), inflation has an impact on economic performance and growth. When inflation increases, he describes how people switch from cash to capital in his model, "The Portfolio Mechanism."

The term "green" was used by Cooley and Hansen in 1989. The correlation between inflation and economic growth is explained by human mechanisms. They arrived at the conclusion that inflation has a detrimental impact on economic growth. As a result, economic growth slows as inflation rises. Onyeali (1997) holds a different perspective. He asserts that an increase in the rate of inflation has no impact on economic growth but may have an impact on people's real incomes without having an impact on the nominal growth rate.

In an inflationary economy, it is difficult for money to serve as a means of trade and a store of value without adversely affecting outputs, employment, and income distribution, claim Gbosi and Omoke (2004). Therefore, increasing inflation is bad for economic growth. According to Gbosi and Omoke (2004), exogenous and steady economic growth is the norm under neoclassical theory. As a result, although inflation has an effect on income level, it has no effect on income growth rate. Because of this, it cannot be assumed that a given level of inflation will cause per-capita inflation to go below the level that may be obtained at lower inflation rates because there is not a substantial association between inflation and the long-run growth rate of the economy.

2.1.3 Causes of Inflation

The CBN's 1996 study "on inflation and the Nigerian economy" supports the Mishkin Postulation by emphasising that the government is the primary cause of any pressures on inflation and that the significant depreciation of the Naira at the Autonomous Foreign Exchange Market is one of the major contributing factors to the sharp increase in the general price level (AFEM).

In a paper he presented at a conference hosted by the Federal Reserve Bank of Kansas City, he describes how government initiatives to achieve other goals resulted in high money growth rates and higher inflation rates. According to him, a high employment rate and rising government spending with low taxes are two elements that could lead to significant inflation.

Iyoha (2004) cites the infection of bank credit in the domestic economy as one of the causes of inflation. They claimed that this resulted in an intolerable economic situation where the cost of consumables has been steadily rising. Iyoha (2004) pointed out that the inflationary trend in Nigeria is a result of both the government's devaluation of the naira and a monetary issue.

2.1.5 Factors that determine exchange rate.

According to Oladapo and Oloyede (2014) the following factors determine a country's exchange rate:

- 1. Differentials in Inflation:** In general, an economy with steadily lower inflation is characterized by an increase in the home currency's purchasing power in comparison to foreign monetary standards. As a result, countries with faster rates of economic growth intentionally reduce their currency to match the market level of their trading partners. This typically has something to do with rising credit fees.
- 2. Interest rate differences:** Financing costs, growth, and scale swapping are, for the most part, intricately related. The pace of inflation and the scale of national swapping can both be controlled by central banks by controlling financing costs, which has an impact on the overall value level and buying power of the domestic currency. In comparison to other countries, higher interest rates provide lenders in an economy with a high level of return on their investments. This is due to the fact that rising exchange rates and foreign investment are brought about by higher interest rates. In other words, the value of the local currency increases in relation to other currencies.
- 3. Current Account Deficits:** The balance of trade between a country and its trading partners reflects all payments made by the trading partners for goods, services, interest, and benefits. In this way, a reversal in the current trend demonstrates that the nation is investing more in new trade. i.e., an import, then it makes money from exports. As a result, in order to make up the shortfall, the nation is forced to borrow money from unreliable sources. The country's exchange rate declines as a result of the excess demand for foreign currency, and eventually, locally produced goods become untouchable for the wealthy while newly acquired assets

become unaffordable to the point where it is even remotely feasible to consider finding deals on local prices.

- 4. Public Debts:** A country's exchange rate is significantly influenced by how much debt it has. To build national infrastructure and support government spending, nations engage in massive deficit financing. Even though these initiatives support domestic economic growth, foreign investors are less likely to invest in nations with high levels of public debt. An enormous public obligation might result in growth. The government might print more money to cover some of the debt, which would increase the amount of movable money in the economy and inevitably lead to inflation. The government must increase the flexibility of protections available to be purchased by foreign investors if it is unable to cover its shortfall through domestic means, such as selling overlaid edged securities and gracefully expanding cash. This lowers the price of these securities and devalues the national currency in relation to other currencies. As a result, the debt will be handled and paid off in the future with less actual money (Bergen, 2017).

2.2 Theoretical Framework

The exchange rate is one of the main tools used in economics to manage the numerous economic imbalances that arise between nations. It has been heavily utilised in the majority of structural adjustment efforts around the world. It has been utilised as a strategic policy instrument to steer the flow of economic resources (skilled labour, capital, managerial expertise, and foreign exchange) into the import and export sectors. However, the current exchange rate regime must be preserved for this to lead to sustained economic growth and development (Schaling, 2008). The three primary hypotheses that were evaluated in this study were balance of payment theory, mint parity theory, purchasing power parity theory, and foreign exchange rate theories.

2.2.1 The Mint Parity Theory

The operation of the global gold standard is related to this theory. In this system, the used money is either made of gold or has a fixed conversion rate into gold (Jhingan, 2004). A specific weight of gold was used to define the value of the currency unit in this case, and the central bank of the relevant nation was always prepared to buy and sell gold at the agreed-upon price. The mint price of gold is the exchange rate at which the local currency could be converted into gold.

2.2.2 The Purchasing Power Parity Theory

The spot exchange rate between currencies will be impacted by the disparity in inflation rates between different countries, according to this notion. The equilibrium exchange rate between two paper currencies that cannot be converted is predicated on the equality of their purchasing power, according to the theory. In other words, the exchange rate between two countries depends on the relative levels of their prices (Obadan, 2006).

2.2.3 The Balance of Payment Theory

In the case of a free exchange rate, this theory contends that a nation's currency's exchange rate is influenced by its balance of payments. According to Jhingan (2004), a positive balance of payments raises the exchange rate whereas a negative balance of payments lowers it. As a result, the idea contends that the exchange rate is determined by the supply and demand for foreign currency.

3.0 METHODOLOGY

The research design, measurement of variables, research instrument, sampling techniques, sample size, procedure of data collection, data analysis, and tools of the study will all be covered in this section, along with those activities involved in coming to a logical conclusion about the study. It is widely acknowledged that any research project's data collection and analysis phases are guided by the research design. The design of a research project can be thought of as the framework that specifies the kind of data that will be gathered, along with the method and source of the data.

As a result, secondary sources were used as the basis for this study's research design to gather the necessary data. The researcher uses secondary data and subjectivity by citing other authors in order to ensure the objectivity of the data; the researcher reviewed a variety of literature while developing the theoretical framework. This study also reports how the deciding factors affected Nigeria's economic expansion. This exploratory study takes into account relevant variable indicators of economic growth and inflation, as well as interest rate and inflation rate in Nigeria. Analysis and findings will be based on data analysis.

3.1 Model Specification

The detailed model shows how the variables of inflation, interest rate, exchange rate, and economic growth interact functionally. The Gross Domestic Product (GDP) at current basic prices is included in the model as the explained variable, while the explanatory variables are inflation, interest rate, and exchange rate.

The model is specified as follows:

$$GDP = f(INF, INT, EXC) \dots \dots \dots (1)$$

Where:

- GDP* = Gross Domestic Product,
- INF* = Inflation
- INT* = Interest Rate
- EXC* = Exchange Rate

Assuming a linear relationship among explanatory variable the explicit form of equation (1) becomes:

$$GDP_t = \beta_0 + \beta_1 INF_t + \beta_2 INT_t + \beta_3 EXC_t + \epsilon_t \dots \dots \dots (2)$$

- GDP* = Explained or dependent variable
- INF* = Explanatory variable or independent variable
- INT* = Explanatory variable or independent variable
- EXC* = Explanatory variable or independent variable

A Priori Expectation

The a priori expectation is based on the knowledge of economic theory, which refers to the sign and size of the economic relationships. A negative relationship is expected between Inflation, Interest rate and Economic Growth, and while a positive relationship is expected between Exchange Rate and Economic growth. Thus, the expectation about the signs and magnitude of the change is explained variable in response to the unit change of the explanatory variables is expressed thus: $\beta_1 < 0, \beta_2 < 0, \beta_3 < 0$ and $\mu = 0$

Where Economic growth is the main variable and others are used as controlled variables.

Variables	Symbols	Signs	Explanation/ Expectation
Gross Domestic	<i>GDP_t</i>	β_0	Gross domestic product (GDP) is used as proxy for

Product			the level of trade between the economy and the rest of the world
Inflation	INF_t	β_1	The inflation rate denotes the persistent rise in general prices
Interest Rate	INT_t	β_2	The Interest rate denote the proportion of a loan that is charged as interest to the borrower
Exchange Rate	EXC_t	β_3	An exchange rate is a rate at which one currency will be exchanged for another currency

Table 3.1: a priori expectations table

3.2 Sources and Method of Data Collection

Data is the most crucial component of any economic research or analysis, and it is also absolutely necessary for the study of econometrics. According to Gugarati (2003), the availability of relevant and accurate data is ultimately what determines whether an econometric analysis is successful. In other words, the researcher should always bear in mind that the quality of the data will ultimately determine how well the research turns out.

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3.3 Data Analysis Techniques

The gathered information will be displayed in tables and other forms of descriptive statistics with the goal of making a trustworthy deduction about how independent variables have affected Nigeria's economic expansion. Based on this, a multiple regression analysis model was used to assess the proxy variables for economic growth, on the one hand, and inflation, interest rates, and exchange rates, on the other. Following that, the model is estimated using Econometric View's ordinary least squares (OLS) methods. Using the software will help you stay clear of any mistakes that could happen while you're analysing your data.

Both the individual and combined statistical significance of the model was assessed. Both the t-statistic and the f-statistic are used, with corresponding significance. Both the t-statistic and the f-statistic are used. The Durbin Watson statistic served as the foundation for the serial correlation test. The coefficient of determination R^2 , which is the adjusted R^2 after accounting for degree of adjustment, is used to assess the model's goodness of fit. The study's findings could only be generalised to the extent that they were found because the hypothesis was tested at the 5% and 1% levels of significance. Since the study uses time series secondary data, the following steps are involved in our data analysis:

- (i) checking the temporal properties of the model's variables using unit root tests to ascertain their stationarity (e.g., Augmented Dickey-Fuller (ADF) tests);
- (ii) figuring out whether there is a meaningful long-run equilibrium relationship among the variables, that is, figuring out whether the variables in the equation are co integrated (e.g., Engle-Granger's single equation test); and
- (iii) estimating the dynamic (short and long run impact)

- (iv) The use of a number of diagnostic tests to assess the reliability and importance of the empirical model. (For example, the serial autocorrelation test, the F-test, the t-test, the t-test for correlation, and the standard error test.)

The econometric software E-views 8 for Windows was used to process the secondary data that was used in the study. Because it allows us to have data corrected, or the serial correlation in the data was corrected, E-view is preferred to SPSS. To solve the issue of spurious regression, it uses the Error Correction Mechanism (ECM). The ECM shows that a variable's change at time (t) depends both on its own lagged changes and on lagged changes in its independent variables. It is attractive because it can create flexibility by fusing short-run and long-run dynamics into a single system. Additionally, the parameter estimates for the ECM are generally accurate and reliable. In assessing the model, the criteria will be employed thus:

3.3.1 Statistical Criteria

The t-statistic and f-statistic, unit root test, co-integration test, and error correction model are used, respectively, for individual and joint statistical significance. The Durbin Watson statistic serves as the foundation for the serial correlation test. The R² coefficient of determination, which is the adjusted R² after accounting for degree of freedom, is used to assess the model's goodness of fit.

3.3.2 Individual Statistical Significance (T-test)

The T-test is used to determine if a null hypothesis is true or false. In this technique, the decision rule is based on the calculated value of the t-statistics from the data. The study of T-calculated and T-tabulated will be based on the decision rule outlined below, using a significant threshold of 0.05.

When $T_{\text{Calculated}} > T_{\text{Tabulated}}$: Accept H_1 , Reject H_0
 When $T_{\text{Calculated}} < T_{\text{Tabulated}}$: Accept H_0 , Reject H_1

3.3.3 Overall Statistical Significance (F-Test)

Due to the presence of multiple explanatory variables, it will be used. The impact of the explanatory variables included in the model is evaluated statistically overall using the F-test. It will be put to the test to see how unemployment and economic growth interact to affect the explained variable as a whole.

If $F_{\text{tab}} > F_{\text{cal}}$ Accept H_1 , Reject H_0
 If $F_{\text{tab}} < F_{\text{cal}}$ Accept H_0 , Reject H_1

3.3.4 Unit root test

The integration order of each series under consideration is tested in this way. Testing the order of integration can be done in a number of ways. The two most often employed tests (1988) are the enhanced Dickey-Fuller (ADF) test created by Dickey and Fuller (1979, 1981) and the Phillips-Perron (PP) test created by Phillips (1997) and Phillips and Perron. The augmented Dickey-Fuller test rejects the null hypothesis of unit root (the series are non-stationary) in favour of the alternative stationarity hypotheses. The tests are carried out for each series both with and without a deterministic trend (t). The generic form of the ADF test is estimated by the regression formula below:

$$\Delta y_t = \alpha_0 + \alpha_1 y_t - 1 + \sum_{i=1}^n \alpha \Delta y_{i+et} \dots \dots \dots (3)$$

$$\Delta y_t = \alpha_1 y_{\mu-1} + \sum_{i=1}^n \alpha_1 \Delta y_i + \delta_1 + e_t \dots \dots \dots (4)$$

Where

Y is a time series, t is a linear time trend, Δ is the first difference operator, α_0 is a constant, n is the optimum number of lags in the dependent variable and e is the random error term; and the Phillip- Perron (PP) is equation is thus:

$$\Delta_t = \alpha_{y0} + \alpha_{yt-1} + e_1 \dots \dots \dots (5)$$

3.3.5 The Cointegration Test

This includes assessing whether or not there is co-integration between the series of the same order of integration by the construction of a co-integration equation. The core premise of co-integration is that if two or more series move closely together over the long term, even while the trends in the series themselves are consistent, the distance between them is not. Due to the fact that their difference is stationary, these series can be regarded of as forming a long-term equilibrium relationship (Hall and Henry, 1989). Because these variables can theoretically drift arbitrary distances from one another in the absence of co-integration, there is no long-term link between them (Dickey et al., 1991). We employ the Johansen and Juselius (1990) maximum likelihood test approach.

4.1 DATA PRESENTATION AND ANALYSIS

To develop strong, robust and reliable models that captures the relationship between Gross Domestic Product and Interest rate, Inflation rate and Exchange rate. The statistical model is estimated using Ordinary Least Square (OLS) technique, using an Econometric Software called E-view. Based on this the descriptive analysis was carried out which reveals the mean of the sampled variables, Standard Deviation, Skewness and Kurtosis. They are aimed at drawing a reliable inference on the significance of the independent variables on Nigeria's Economic growth rate.

The OLS method is based on some assumptions (Gujarati, 2003) which make the OLS estimators become Blue (Best Linear Unbiased Estimator). Hence, individual initiative was applied along with the empirical rules and tests, to obtain tenable and robust results. Other relevant statistics were carried out to determine the validity of the null hypotheses to uphold the null hypotheses or stick to the alternative hypotheses. Furthermore, this chapter also examines the problem of social correlation (Autocorrelation) and the first of the serial correlation. Various statistical tests such as standard error, unit root test, Co-integration Test, t-test statistics, adjusted R-square, Durbin Watson and F-statistics were used to validate the hypotheses respectively.

4.1.1 SUMMARY OF DESCRIPTIVE STATISTICS

	GDP	INF	INT	EXC
Mean	5.029809	12.43339	5.783300	188.6087
Median	5.917700	12.88000	6.047200	150.0000
Std. Dev.	3.784056	3.751866	5.647369	94.47690
Skewness	0.351824	-0.210311	0.013267	1.120419
Kurtosis	3.896323	2.135984	2.774531	2.859274
Jarque-Bera	1.244412	0.884970	0.049393	4.831114

Sources: Computed by Author using E-views 10, 2023

The table above reveals the **mean** value of the variables, the mean commonly called average is a mathematically computed value which represents a central value of a given data set, the mean is computed by adding all the data values together and dividing by n ; the mean value of the

variables are presented as follows: Gross Domestic Product (GDP) has a mean value of 5.029809, Inflation (INF) is 12.43339, Interest Rate (INT) is 5.783300 and Exchange Rate is (EXC) 188.6087.

The **median** is used to identify the middle number when arranged in ascending or descending order of 2 equal parts i.e. number of terms on the right side of it is the same as a number of terms on the left side of it. The median of the analysis are presented as follows: GDP (5.917700), INF (12.88000), INT (6.047200) and EXC (150.0000).

The **standard deviation** is a measure of dispersion and gives us a way to describe where any given data value is located with respect to the mean, the mean, and the variables has a standard deviation as follows: (GDP) has a standard deviation value of 3.784056, (INF) is 3.751866, (INT) value of 5.647369, and (EXC) value of 94.47690.

The table also reveals the data for the **skewness test**, for (GDP) has a value of 0.351824, (INF) is -0.210311, (INT) value of 0.013267, and (EXC) value of 1.120419. The data for the Kurtosis test is presented as follows, (GDP) 3.896323, (INF) 2.135984, (INT) is 2.774531, and (EXC) rate is 2.859274 respectively as presented in table 4.1.1 above.

Kurtosis measures the existence of outliers. Kurtosis is a measure of whether the data are heavy-tailed (profusion of outliers) or light-tailed (lack of outliers) relative to a normal distribution. The Kurtosis of the analysis is presented as follows: GDP (3.896323), INF (2.135984), INT (2.774531) and EXC (2.859274).

Jarque-Bera statistic can be used to test a null hypothesis shall be rejected if the p-value $\frac{1}{4}$, hence, the value is considered to have a normal distribution. The results in reveal a **Jarque-Bera value as follows**, GDP (1.244412), INF (0.884970), INT (0.049393) and EXC (4.831114).

4.1.2 CORRELATION RESULT AND INTERPRETATION

	GDP	INF	INT	EXC
GDP	1.000000	0.007122	-0.082517	-0.628082
INF	0.007122	1.000000	-0.049980	0.324622
INT	-0.082517	-0.049980	1.000000	-0.027608
EXC	-0.628082	0.324622	-0.027608	1.000000

Sources: Computed by Author using E-views 10, 2023.

Table 4.1.2 above shows the correlation between the variables. Correlation is used to establish the relationship between complementary variables, or if one thing is caused by another. From the table presented above, the analysis reveals a positive relationship between Gross Domestic Product and Interest rate. However, a negative relationship exists between Gross Domestic Product and Interest rate and Exchange rate respectively. The correlation result thus reveals that one of the variables is positively correlated while some are negatively correlated, that is an increase in one of the explanatory variables will lead to deviation in the dependent variable as shown in table 4.1.2 above.

4.1.3 UNIT ROOT TEST

VARIABLE	T-STATISTICS	1%	5%	10%	ORDER OF INTEGRATION
GDP	-1.603660	-3.7856	-3.0114	-2.6457	I(1)

INF	-5.032749	-3.7856	-3.0114	-2.6457	I(1)
INT	-2.237599	-3.7856	-3.0114	-2.6457	I(1)
EXC	1.129279	-3.7856	-3.0114	-2.6457	I(1)

Sources: Computed by Author using E-views 10, 2023.

In line with recent developments in time series modelling, unit root tests of the time series properties of the data are examined to determine the order of integration of the variables used in the model. A series is said to be integrated of order d , denoted $I(d)$, if the series becomes stationary or $I(0)$ after being differenced d times. The Dickey Fuller-GLS tests are performed. The statistics of the tests allow one to test formally the null hypothesis that a series is $I(1)$ against the alternative that it is $I(0)$. The results of the stationarity tests for the variables are presented in Table 4.1.3.

The results from the tests show that all the variables are stationary at the first difference (that is, they are integrated into order one). The results of the stationarity (unit root) test indicates that Gross Domestic Product (GDP), Inflation (INF), Interest rate (INT) and Exchange rate (EXC) are all stationary at the first difference and as such have a unit root. A variable is stationary where the value of the test statistic is greater than the critical value. The next step after finding out the order of integration was to establish whether the stationary variables are co-integrated.

4.1.4 CO-INTEGRATION TEST

Time series variables which are not stationary may have some linear combination of them that is stationary. In such a case, the variables are said to be co-integrated. This implies that there is a long-run relationship among the non-stationary variables. If the tests for stationarity reveal that most of the variables are not stationary, there is a need to conduct a co-integration test.

This study follows Johansen and Juselius (1990) to determine the number of co-integrating vectors using two likelihood ratio test statistics, the trace and maximal eigenvalue test statistics were utilized to determine the number of co-integrating vectors. However, it is commonly acknowledged that the statistical properties of the Johansen procedures are generally better and the co-integrating test is of higher power compared to that of the Engle-Granger (Charemza and Deadman, 1997). The results of the trace and maximal eigenvalue tests statistics are presented in Table 4.1.5. The results of Johansen maximum likelihood procedures showed that the variables in each of the stochastic equations are co-integrated.

The procedure followed to determine the number of co-integrating vectors began at the top of the table with the hypothesis that there are no co-integrating vectors, H_0 . A rejection of the hypothesis would lead to testing the alternative hypothesis, which is H_A . The testing procedure continues until the null hypothesis cannot be rejected any longer. Based on the test statistics, the hypothesis of no co-integration, H_0 is rejected.

The results indicated the existence of more than one co-integrating vector in some of the stochastic equations, as shown by the Maximum Eigenvalues which are statistically significant at the 5% level. The result further reveals that four co-integrating vectors were identified for the variables. These results are not surprising as their long-run relationships may well involve more than just the variables tested. The consistency in the test results confirmed the existence of a long-run relationship between the exogenous and endogenous variables in the model.

Table 4:1.5 Johansen Maximum Likelihood Co-Integration Test Results

Maximum Eigenvalues Test				
Variable	H ₀	H _A	(λ max)	5% Critical values
GDP	r = 0	r = 1	0.125013	3.76
INF	r = 0	r = 1	0.217624	3.76
INT	r = 0	r = 1	0.584570	3.76
EXC	r = 0	r = 1	0.066161	3.76

Note: r represents number of co-integrating vectors.

Source: Computed by Author using E-views 10, 2023.

4.2 PRESENTATIONS OF REGRESSION RESULTS

Using the Ordinary Least Squares (OLS) regression method the following estimated equation was obtained with Econometric Views Computer Package [E-views]. The table below shows the analysis of the result of the data used in the study. The method of analysis employed is the Ordinary Least Square (OLS).

The economic growth trend model regression results

Dependent Variable: GDP

Method: Least Squares

Date: 06/03/23 Time: 01:46

Sample: 1999 2021

Included observations: 23

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	7.806222	2.432080	3.209690	0.0046
EXC	-0.028269	0.007189	-3.932054	0.0009
INF	0.233709	0.181197	1.289811	0.2126
INT	-0.060587	0.113903	-0.531918	0.0509
R-squared	0.452412	Mean dependent var	5.029809	
Adjusted R-squared	0.365951	S.D. dependent var	3.784056	
S.E. of regression	3.013138	Akaike info criterion	5.200612	
Sum squared resid	172.5010	Schwarz criterion	5.398089	
Log likelihood	-55.80704	F-statistic	5.232538	
Durbin-Watson stat	1.711003	Prob(F-statistic)	0.008398	

Table 4.4 Sources: Computed by Author using E-views 10, 2023

$$\text{GDP} = 7.806222 + 0.233709\text{INF} - 0.060587\text{INT} - 0.028269\text{EXC}$$

$$t^* \quad (3.209690) \quad (1.289811) \quad (-0.531918) \quad (-3.932054)$$

$$R^2 = 0.452412 \quad \text{Adjusted } R^2 = 0.365951$$

$$D.W = 1.711003 \quad F\text{-statistic} = 5.232538$$

$$\text{Prob (F-statistic)} = 0.008398$$

The analysis reveal an intercept value of (7.806222), an indication that there is an autonomous component of Gross Domestic Product explained by the independent variables. The positive response reported by the result of the intercept signifies that holding all variables constant, a significant increase in the independent variable will result in 78% variability in the national economy, while the remaining 22% are other variables outside the model or that are captured by the error term.

The significance of the independent variables is presented as follows, the Exchange rate is -0.028269, which indicates a negative relationship among the variables, which indicates a percentage increase in the exchange rate will result in a 28% negative impact on the nation's economy, this aligns with the priori expectation as a negative relationship is expected between

the variables. The implication of this is that holding other variables constant, a percentage increase in the Exchange rate will cause a 28% negative implication on Gross Domestic Product.

According to the result, Inflation has a figure of 0.233709 which indicates that INF has a positive relationship with GDP. This means that holding all other variables constant, a percentage increase in Inflation Rate will cause a 23% on Gross Domestic Product. The Interest rate is -0.060587, which indicates a negative relationship among the variables, which indicates a percentage increase in the Interest rate will result in a 60% negative impact on the nation's economy.

Since R^2 measures the fit of the model so this model is highly fitted i.e. the data is fitted well with an R^2 value of 0.452412 as it also reveals a higher value than the Adjusted R^2 of 0.365951. Therefore, we can conclude that the explanatory variables perfectly explained the variability in the dependent variable.

From the table, it shows that F-statistics is 5.232538; and Prob (F-statistic) is 0.008398. Durbin Watson Statistic is used to detect the presence of autocorrelation (A relationship between values separated from each other by a given time lag) to indicate whether there is serial correlation in the model. The value of DW always lies between 0 and 4. If the Durbin–Watson statistic is substantially less than 2, there is evidence of a positive serial correlation. As a rough rule of thumb, if Durbin–Watson is less than 1.0, there may be cause for alarm. Small values of DW indicate successive error terms are, on average, close in value to one another, or positively correlated. If $d > 2$, successive error terms are, on average, much different in value from one another, i.e., negatively correlated. If there is serial correlation in the model it therefore implies that the model has lost its predictive power. Durbin – Watson Statistic is given as 1.711003 and this suggests that the model is free autocorrelation. Consequently, the estimated model can be confidently relied upon for making inferences and for prediction purposes.

4.3 DISCUSSION OF FINDINGS AND DECISION RULE

Restatement of Hypothesis One

H0: There is no significant impact of the exchange rate on Nigeria's economic growth

H1: There is a significant impact of the exchange rate on Nigeria's economic growth

In an attempt to validate this hypothesis, linear regression analysis was employed to analyse the relationship between economic growth (dependent variable) and exchange rate (independent variable). The prio-expectation expects a negative relationship between the variables holding all variables constant. The Gross Domestic Product and Inflation reveals negative significant value of (-0.028269), which conforms to the priori-expectation as negative relationship is expected among the variables. This indicate that holding all variables constant, a percentage increase in the nations exchange rate will result in a 28% negative impact on the nation's Gross Domestic Product.

The earlier stated null hypothesis shall be rejected if the probability statistics value otherwise known as p-value is less than 0.05. The research analysis thus, reveals a p-value of p-value of (0.0009) at 95%. Hence, the earlier stated null hypothesis shall be rejected while the alternative which says there is a significant impact of the exchange rate on Nigeria's economic growth shall be upheld, the rejection of null hypothesis is due to the lack of statistical support.

Restatement of Hypothesis Two

H0: There is no significant impact of inflation on Nigeria's economic growth

H1: There is a significant impact of inflation on Nigeria's economic growth

The second hypothesis is aimed at establishing if significant relationship exists between inflation rate and economic growth. The research takes into cognizance the inflation statistics of the period under review. The research reveals a value of (0.233709), which indicates that INF has a positive relationship with GDP. This means that holding all other variables constant, a percentage increase in Inflation Rate will cause a 23% increase in Gross Domestic Product, this does not comply with the A priori expectation, because a negative relationship is expected between the two variables.

The earlier stated null hypothesis shall be rejected if the probability statistics value otherwise known as p-value is less than 0.05. The research analysis thus, reveals a p-value of p-value of (0.2126) at 95%. Hence, the earlier stated null hypothesis which say there is no significant impact of inflation on Nigeria's economic growth shall be upheld while the alternative forgone, the acceptance of the null hypothesis is because it received statistical support.

Restatement of Hypothesis Three

H0: Interest rate has no significant impact on Nigeria's economic growth

H1: Interest rate has a significant impact on Nigeria's economic growth

The analysis of long and short-term relationships between the variables established a significant negative relationship exist between inflation and economic growth on Nigeria's economic growth, with a value of (-0.060587), which indicates a negative relationship among the variables. Holding all variables constant, a percentage increase in Interest rate will result in a 60% negative impact on the nation's economy, this aligns with the priori expectation as a negative relationship is expected between the variables. The implication of this is that holding other variables constant, a percentage increase in INT will cause a 60% negative implication on Gross Domestic Product.

The p-value will be significant in reaching a conclusion on the earlier stated null hypothesis. The null hypothesis shall be rejected if the probability statistics value otherwise known as p-value is less than 0.05. The research analysis thus, reveals a p-value of p-value of (0.0509) at 95%. Hence, the earlier stated null hypothesis which says interest rate has no significant impact on Nigeria's economic growth shall be rejected while the alternative upheld, the rejection of the null hypothesis is due to the lack of statistical support. It can therefore be concluded that interest rate has a significant impact on Nigeria's economic growth.

Re-Statement of Hypothesis Four

H0: The joint impact of the exchange rate, inflation rate and interest rate has no significant effect on Nigeria's economic growth

H1: Exchange rate, inflation rate and interest rate have a joint significant effect on Nigeria's economic growth

The Intercept, R2 and F-Statistics will be significant in determining the third hypothesis as this involves a wide range of relationship. The research reveals an intercept among the sampled variables (Exchange rate, Inflation rate and Interest rate) as the independent variables (Gross Domestic Product) as the dependent variable. The Intercept is used to measure the success of the regression in the prediction of the dependent variable value within the sample. It may be interpreted as the level of significance of the dependent variable explained by the independent variables in the model. The intercept of (7.806222) was found to be consistent with the A priori

expectation as it assumed a positive sign, an indication that there is an autonomous component of Gross Domestic Product explained by the independent variables. The positive response reported by the result of the intercept signifies that holding all variables constant, a significant increase in the independent variable will result in 78% variability in the national economy, while the remaining 22% are other variables outside the model or that are captured by the error term.

Since R^2 measures the fit of the model so this model is highly fitted i.e. the data is fitted well with an R^2 value of 0.452412 as it also reveals a higher value than the Adjusted R^2 of 0.365951. Therefore, we can conclude that the explanatory variables perfectly explained the variability in the dependent variable.

In an attempt to take a decision on the earlier stated null hypothesis which states that the joint impact of the exchange rate, inflation rate and interest rate has no significant effect on Nigeria's economic growth shall be validated using the f-statistics test, it is used to analyse if the independent variables are jointly significant to explain the overall significance of the model under study. Note, F-calculated is compared with F-tabulated when F-cal is greater than F-tab we reject the null hypothesis (H_0). From the table presented above, it shows that F-statistics is 5.232538; and Prob (F-statistic) is 0.008398. We, therefore, reject the null hypothesis and accept the alternative hypothesis. Hence, it can be concluded that Exchange rate, inflation rate and interest rate have a joint significant effect on Nigeria's economic growth.

5.0 SUMMARY, RECOMMENDATION AND CONCLUSION

1.1 SUMMARY

The study investigated the impact of exchange rates, inflation, and interest rates on the economic growth of Nigeria between 1999 and 2021. The period under study was chosen because it period of Nigeria transition to democracy till date after several years of military rule. The research is therefore aimed at analysing the significant impact of inflation, interest rate, and exchange rate, which were all considered determining variables, on Gross Domestic Product (GDP), which is regarded as a determined variable.

The theoretical framework employed for the research is the Mint Parity Theory, the Purchasing Power Parity Theory, the balance of payment theory, and the theory of endogenous economic growth. The mint parity theory is associated with the working of the international gold standard, where the currency in use is made of gold or convertible into it at a fixed rate (Jingan, 2004). The purchasing power parity theory was also employed; the theory states that the exchange rate between countries will change according to the differential in inflation rate between two inconvertible paper currencies, which determines the equality of their purchasing power, which helps in explaining the exchange rate variable (Obadan, 2006).

The research analysis thus reveals a significant relationship exists between Gross Domestic Product and exchange rate, with a p-value of (0.0009) at the 95% confidence interval and a regression value of (-0.028269). Holding all variables constant, the research reveals the exchange rate will result in a 28% negative impact on Gross Domestic Product. Therefore, prompting the rejection of the earlier stated null hypothesis, the research concludes that there is a significant impact of the exchange rate on Nigeria's economic growth. This negates the findings of Sebastian (2016), who analysed the impact of the choice of exchange rate regimes and their impact on economic growth between 1990 and 2014. The research was conducted across different levels of country development. The analysis, which contrasts the findings of many

research papers, stated that the choice of exchange rate regime has no statistically significant impact on economic growth.

The research takes into consideration the inflation statistics of the period under review. The research reveals a value of (0.233709), which indicates that Inflation has a positive relationship with Gross Domestic Product. This means that holding all other variables constant, a percentage increase in the inflation rate will cause a 23% increase in Gross Domestic product. This does not comply with the A priori expectation because a negative relationship is expected between the two variables. The earlier stated null hypothesis was rejected because the p-value is less than 0.05, as the research analysis reveals a p-value of (0.2126) at 95%. Hence, the earlier stated null hypothesis which say there is no significant impact of inflation on Nigeria's economic growth shall be upheld while the alternative forgone, the acceptance of the null hypothesis is because it received statistical support. A research conducted on the cross-sectional analysis of the origin and development of inflation in some selected African countries, including Nigeria, was carried out by the research department of the central bank of Nigeria (1974), covering the period 1960–1972. The empirical investigations were limited only to six countries, and the explanatory variables used were money supply, deficit financing, and real Gross Domestic Product (Real GDP). The empirical investigation as regards Nigeria shows that changes in money supply and domestic credit had no significant Impact on the inflation rate.

In the same vein, the purchasing power parity theory was helpful in explaining the exchange rate variable. This Theory states that the spot exchange rate between currencies will change due to the differential in inflation rates between countries. The theory states that the equilibrium exchange rate between two inconvertible paper currencies is determined by the equality of their purchasing power. This was further substantiated by Jhingan (2004), who states that a favourable balance of payment raises the exchange rate; hence, the theory stipulates that under exchange rate, the exchange rate of the currency of a country depends upon its balance of payment. Therefore, an unfavourable balance of payments reduces the exchange rate. This theory implies that the demand and supply of foreign exchange are functions of demand and supply, which are therefore interrelated with economic growth. This theory was helpful in explaining the exchange rate variable.

The research established a negative long-term relationship between the inflation rate and Nigeria's economic growth, with a value of (-0.060587), which indicates a negative relationship among the variables. A percentage increase in the nation's inflation rate will have a 60% negative impact on the nation's economy. It was further established by the hypothesis tested at the 95% confidence interval. The null hypothesis was rejected as the p-value, was less than 0.05. The research analysis thus reveals a p-value of (0.0509), which is less than 0.05. Hence, the earlier stated null hypothesis, which says interest rates have no significant impact on Nigeria's economic growth, was rejected while the alternative was upheld. The research affirms that interest rates have a significant impact on Nigeria's economic growth.

The research aligned with the findings of the empirical analysis carried out by Asoqu (1991) on the extensive review of the literature on inflation in Nigeria with an empirical analysis covering the period 1960–1969. His research findings are in line with those of Bodin and Mishkin. He further expresses that the inflation rate is a function of the money supply and its togged values, changes in domestic credit, real output, net exports, and net government expenditure. He maintains that real output, especially industrial outputs, the current money supply, domestic food prices, and exchange rate changes were the major determinants of inflation in Nigeria.

The theory of endogenous economic growth, which occurred in the 1980s and 1990s, was helpful in explaining the relationship that exists among all the variables towards economic growth. It reflects the impact of imperfect competition, the role of possible changes in the profit rate, and most importantly, the scientific and technical progress made, which are regarded as endogenous growth factors generated by internal causes. It was hypothesised by Paul Romer (1955–till now) and Robert Lucas (1937–till now), two American economists, that the endogenous character of the most important technological innovations is based on investment (contribution) in technological development and in human capital.

5.2 RECOMMENDATIONS

In the Nigerian economy, several general approaches are being postulated to enhance the productivity of the economy:

1. Frantic efforts should be made by the government on the issue of the erratic exchange rate by avoiding acts that may undermine a sustainable economic objective of the nation, which may include coming hard on banks that operate in foreign exchange markets outside the CBN directive;
2. The government should make the market more viable and economically patriotic to encourage investors.
3. The government should consider reducing the budget deficit by raising taxes.
4. The government should consider monetizing the deficit by increasing the money supply sufficiently to cover the new expenditure.
5. The government should consider improving the existing exchange rate management framework and structures to enhance economic growth and development.
6. High reliance on foreign products has not done the country any good but contributes significantly to our economic stagnation; hence, the government should sustain the border closure, which may further be debilitated by strict levies.
7. The government should induce the exchange rate by introducing positive economic reforms that will help reduce the impact of exchange rate fluctuation on the Nigerian economy, most importantly in the area of trade flows and economic development.
8. The government should consider a significant reduction in the nation's prime lending rate to investors to encourage them to borrow to enhance investments and economic development.

5.3 CONCLUSION

The significance of effective monetary policies in the nation's economy cannot be overemphasised; hence, the government should address the various monetary policies in the nation to curb the incessant and recurrent monetary issues so the nation can enjoy the benefits associated with exchange rate stability as well as an inflation rate reduction and control to enhance the nation's economic growth and development. The study established that, while a high rate of inflation and inconsistent exchange rates are detrimental to the nation's economic advancement, it is also important to mention that moderate and stable inflation rates will help supplement returns to savers in the long run, thereby enhancing investment and economic growth.

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