EXCHANGE RATE AND ECONOMIC GROWTH IN NIGERIA (1980-2020)

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BEING A PROJECT SUBMITTED TO THE DEPARTMENT OF ECONOMICS, COLLEGE OF HUMANITIES, MANAGEMENT AND SOCIAL SCIENCES, MOUNTAIN TOP UNIVERSITY, IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF BACHELORS DEGREE IN ECONOMICS

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CERTIFICATION

This is to certify that this research project titled Exchange Rate and Economic Growth In Nigeria was carried out by DIAI DAVID. I from the Department of Economics, Mountain Top University, Ogun State, Nigeria.

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DEDICATION

This research project is dedicated to the Almighty God who has given me the grace and opportunity to complete this program.

ACKNOWLEDGEMENT

My sincere thanks go to God Almighty, who made this work successful via his boundless mercies, blessings, and grace. My family deserves a special word of thanks and appreciation for their assistance in the form of their love, concern, money, moral support, and prayers. I will always be grateful to my H.O.D, DR. Ologundudu Mojeed, who provided me with all the academic assistance I required to ensure the success of this research. I also acknowledge the knowledge imparted to me by my lecturers, Dr. Ademola Young, Mr. O.O. Oluyomi, Dr Motunrayo. To my dear friends Emmanuel, Ayomide and my unforgettable roommates who all made a good difference in the outcome of this endeavor. I also want to express my gratitude to everyone else who has contributed in some way but has not been specifically addressed.

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ABSTRACT

The relationship between the exchange rate and economic growth in Nigeria between 1980 and 2020 was investigated in this study. It is important to understand the effects of exchange rate, inflation, and interest rate on gross domestic product (GDP). The Central Bank of NIGERIA provided the information on the variables as well as The National Bureau of Statistics, Nigeria (CBN) Statistical Bulletin, and World Development Indicators. The price of one currency in relation to another currency is known as the exchange rate. The country's rate of output growth is also estimated using this exchange rate. Nigeria has used a variety of exchange rate regimes over the years, and current study is focused on how exchange rates affect the country's economic growth, with a focus on the typical Nigerian's purchasing power and the volume of international trade. In order to achieve this, the conventional linear regression model is utilized, and the ordinary least squares econometric technique is also applied to assess the effect of exchange rate on economic growth. Given the results, this study suggests, among other things, that the federal government, through the CBN, should make sure that exchange rate policy is consistent to allow for a reasonable and stable exchange rate that can stimulate economic growth in Nigeria.

Keywords: exchange rate, inflation rate, interest rate, economic growth.

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND TO THE STUDY:

In economics, exchange rate is one of the most frequently debated issues in Nigeria today. Macroeconomic policy formulation is a process by which the agencies played a vital role for the conduct of economic policies try to influence a set of instrumental variables that help achieve specific objectives. Within Nigeria. These goals include achieving domestic price stability, a balanced budget, fair income distribution, economic expansion and development. Because the exchange rate of an economy directly affects all macroeconomic factors, such as domestic price indicators, the profitability of traded goods and services, resource allocation, and investment decisions, monetary authorities and the private sector work to maintain stability in these factors (Ajakaiye, 2001).

To further understand the concept of exchange rate, we have to take a close look at naira fluctuation. Only a decision by the government or monetary authority of a nation can change the currency's official value under a fixed exchange rate regime. These actions are occasionally taken by governments, frequently in response to irregular market pressures. Most times the government uses Naira Devaluation as a means of correcting exchange rate imbalances. Devaluation, which is the intentional reduction in the official exchange rate, lowers the value of the currency; in contrast, revaluation is an increase in the value of the currency. Countries that have a fixed exchange rate or semi-fixed exchange rate use this monetary policy tool. Some analysts have questioned the central bank's devaluation strategy, claiming that it might have serious consequences for Nigeria's import-dependent economy.

As a result, whenever the Naira depreciates, the cost of importing all of these inputs skyrockets, raising the cost of manufacturing, which the manufacturers reflect in higher pricing. Consider a situation where a government has set the value of 10 of its currency to equal one dollar. It might declare a devaluation by declaring that moving forward, 20 of its currency units will be equivalent to one dollar. Due to this, the devaluing nation's currency would be twice as expensive to Americans as the U.S. dollar. The rate of exchange might be changed from ten units to one dollar to five units to one dollar as part of a revaluation; this would make the currency twice as expensive to Americans and the value of the dollar in their own country. When a government devalues its money, it frequently does so because the fixed exchange rate of the currency has become unworkable due to the combination of market forces and policy actions. A nation must have enough foreign exchange reserves, frequently dollars, and be willing to use them in order to accept all offers of its currency at the predetermined exchange rate in order to maintain a fixed exchange rate. A nation must devalue its currency to a level that it can and will support with its foreign exchange reserves if it is unable or unwilling to do so.

This might help to lower the current account deficit by lowering imports and raising exports for the nation. Other policy issues may force a country to change its fixed exchange rate. For example, rather than implementing unfavorable fiscal spending policies, a government may try to boost aggregate demand in the economy through devaluation in order to combat unemployment. Revaluation, which makes a currency more valuable, may be used to minimize a current account surplus, where exports surpasses imports, or to try to keep inflationary pressures at bay.

Various international organizations, such as the International Monetary Fund (IMF), have been established since the 1930s to assist nations in coordinating their trade and foreign exchange policies, thereby avoiding successive rounds of devaluation and retaliation.Article IV of the IMF

charter was revised in 1976 to encourage policymakers to avoid "manipulating exchange rates...to obtain an undue competitive advantage over other members." The IMF also established each member country's right to freely adopt an exchange rate regime with this modification. In order to gain foreign assistance to rectify its balance of payments problems, the government propositioned the IMF for a three-year program to effectively alter and restructure the Nigerian economy's consumption and productive patterns, as well as to eliminate price imbalances and heavy reliance on crude oil exports and imports of consumer and producer goods.

1.2 STATEMENT OF RESEARCH PROBLEM:

Because of the implementation of the structural adjustment program, the real rate of economic growth turned negative (SAP). Foreign exchange rate instability is another issue for the economy. The depreciation of the naira has created so much imbalance in the country that the economy is now fragile, if not in chaos. The goal of this analysis is to uncover the key causes of the Naira's depreciation in order to propose solutions to help the Naira appreciate significantly.

The fact that the Naira is depreciating further at a time when our economy is deregulated is a serious concern. Because of the depreciation of the Naira, every commodity in the country is now very expensive. Therefore, a reduction in the degree of over-valuation of the Naira was to be brought about in an effort to adopt a realistic exchange rate policy. That is the motivation propelling my interest in this study.

1.3 RESEARCH QUESTIONS:

As a result, the statement of problems is formulated by answering the following questions:

a. To what capacity does currency rate affect the Nigerian economy growth?

b. What impact does the currency rate have on exports from Nigeria?

c. Does Nigeria's inflation rate affects economic growth?

1.4 RESEARCH OBJECTIVES:

The purpose of this study is to see how the devaluation of the Naira affects the Nigerian economy.

i. Examine how the currency rate fluctuation affects Nigeria's economic Growth

ii. To observe the impact of currency rate on Nigerian exports

iii. To determine how Nigeria's inflation rate affects economic growth.

1.5 STATEMENT OF HYPOTHESIS:

Hypothesis 1

Ho: There is no causality effect of the Nigerian exchange rate fluctuation on the Nigerian economic growth

Hi: There is causality effect of the Nigerian exchange rate fluctuation on the Nigerian economic growth

Hypothesis 2

Ho: There is no significant relationship between currency rate and Nigerian export

Hi: There is significant relationship between currency rate and the Nigerian export

Hypothesis 3

Ho: There is no significant relationship between inflation rate and economic growth in Nigeria.

H1: There is significant relationship between inflation rate and economic growth in Nigeria.

1.6 SIGNIFICANCE OF STUDY:

The significance of the study is to provide useful synthesis and analysis of how vital the devaluation of the naira is to further build the economy in terms of growth. The purpose of this project is to do research on how the depreciation of the naira has affected the Nigerian economy. It is frequently employed in developing nations to minimize significant external imbalances, encourage export development, adjust the value of the real exchange rate, and support local market activity. Importantly, this study would aid the government and the central bank of Nigeria (CBN) in determining the advantages and disadvantages of each foreign exchange system, allowing them to adopt the course of action that will best promote economic growth and development. The study will also act as a guide for future researchers in this area.

1.7 SCOPE OF STUDY:

The affected areas of the Nigerian economy due to the Naira's Exchange will be covered in this study, including the gross domestic product, gross national product, unemployment, inflation, import and export rate, and others. It will also cover the reform, the structural adjustment program, the analysis of the IMF's operations that had an impact on the Nigerian economy, and the impact of the naira's devaluation on poverty levels in Nigeria. The study covers the exchange rate of Naira from the period of 1980-2020

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

This chapter is divided into three sections. Section 2 shows the conceptual review of the related topic. Section 2.3 gives the breakdown of the theories used in this literature while section 2.4 illustrates the empirical review which is the review of other literatures previously made on this topic.

2.2 CONCEPTUAL FRAMEWORK

2.2.1 CURRENCY DEVALUATION: The official reduction in the value of a nation's currency under a fixed exchange rate system is known as currency devaluation. Since most nations have systems of flexible exchange rates, devaluations of currencies are very infrequent. Depreciation is the phrase used to describe a decline in a currency's value in comparison to other currencies under a floating exchange rate system, in which exchange rates are decided by market forces. It is a reduction in a nation's currency's value in comparison to a foreign currency or standard. Devaluation is a common monetary policy instrument used by many nations with fixed exchange rates to manage supply and demand. Due to the decreased perceived worth of the currency by nations importing the commodities, devaluations are used to increase exports, decrease trade deficits, and minimize the cost of interest payments on government debt.

Trade imbalances are the primary cause of currency devaluations by nations. Devaluation can lower a nation's export costs, increasing its ability to compete on the international stage. Additionally, when import costs rise, domestic customers become less inclined to buy more expensive products from overseas companies and are more inclined to buy domestically produced

items at cheaper prices. The rise in domestic expenditure would therefore encourage the flow of money inside the individual's own economy. Trade imbalances eventually shrink when exports start to rise as a result of lower prices and imports start to fall as a result of perceived higher prices by local consumers. Due to the high demand for more expensive imports and less expensive exports, the depreciation of the home currency can thereby reduce deficits.

2.2.2 EXCHANGE RATE: The price of one currency relative to another is known as the exchange rate. When nations employ gold or another accepted standard, and each currency is worth a particular amount of the metal or other standard, the exchange rate is "fixed." When supply and demand or speculation determine exchange rates, the exchange rate is "floating" (conversion units). When a nation imports a lot of products, the demand will drive up the country's exchange rate, increasing the cost of the imported products for domestic consumers. Demand declines when the price of the items rise, and the currency of that nation becomes less costly in comparison to the currencies of other nations. Then the price of the country's goods drops to foreign consumers, demand grows, and exports grow. Today's global commerce relies on a controlled floating exchange mechanism. Governments take action to maintain the exchange rates of their nations by restricting imports, promoting exports, or depreciating currencies.

2.2.3 ECONOMIC GROWTH: Economic growth is the rise or improvement in the market value of the products and services generated by an economy over a predetermined period of time, adjusted for inflation. Statisticians often use the percent rate of growth of the real gross domestic product, or real GDP, to quantify growth. In order to remove the inflationary distortion on the pricing of produced items, growth is typically assessed in real terms, or terms adjusted for inflation. Economic growth is measured using national income accounting. Economic growth has both the benefits and disadvantages of GDP growth since it is calculated as the yearly percent change. The ratio of GDP to population is a typical metric used to compare the economic growth rates of

different nations (per-capita income). Economic growth, in its most basic form, is a rise in the economy's total output. Gains in overall production frequently, but not always, correspond with higher average marginal productivity. As a result, there is a gain in income, which encourages people to spend more money on goods and services, raising the standard of living or quality of life in tangible terms.

Growth is frequently represented in economics as a function of labor force, technology, human capital, and physical capital. Increasing the amount or quality of the working age population, the resources accessible to them, and the methods they may use to combine labor, capital, and raw materials will all result in higher economic production, to put it simply.

2.2.4 EXPORT: Export is a good made in one nation and sold in another, or a service rendered in one nation to a person or resident of another one. The person who provides these products or services is an exporter; the overseas customer is an importer. Financial, accounting, and other professional services, tourism, education, and intellectual property rights are all examples of services that are involved in international commerce. Exports are the products and services that a nation produces at home, or inside its national borders, and sells to customers outside. Imports, which are products and services that consumers in a nation buy from suppliers abroad, are the polar opposite of exports. The exchange of commodities and services between nations is international trade, which includes both exports and imports. A nation's exports may be hampered by trade restrictions including tariffs, import levies, and subsidies for domestic companies.

2.2.5 IMPORT: Imports are foreign products and services that residents, companies, and governments of other nations purchase. What the imports are or how they are conveyed doesn't matter. They can be delivered by mail, supplied electronically, or even flown hand-carried in carry-on luggage. They are imports if they are made elsewhere and offered for sale to citizens of the

country. Even travel-related goods and services are imported. Any mementos you purchase while traveling outside the nation are imported. A nation has a trade imbalance if its imports exceed its exports. A trade surplus is produced when imports are fewer than exports. A country with a trade imbalance must borrow money from other nations to cover the additional imports. It's similar to a newly established family. To buy a car, a house, and furniture, the couple must take out loans. Their income is insufficient to pay for the costs that raise their level of living.

2.2.6 INFLATION RATE: A measure of buying power is inflation. It is described as the rate of change in goods and service prices over a predetermined time period (usually a year). Simply put, consumer spending decreases when inflation increases because consumers can no longer afford to make as many purchases. The yearly percentage change in a general price index, or inflation rate, is the most often used indicator of inflation. The consumer price index (CPI) is frequently employed for this purpose since price increases are not uniform across the board. In the United States, salaries are also calculated using the employment cost index

2.2.7 INTEREST RATE: In order to help control other economic factors like the country's inflation rate, central banks set the main interest rate for their nation as part of their monetary policy. The base rate is a common name for this. Though there was significant inflation, the real interest rate in 2001 was over 20%. The ongoing high interest rate lowers profits on investments made in the real economy and keeps financial instrument trade going**.** The level of interest rates and the aggregate supply of money in circulation are the two basic instruments of monetary policies which can either be achieved by controlling the growth of the money supply as argued by monetarist theorist or expanding the supply of money in circulation which in turn leads to excess demand thereby causing the interest rates to decline as argued by the Keynesian economists. These are easily achieved in developed countries where there is highly organized, economically interdependent and efficiently functioning money and credit markets.

2.3 CONCEPTUAL REVIEW

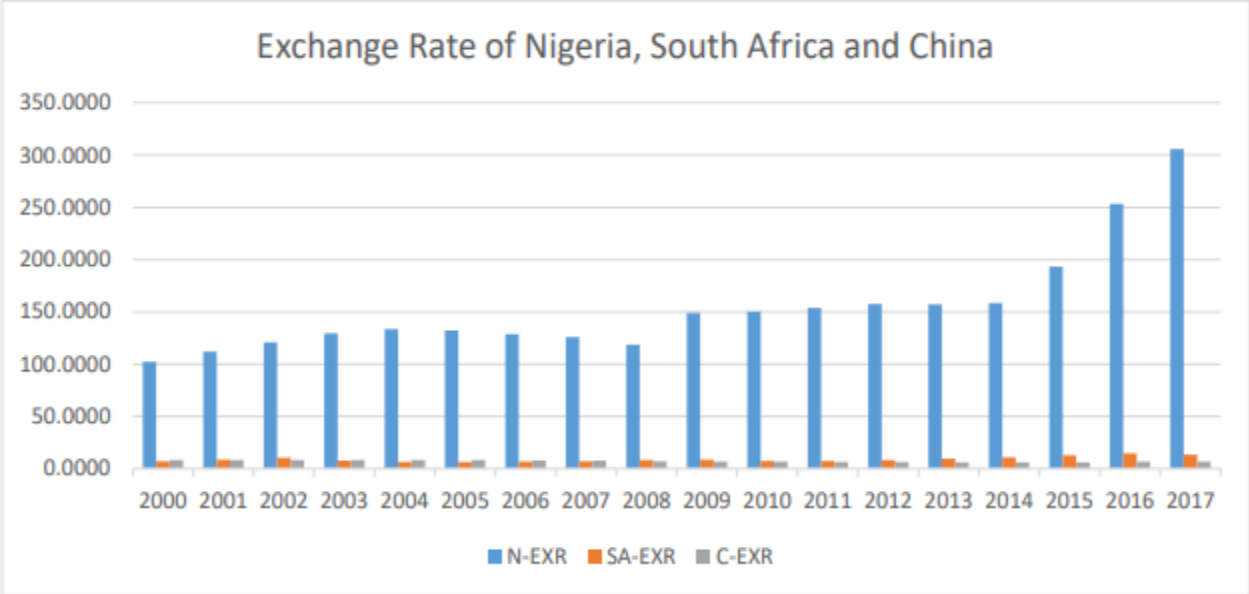
In an empirical investigation published in 2014, Adeniran, Yusuf, and Adeyemi used secondary data from the Central Bank of Nigeria Statistical Bulletin and correlation and regression analysis of the ordinary least square (OLS) as methods for data analysis. They looked at the impact of exchange rate fluctuations on Nigerian economic growth from 1986 to 2013.Their findings confirmed those of earlier studies that developing countries are generally better off when choosing flexible exchange rate regimes by showing that exchange rates have a favorable but not particularly significant impact on economic growth. Their findings also suggested that while inflation and interest rates are detrimental to economic growth, they are not particularly so. Using currency rates, Alasha (2020) looked at the relationship between exchange rate variations and how they affected the growth of the Nigerian economy.

According to Aiya (2014), currency devaluation is a macroeconomic fiscal strategy that focuses on a purposeful decline in the value of the domestic currency with the goal of maximizing gain in trade-able goods. If there is "fundamental imbalance" in a country's international payment situation, whether that the country's imbalance is caused by external sources or domestic developments or components. Devaluing a currency is a difficult decision that is made as a final option after several partial replacements have been used. Since currency values are mostly evaluated against the American "Dollar," a decline or appreciation in the dollar value of a foreign currency will have a significant impact on the value of another domestic currency when transacting internationally with that nation.

However, the absorption technique maintains that the elasticity is irrelevant and that the trade balance only improves if the country's Gross Domestic Product (GDP) grows faster than domestic consumption. The Babangida-led Administration of Nigeria was responsible for legally

introducing currency depreciation. The Structural Adjustment Programme (SAP) was put in place in 1986 with the goal of achieving a reasonable exchange rate for the naira, which at the time was seen to be overvalued. In order to encourage the diversification of indigenous products and exports, several Nigerian governments, most notably the Buhari-led administration, have shown interest in devaluing the Nigerian naira. However, the Nigerian government's policy framework and priorities have consistently encouraged importing activities while discouraging exports. The consequences of this approach made life challenging for the typical Nigerian. (Aiya, 2014).

The value of the Nigerian "Naira" in relation to the American "Dollar" has been rising steadily, and similar trends have been observed for the British "Pound Sterling," Swiss "Franc," and European "Euro". One of the main reasons significant importation operations deal directly with these nations is because the CFA Franc, China Yuan, and Japanese Yen have all maintained a steady exchange rate to the Naira.



Graphical Illustration

For instance, China's sudden devaluation of the Yuan, which began in August 2015 and reduced its value by more than 3%, shocked the global economy. Despite capital outflows and reserve losses, China's currency has increased 33% versus the US dollar since 2005, which is a significant increase. Therefore, in order to stabilize reserves, China's capital account had to be tightened, which was not unexpected given that stability had long been a top priority for the Chinese economy in global commerce. China continues to expand three times faster than the developed world, which is largely the result of greater GDP and income growth in China than in the West. China's devaluation process has improved their ability to compete on the global trade market and has turned them into a major exporter of goods.

Since the end of apartheid in 1994, the South African economy has been a vital component of the global economy, making it more vulnerable to exchange rate changes and providing excellent opportunities for trade (Jordaan & Netshitenzhe, 2015). In order to promote exports, South Africa needed to continuously improve its competitiveness, which was made clear in the policy documents of its National Development Plan (NDP). This was done in order to continue economic development, generate employment, and increase exportation operations. The struggle of the South African economy prompted discussions about depreciation, appreciation, or currency rate stabilization (Edwards & Garlick, 2007)

The Congress of South African Trade Unions is a proponent of the depreciation of the South African "Rand," arguing that a weaker rand makes South African export goods more competitive. The real effective exchange rate (REER) of South Africa fell by 36% between January 1990 and January 2014, underscoring the impact of currency rate depreciation on the country's ability to generate income from exports. In response to the rand's REER devaluation, South Africa's overall exports of manufactured goods, mining exports, and agricultural products are anticipated to rise (Jordaan & Netshitenzhe, 2015). However, it was noted that after 2001, the Rand's strength had a

detrimental impact on industrial output and potential exporting operations (Business Day, 2003). For instance, in Nigeria, the Naira exchange rate for the dollar climbed from 109.55 to 150.3 and then to 305.8 between 2000 and 2010 and 2017, respectively (IMF, 2018). Within the same time frame, the pounds, Euro, and Swiss Franc all had comparable value increases to the naira.

However, the exchange rates between the Chinese Yuan and the Japanese Yen and the Naira remain constant and low. According to CBN (2016), the exchange rate for the Japanese yen ranged from 0.9546 to 2.1357 from 2000 to 2016.

By maintaining a consistent low and single digit inflation rate in their economies and promoting exportation operations, the nations' inflation rates improved their standing on the global market. For instance, China's inflation rate ranged from 0.3 % in 2000 to 2.0 % in 2016, with the greatest rate of 5.9 % occurring in 2008 (IMF statistics, 2018). With its greatest inflation rate of 2.8 % in 2014, the Japanese inflation rate also showed -0.7 % in 2000 and 0.1 % in 2016. The inflation rate in South Africa was 5.3 % in 2016 and continued to swing up and down, reaching 6.3 %, with the year 2008 seeing the highest inflation rate of 11.5 %. The worldwide economic recession of 2008, which had an impact on South Africa's economy's cost of living and foreign trade operations, was the cause of this inflationary pressure (IMF data, 2018). However, the inflation rate in Nigeria is quite high, having doubled between 2000 and 2016 to reach 15.7 % from 6.9 % in 2000.

With the highest exportation income of $126,865,798,283 in 2011 for South Africa and $202,589,270,000 in 2000 for China, the export of goods and services with primary income increased for both countries from $36,995,346,355 in 2000 to $103,835,466,913 in 2017 at an average annual rate of 8.02 percent and $2,702,274,321,141 in 2014 at an average annual rate of 17.70 percent, respectively (IMF data, 2018). This demonstrates that, as a result of the declining

currency exchange rate to the dollar, the decline in the price of crude oil, the rise in inflation, and the high level of importation activities within the Nigerian economy in global trade, the commensurate increase experienced in South Africa and China completely lacks in the Nigerian factor. Nigeria's economy is very vulnerable to trade, and its continued reliance on imports is disastrous for its export-oriented operations. An important component of a nation's efforts to broaden its source of income and steer the economy toward expansion and economic advancement is the development of export revenue. In the same way that Ricardo noted that international commerce is extremely advantageous to a nation, it also plays a crucial part in the expansion of any economy. Economic literature refers to this as export led growth. According to Adenugba, Dipo, and Sheridan (2013) and 2014, export is a crucial catalyst for an economy's overall growth and an encouragement for growth. In a growing nation like Nigeria, increasing exports aids in maintaining a positive trade balance and, as a result, a positive balance of payments situation. As a result, domestic production capacity tends to increase, employment levels rise, unemployment rates decline, aggregate demand is strengthened, and domestic investment grows further as foreign profits rise as a result of export expansion (Omojolaibi, Mesagan & Adeyemi, 2015).

The best way to define the exportation sector of an economy is as those economic activities that involve exporting goods and services. This segment includes all transactions between citizens of one country and the rest of the world that involve the transfer of ownership of general merchandise, net exports of goods under merchant-like, non-monetary gold, and services from citizens to non-citizens. The following activities are included in this list: telecommunication services, tourism services (hotels, restaurants, parks, carnivals, movies, and health services), wholesale and retail trade, financial sector (banking and insurance) services, agricultural and mineral activities (products), trade, manufacturing activities (products), environmental services (cleaning, waste collection and recycling), ICT, etc (Adulagba, 2011 & Onwualu, 2012). The Nigerian economy

needs to diversify in order to reduce its reliance on crude oil exports as a main source of income and to create other non-oil sectors of the economy that can also generate export money from their exporting operations.

2.3.1 THE PURCHASING POWER PARITY THEORY

This theory states that the equal purchasing power of two non-convertible paper currencies determines the equilibrium rate of exchange. It means that the exchange rate between two non-convertible paper currencies is influenced by the domestic price levels of two nations. One of the earliest and possibly most well-known theories of exchange rates is the purchasing power parity (PPP) idea. This assumes that the exchange rate would be the same as the pertinent national price levels for two currencies. It makes the assumption that there are no trade restrictions, transaction costs, or purchasing power parity (PPP) (Obioma, 2000). While the relative version bases the equilibrium rate of exchange in the current period (R1) on the equilibrium rate of exchange in the base period (R1) and the ratio of the price indices of the current and base periods in one country to the ratio of the price indices of the c, the absolute version defines the rate of exchange as the ratio of the outlay required to buy a specific set of goods at home as compared to what it would buy in a foreign country. In this version, the purchasing power parity (PPP) doctrine equates the equilibrium exchange rate of the ratio of domestic to foreign price level (Lyon, 1992).

$$E\text{-}\frac{Pd}{PE}$$

E is the nominal exchange rate, which is expressed as the value of one domestic currency in terms of one foreign currency. If all the countries produced explicitly the same tradable commodities, then Pd is the foreign price, PE level with perfect efficiency and no trade barriers, and the purchasing power parity (PPP) doctrine would be equivalent to the application of the law of one price. It is crucial to be aware that the PPP plays a significant role in the monetary approach used to determine the equilibrium exchange rate between the two currencies (Gustaar Cassel 1998). It is frequently used in exchange rate analysis as a stand-in for the monetary model (CBN, 1998). The relevant version of PPP doctrine relates the equilibrium exchange rate to the product of the exchange rate in a base period and the ratio of the countries price indices (Argh, 1994). By definition, we have the relative purchasing power parity (PPP) as.

$$E - \frac{Pd}{PE} Ro$$

The amount of units of domestic currency for each unit of foreign currency is known as the real exchange rate, or Ro. The definition of the purchasing power parity theory. To align international comparisons on the assumption of some technological efficiency in all countries could be deceptive. Again the choice of the base year for the relative purchasing power parity (PPP) is often arbitrary. Finally, PPP is often presented as if causality runs from price level to exchange rate. Actual experiences are often more complicated when monetary/fiscal polices move, both causality could be quite exogenous or bi-directional.

2.3.2 THE ELASTICITY APPROACH

The elasticity approach recognizes devaluation as a tool for enhancing a nation's trade balance. They make it quite obvious that the impact of a devaluation depends only on how elastic exports and imports are. The elasticity strategy includes two The Marshall-Lerner (ML) condition and the Bickerdike-Robinson-Metzler (BRM) model are important models. When using both models to examine how responsively demand for imports and exports. An economy adopts devaluation. Model Bickerdike-Robinson-Metzler (BRM) support response of imports and exports to price changes brought on by consumer awareness devaluation. When the total of the price elasticity of the local and international demand for imports is more than one, only then will the exchange rate depreciation enhance the balance of payments situation. This occurs as a result of the substitution effects in consumption and production brought on by changes in the relative pricing of local and foreign goods brought on by the depreciation of the currency rate. When a nation devalues its currency, the cost of imports increases domestically and the cost of exporting decreases internationally. Thus, by raising exports and decreasing imports, devaluation helps a country's BOP imbalance. However, the country's price elasticity of internal demand for imports and international demand for exports will determine how successful it is. The Marshall-Lerner criterion argues that devaluation will enhance the nation's balance of payments when the total price elasticity of demand for exports and imports are larger than unity in absolute terms. i.e.

$$e_x + e_m > 1$$

When the demand elasticity for exports (ex) and imports (em) are different. Devaluation will aggravate (raise the deficit) the BOP, on the other hand, if the total of the price elasticity of the demand for exports and imports, in absolute terms, is less than unity i.e $e_x + e_m > 1$. Devaluation has no impact on the BOP scenario since $e_x + e_m = 1$ if the total of these elasticity is equal to unity

in absolute terms. The following is how the Marshall-Lerner condition works to eliminate a country's BOP deficit when it is depreciating its currency. Devaluation lowers local export prices relative to the foreign currency. Exports rise when prices decline. The export demand elasticity determines how much they will rise. Additionally, it relies on the type of exported commodities and the state of the market. The demand elasticity for the country's exports will be low if it is the sole provider and exports raw resources or perishable items.

The demand for its goods will be highly elastic if it exports machinery, tools, and industrial goods into competition with other nations, and devaluation will be effective in balancing a deficit. Devaluation also has the impact of raising import prices domestically, which lowers the amount of products imported. The demand elasticity of imports determines how much the amount of imports will decrease. In turn, the type of commodities bought by the nation depreciating its currency affects the demand elasticity of imports. Its need for imports will be less elastic if it buys consumer products, raw materials, and industrial inputs. Devaluation won't assist to rectify a balance of payments deficit unless import elasticity of demand is significant for the commodity in question. Devaluation will thus only improve the balance of payments of a country depreciating its currency if the total elasticity of demand for exports and imports is larger than one.

2.3.3 THE MONETARY APPROACH:

The balance of payments theory of exchange rate maintains that rate of exchange of the currency of one country with the other is determined by the factors which are autonomous of internal price level and money supply. It emphasizes that the rate of exchange is influenced, in a significant way, by the balance of payments position of a country. The entire balance of payments is

explained by the monetary approach to the balance of payments. Changes in the balance of payments are explained in terms of the supply and demand for money. A balance of payments deficit, in accordance with this strategy, "is always and everywhere a monetary phenomenon." Therefore, the only means of correction available is financial.

Given these presumptions, the monetary approach may be represented by the connection between the supply and demand for money as follows:

The relationship between income (Y), prices (P), and interest rates (i) and the demand for money (MD) is steady

$$Md = f (Y, P, I) =\ldots\ldots\ldots\ldots (1)$$

The monetary base (m), which comprises of local currency, is multiplied by the money supply (Ms) as well as the nation's foreign exchange reserves (R) ignoring m to keep things simple, which is a constant.

$$Ms = D + R \ldots\ldots\ldots\ldots\ldots\ldots (2)$$

Since the supply and demand of money are equal in an equilibrium,

$$Md = Ms \ldots\ldots\ldots\ldots\ldots\ldots\ldots (3)$$

$$\text{or } [Ms = D + R]\ Md = D + R \ldots\ldots(4)$$

Changes in the nation's foreign exchange reserves serve as a proxy for a balance of payments deficit or surplus. Therefore, Therefore,

$$\hat{I}" R = DMD - DD\ldots\ldots\ldots\ldots\ldots (5)$$

$$\text{Or } \hat{I}" R = B\ldots\ldots\ldots\ldots\ldots\ldots\ldots (6),$$

Where B indicates balance of payments and is equal to the difference between changes in domestic credit and changes in the demand for money (DMD) (DD).

If B is negative due to a balance of payments deficit, R and the money supply are both decreased. A surplus, however, denotes a positive B, which raises R and the money supply. When B = O, the BOP is in balance or not out of equilibrium.

Both fixed exchange rate systems and flexible exchange rate systems both provide an explanation for the automatic adjustment mechanism in monetary methods.

Assume MD = Ms under the fixed exchange rate system, resulting in BOP (or B) being zero. Imagine that the domestic money supply is increased but there is no change in the demand for money. Ms > M0 as a result, and a BOP deficit results. People with higher cash reserves make more purchases in order to purchase more international products and securities. They often increase in cost as a result, along with imports of products and foreign assets. As a result, the BOP's current and capital accounts experience an increase in spending, resulting in a deficit. The monetary authority will have to sell foreign exchange reserves and buy domestic currency in order to maintain a fixed exchange rate. R and the domestic money supply both decrease as a result of the withdrawal of foreign exchange reserves. This process will continue until Ms = MD, at which point BOP equilibrium will once more exist.

On the other hand, there will be a BOP surplus if Ms MD at the specified exchange rate. As a result, individuals get local money by offering commodities and assets to overseas buyers. Additionally, they'll want to accumulate more cash by limiting their spending in relation to their income. In return for home currency, the monetary authority will purchase extra foreign currency. Foreign exchange reserves will arrive, and the amount of domestic money supply will rise. Up till

Ms = MD, this procedure will continue and BOP balance will be recovered once more. Therefore, a BOP shortfall or surplus is a transient phenomenon that eventually corrects itself (or automatically).

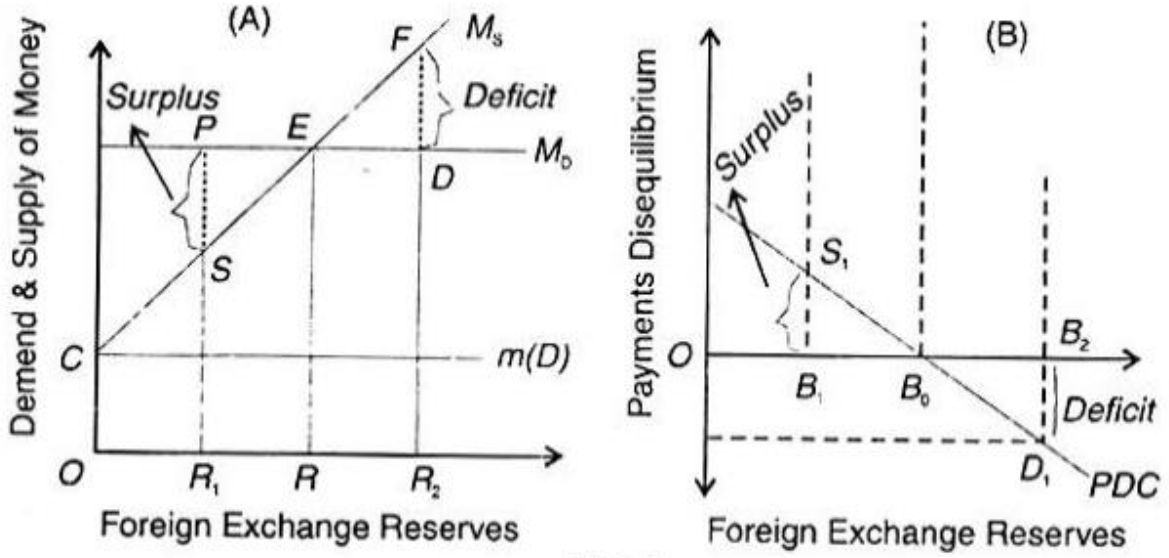


FIG. 4

Figure 4 explains this. The steady money demand curve (MD) and the money supply curve (MS) are depicted in Panel (A) of the figure. The monetary base, which is a multiple of domestic credit and a constant D, is shown by the horizontal line m (D). The MS Curve begins at point C since this is the domestic component of the money supply. At point E, where the country's balance of payments is in equilibrium and its foreign exchange reserves are OR, the ms and md curves intersect. PDC, or payments disequilibrium curve, is depicted in Panel (B) of the figure as the vertical difference between the Ms and MD curves of Panel (A). With no disequilibrium in the balance of payments, point B0 in Panel (B) corresponds to point E in Panel (A).

There is a BOP excess of SP in Panel if Ms M0 (A). It causes a rise in foreign exchange reserves from one OR to the next, increasing the money supply and bringing the BOP into equilibrium at point E. However, if Ms > M, there is a BOP deficit equal to DF. In order to restore BOP equilibrium at point $, there is an outflow of foreign currency reserves that fall from OR to

OR and diminish the money supply. In Panel (B) of the figure, the same procedure is shown, where BOP disequilibrium automatically corrects itself when B,S, surplus and B2D, deficit are equal.

When B = O, there is no change in foreign exchange reserves under a system of flexible (or floating) exchange rates (R). However, when there is a BOP deficit or surplus, changes in the demand for money and the exchange rate, rather than an influx or outflow of foreign exchange reserves, have a significant impact on the adjustment process. Let's say there is a BOP imbalance and the monetary authority raises the money supply (Ms > MD). People with larger financial reserves make more purchases, which drives up the cost of both local and international items.

The value of the local currency is declining while the exchange rate is rising. The increase in demand for money as a result of the price increase equalizes MD and Ms without any loss of foreign exchange reserves. When Md exceeds Ms, the reverse will occur: prices will drop and the local currency will appreciate, which will instantly reduce the excessive demand for money. Until MD = Ms and BOP are in equilibrium, the exchange rate declines without any input of foreign exchange reserves.

2.4 EMPERICAL REVIEW

Depreciation is a crucial component of the exchange rate situation that pushes the boundaries of better exporting and more income production. Different theories and approaches have been discussed to emphasize the impact of depreciation on export performance. For instance, the elasticity approach contends that the degree to which export volumes respond to or rise in response to currency depreciations depends on the elasticity of domestic supply of export goods and the elasticity of foreign demand for the country's exports. The quantitative responsiveness of desired products or services to price changes is known as the elasticity of demand. If export items have price elasticity, then demand will grow more than relative prices will drop, increasing overall export

earnings (Alemu & Jin-sang, 2014 and Jordaan & Netshitenzhe, 2015). As a result, the impact of a currency devaluation relies on how the economy functions However, it is believed that this theory is limited in that it only considers how export supply functions in terms of nominal prices as opposed to relative pricing (Ogundipe, Ojeaga & Ogundipe, 2013).

The absorption method, which claims that a depreciation of an exchange rate might affect exports in two ways, was made easier by addressing this theory's narrowness. First, a currency depreciation affects domestic purchases of goods and services (decreased absorption), which is known as the cash balance impact. This leads to a growth in exportable goods and services as well as a resource shift in favor of export production. This impact is plausible given that there is no capital mobility, the money supply is rigid, and investors prefer to hang onto their real cash holdings as prices increase. The idle resources impact is the second effect. If the increased output of marketable goods and services does not substantially increase the price of these items, then a currency depreciation can only enhance the exports of the devaluing country. For the sake of this research, we will concentrate on the Standard Trade Theory, which contends that a country's export performance is facilitated by a depreciation in its currency. This is because foreign customers divert their spending from their own goods and services to the less expensive imports as a result of devaluation, which makes domestic exports relatively cheaper to them (Appleyard, Field & Cobb, 2010).

According to Navaretti, Tybout, and De-(1997) Melo's study on the effects of currency devaluation on the Cameroonian economy, devaluation had a significant negative impact on businesses that were already engaged in trade. These businesses expanded their exports, whereas importing businesses saw rises in their manufacturing costs. Sibanda, Ncwadi, and Mlambo (2013) looked at how real exchange rates affected South Africa's economic development from 1994 to 2010. They evaluate how real exchange rates, real interest rates, money supply, gross fixed capital

creation, and trade openness affect GDP using Johansen cointegration and the vector error correction model. The study's findings demonstrate that interest rates, which also have an effect on GDP and the currency rate, are quite important. In Africa, Attah-Obeng, Enu, Osei-Gyimah, and Opoku (2013) looked into how the exchange rate affected Ghana's economic development from 1980 to 2012.

The results of the study showed that there is a link between exchange rate and GDP using descriptive analysis and the ordinary least square (OLS) regression approach, which is consistent with the hypothesis that devaluation increases economic development in the short run. Using the Johansson Cointegration test and ECM techniques of analysis, it was shown that the broad money supply, net exports, and total government expenditure have a significant impact on economic growth on the one hand, while the exchange rate has a direct and minimal impact on economic growth in Nigeria. This suggests that the devaluation of the currency rate throughout the SAP era had little to no impact on Nigeria's economic performance. Momodu and Akani (2016) used a multivariate study approach to examine how currency devaluation affects Nigeria's economic growth.

The findings of a multivariate integration test demonstrate that there is at least one integrating vector in the relationship between economic growth and the independent variables. Therefore, there is a long-term link between these factors. The outcome of the error correction mechanism shows that currency depreciation and other factors included in the model adequately account for short-term fluctuations in economic development. Thus, economic development and currency depreciation have strong short-term correlations. The analysis demonstrates that currency devaluation increases output and improves the balance of payments in the short run, but that in the long term the gain in output and improvement in the balance of payments are offset by an increase in prices. Imoughele

and Ismaila (2015) examine the influence of currency rates on non-oil exports in general by focusing on the 27-year period between 1986 and 2013

. The growth of non-oil export in the Nigerian economy was found to be significantly influenced by the effective exchange rate, money supply, credit to the private sector, and economic performance using the Augmented Dickey-Fuller (ADF), Johansen's co-integration test, and Ordinary Least Square statistical technique. In contrast, appreciation of the exchange rate had a negative impact on non-oil export, which is consistent with economic theory.

Okoroafor and Adeniji (2017), Using a vector error correction model, studied currency depreciation and macroeconomic factors in Nigeria from 1986 to 2016. The outcome showed that exchange rate depreciation had a significant and favorable influence on the macroeconomic variables examined, including Nigeria's economic growth. Real gross domestic product (RGDP), one period lag of exchange rate devaluation, money supply, external reserve, interest rate, and balance of payments all responded favorably to shocks brought on by exchange rate devaluation in the economy, while inflation, trade openness, and non-oil exports responded adversely, according to the impulse response result. While exchange rate depreciation had a notable and increasing influence on the balance of payments, its effects on non-oil export were found to be negative, which is consistent with the results of other research.

The impact of exchange rate changes on real production growth in Nigeria from 1986 to 2010 is examined by Akpan and Atan (2012). It was determined using the Generalized Method of Moments (GMM) approach that there is no substantial direct correlation between exchange rate fluctuations and production growth. Instead, monetary factors have had a direct impact on Nigeria's economic growth Akindiyo and Olawole (2015) used secondary sources of data to analyze the depreciation of the Nigerian naira in a quantitative manner and found that devaluation is more detrimental to

Nigeria than beneficial. Devaluation/depreciation does not improve the trade balance, according to Loto (2011)'s further investigation of devaluation in Nigeria. The Marshall-Lerner condition does not hold because the sum of demand elasticity for imports and exports is less than unity, which means that devaluation/depreciation does not improve the trade balance. Fu (2017) looks at how the exchange rate influences the expansion of the Chinese economy. Using quarterly data from 1994 to 2016 and the Granger Causality test technique, the paper evaluates the transmission mechanism of the RMB real effective exchange rate on the impact of Chinese import, export, and foreign direct investment. The test revealed that the strengthening of the RMB had a detrimental impact on the expansion of the Chinese economy. Genye (2011) uses time series data from 1980 to 2010 to examine the impact of devaluation on GDP per capita growth in Ethiopia.

The study used factors including education, private investment, and openness to estimate the increase of Ethiopia's GDP per capita. According to the study, devaluation has a short-term negative impact on GDP per capita while having a longer-term beneficial impact on the coefficient for the lagged exchange rate. Acharya (2010) examine the probable effects of the depreciation of Nepalese currency. The study offered proof that devaluation would raise import costs and cause the agricultural and manufacturing sectors to produce more goods for export. As a result, the analysis found that the growth in industrial sector production and the steady rise in agricultural exports will lead to an increase in overall GDP.

Ahmed, Wu, Rehman, and Ahmed (2015) look at how currency rate depreciation affects Pakistani economic and commercial growth. The study finds that exchange rate depreciation has adversely affected growth in the business sector, particularly Investment and FDI, while net export has a positive association with the exchange rate, using time series data from 1976 to 2010 and employing integration followed by the Error Correction Model. All of these data indicate that depreciation is a bad practice since it hinders business sector growth. By utilizing cutting-edge

econometric techniques like the ARDL (Autoregressive distributed lag model), the study adds to the body of current work. The analysis essentially confirmed the long-term link between the trade balance, currency depreciation, and foreign debt. The lack of a J-curve in the instance of Pakistan is indicated by the real effective exchange rate's negative coefficient. The findings unambiguously show that a devaluation will negatively impact Pakistan's trade balance.

Watter (2015) investigated the effects of the naira devaluation and concluded that if significant imports are produced locally, the effects will be less severe. Adekoya and Fagbohun (2016) used the Augmented Dickey-Fuller stationarity test, Engel-Granger co-integration for the long-run relationship, ordinary least square for the long-run estimate, and Granger causality test for causal relationships to examine the effects of currency devaluation on manufacturing output growth in Nigeria between 1980 and 2014. The outcome showed that all the variables have a long-run connection and are stationary at I. It also demonstrated that every factor—aside from import—has a favorable impact on the expansion of industrial output.

The performance of economic growth through the trade channel has been strongly impacted by the short- and long-term unfavorable effects of exchange rate changes, according to empirical research. However, the effect's nature runs either in a positive or negative direction. IMF (1994) and the European Commission claim (1990), the impact of exchange rate stability on commerce (and therefore growth). The framework of gravity models has been used to quantify the impact of trade and growth on exchange rate stability. There is evidence that higher growth in the EMU is correlated with the ability of exchange rates periphery.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 INTRODUCTION

The methods used to achieve the study's goals is the main topic of this chapter. Theoretical difficulties and other methodological concerns related to the analysis of the study are examined in length. It includes the estimating approach, the model specification, the definition and measurement of variables and their sources. The choice of which independent variables should be included or deleted from a regression equation is referred to as model specification. In general, rather than empirical or methodological factors, the specification of a regression model should be based primarily on theoretical considerations. A multiple regression model is a theoretical statement regarding the relationship between one or more independent variables and one or more dependent variables. Indeed, regression analysis requires three independent stages: the specification of a model, the estimation of the model's parameters, and the interpretation of these parameters. The first and most important stage is specification.

3.2 THEORETICAL FRAMEWORK

The elasticity approach recognizes devaluation as a tool for enhancing a nation's trade balance. They make it quite apparent that the effect of a devaluation depends only on how elastic exports and imports are. The Bickerdike-Robinson-Metzler (BRM) model and the Marshall-Lerner (ML) condition are two important models that are included in the elasticity method. The responsiveness of the demand for imports and exports to the adoption of devaluation in an economy is being studied using both models. The Bickerdike-Robinson-Metzler (BRM) model demonstrates

how imports and exports respond to price fluctuations brought on by devaluation awareness. An economy adopts devaluation. Model Bickerdike-Robinson-Metzler (BRM) support response of imports and exports to price changes brought on by consumer awareness devaluation. Le Khak, (cited in Ankara in 2015). When the total of the price elasticity of the local and international demand for imports is more than one, only then will the exchange rate depreciation enhance the balance of payments situation. This occurs as a result of the substitution effects in consumption and production brought on by changes in the relative pricing of local and foreign goods brought on by the depreciation of the currency rate. When a nation devalues its currency, the cost of imports increases domestically and the cost of exporting decreases internationally. Thus, by raising exports and decreasing imports, devaluation helps a country's BOP imbalance.

The BRM models have the following assumptions: there is free commerce in the economy, initial market equilibrium, and only two nations and two commodities are included. Le Khak asserts that the model is best represented as follows:

$$\frac{dB}{dE} = (px\chi s\mathrm{I}(1+\varepsilon)\eta^{*} / (\varepsilon+\eta^{*})\mathrm{I}) - (pmMd\mathrm{I}(1+\eta)\varepsilon^{*}/\varepsilon^{*}+\eta\mathrm{I})$$

Where dB = derivative of trade balance, dE = derivative of nominal exchange rate, Px = export price and Pm = import price, Xs and Md = domestic supply and demand for export and import. ε and η = absolute values of elasticity of domestic demand for export and import ε* and η*= foreign price elasticity of export and import demand. The model demonstrated that changes in the exchange rate have an impact on the trade balance depending on the levels of domestic supply and demand's price elasticity. If $|\varepsilon| > |\eta|$.

Following the implementation of a devaluation, trade and the balance of payments improve when the absolute value price elasticity of export supply is larger than that of import demand, and

the opposite is also true (Ankara 2015).The Marshall-Lerner condition, commonly known as the BRM condition, which argues that in order for countries to benefit from the beneficial effect of devaluation, the absolute values of the sum of demand elasticity for exports and imports must be larger than unity (greater than 1) . Ogundipe, Ojeage, and Ogundipe (2013)

3.3 MODEL SPECIFICATION

MODEL I

The model will be used to capture these objectives.

$$GDP = F(RER, INT, DOP)$$

Objective 1: Using the econometric model, which is given as;

$$GDP = \beta_0 + \beta_1 RER + \beta_2 INT + \beta_3 DOP + \mu$$

Where: RER = Real exchange rate.

INT = Interest rate.

DOP = Degree of trade openness = $\frac{EXP - IMP}{GDP}$

GDP = Gross domestic product.

μ = The stochastic error term.

Real exchange rate, Interest rate, Degree of trade openness, are the independent variables changing the dependent variables. While Gross domestic product is the dependent variable,

β_0 is the intercept parameter and $\beta_1, \beta_2 and \beta_3$ are coefficient of the variables.

MODEL II

The model will be used to capture these objectives.

Objective 2: The functional form is shown as

$$EXP = F(RER, INT, INFL)$$

To estimate the above equation, equation 2 is written into econometric form as

$$EXP = \alpha_0 + \alpha_1 RER + \alpha_2 INT + \alpha_3 INFL + \mu$$

Where EXP = Export

RER = Real exchange rate

INT = Interest rate

INFL = Inflation rate

μ = Error term

The apriori: $\alpha_0 > 0, \alpha_1 < 0, \alpha_2 < 0, \alpha_3 < 0$

3.4 ESTIMATION TECHNIQUES

For this study, we'll use the econometric simulation method with a single equation. The dependent and independent variables' determinants, as well as the previous expectation of the independent variables, are included in the model specification parameters of the functions' signs and sizes, the functional form of the model, the equation's mathematical form. The traditional least-squares regression model will be used as the model in this analysis to be employed (OLS). This approach, is projected based on the fundamental characteristics of OLS.

The basic idea is to determine the relation between growth and exchange rate while allowing for other key macroeconomic influences on both variables.

3.5 NATURE AND SOURCES OF DATA

Secondary data was employed in this study, and it came from the following reports and bulletins:

i. Central bank of Nigeria (CBN).

ii. World bank development indicators (wdi)

iii. National Bureau of statistic

CHAPTER FOUR

PRESENTATION AND ANALYSIS OF DATA

4.1 INTRODUCTION

This chapter focuses on data presentation, data analysis, evaluation, and analytical conclusion. It is concerned with the process of doing an overall analysis of all the information gathered and examined, as well as determining its credibility by interpreting or applying findings.

4.2 PRESENTATION OF RESULTS

Two models were estimated in this research work based on the topic discussed. The models were estimated using the ordinary least square method (OLS) method. The results of the model are presented below as thus:

4.2.1 OLS Regression Table For Model 1

MODEL 1

Dependent Variable: INRGDP
Method: Least Squares
Date: 08/20/22 Time: 23:47
Sample: 1980 2020
Included observations: 41

Variable	Coefficient	Std. Error	t-Statistic	Prob.
INEXR	0.418025	0.033939	12.31679	0.0000
RIR	-0.001802	0.003778	-0.476943	0.6362
INDOP	-0.743066	0.132728	-5.598417	0.0000
C	13.93720	0.385652	36.13931	0.0000

R-squared	0.840438	Mean dependent var	12.90294
Adjusted R-squared	0.827501	S.D. dependent var	0.734829
S.E. of regression	0.305197	Akaike info criterion	0.556748
Sum squared resid	3.446369	Schwarz criterion	0.723926
Log likelihood	-7.413335	Hannan-Quinn criter.	0.617625
F-statistic	64.96158	Durbin-Watson stat	0.727782
Prob(F-statistic)	0.000000		

Source: Author's computation using E-views 10 software

4.2.2 OLS Regression Table For Model 2

MODEL 2

Dependent Variable: INEXPT
Method: Least Squares
Date: 08/20/22 Time: 23:51
Sample: 1980 2020
Included observations: 41

Variable	Coefficient	Std. Error	t-Statistic	Prob.
INEXR	0.145640	0.037932	3.839506	0.0005
ININFL	0.040869	0.122205	0.334427	0.7399
RIR	-0.001790	0.006389	-0.280182	0.7809
C	2.222577	0.341477	6.508712	0.0000

R-squared	0.317673	Mean dependent var	2.848852
Adjusted R-squared	0.262349	S.D. dependent var	0.517154
S.E. of regression	0.444166	Akaike info criterion	1.307231
Sum squared resid	7.299488	Schwarz criterion	1.474409
Log likelihood	-22.79824	Hannan-Quinn criter.	1.368108
F-statistic	5.742068	Durbin-Watson stat	0.821249
Prob(F-statistic)	0.002493		

Source: Author's computation using E-views 10 software

4.3 RESULT INTERPRETION

4.3.1 ANALYSIS OF RESULTS BASED ON ECONOMIC CRITERIA

Model 1

The above result in terms of coefficients of regression can be interpreted as follows:

The intercept of Real Gross Domestic Products when all other explanatory variables are held constant is 13.93720

EXCHANGE RATE (EXR)

Exchange rate has a positive coefficient of 0.418025. This indicates that Exchange rate has a positive relationship with RGDP, showing that a unit increase in Exchange rate (EXR) will increase RGDP by 0.418025

REAL INTEREST RATE (RIR)

The coefficient has a negative of -0.001802. Which means that there is a negative relationship between real interest rate and RGDP, showing that with a unit increase in real interest rate (RIR) RGDP will decrease by -0.001802.

DEGREE OF OPENESS (DOP)

The coefficient is -0.743066. This shows that there is a negative relationship between degree of openness and RGDP, showing that a unit increase in DOP will reduce RGDP by -0.743066.

MODEL 2

The intercept of Export trade when all other explanatory variables are held constant is 2.22257

EXCHANGE RATE (EXR)

Exchange rate has a positive coefficient of 0.145640. This indicates that Exchange rate has a positive relationship with Export rate, showing that a unit increase in Exchange rate (EXR) will increase Export rate by 0.145640.

INFLATION RATE (INFL)

The coefficient is 0.040869 meaning that there is a positive relationship between inflation rate and Export rate, showing that with a unit increase in inflation rate the Export rate increases by 0.040869

REAL INTEREST RATE (RIR)

The coefficient is -0.001790. This indicates a negative relationship between real interest rate (RER) and Export rate, showing that with a unit increase in RIR Export rate increases by

-0.001790

4.3.2 ANALYSIS BASED ON STATISTICAL CRITERIA

4.3.2.1 The R^2 (coefficient of determination)

In our model, model 1 has R^2 of 0.840438, which implied that about 84% of the variation in real GDP is explained by the independent variable (Exchange rate, interest rate, degree of openness). In model 2, R^2 is 0.317673, which implies that about 32% of the variation in Export rate is explained by the independent variable (Exchange rate, interest rate and inflation rate).

4.3.2.2 The T-test (Student T test) statistics

The t-test are used to test if the independent variables are statistically significant to the dependent variables. Under n-k degrees of freedom at 5% level of significance,

Test Hypothesis

H_0: $B_1=0$ (The parameter is statistically insignificant)

H_1: $B_1 \neq 0$ (The parameter is statistically significant).

Decision rule

Reject H_0 if t-cal> t-tab

Accept H_0 if otherwise

From our data n=41 and K =4

Therefore d.f = n-k=41-4=37 for model 1 and 2

Critical tabulated at 0.05 significance level is equal to 2.021

Table 4.3.2.2.1 T-stat table for model 1

MODEL 1

Variable	T-calculated	T- tabulated	Decision	Conclusion
EXR	12.31679	± 2.021	Reject H_0	Significant
RIR	-0.476943	± 2.021	Accept H_0	Not Significant
DOP	-5.598417	± 2.021	Reject H_0	Significant

Source: Author's computation using E-views 10 software

4.3.2.2.2 T-stat table for model 2

MODEL 2

Variable	T-calculated	T- tabulated	Decision	Conclusion
EXR	3.839506	± 2.021	Reject H_0	Significant
INFL	0.334927	± 2.021	Accept H_0	Not Significant
RIR	-0.280187	± 2.021	Accept H_0	Not Significant

Source: Author's computation using E-views 10 software

4.3.2.3 The F- statistics Test

The Test is carried out to determine if the independent variables in the model are simultaneously significant or not it has K-1 degree of freedom in the numerator and n-k degree of freedom in the denominator. Hence, the analysis shall be carried out under the hypothesis below:

H_0:X_1=X_2=X_3=0 (The model is insignificant)

H_1:X_1≠ X_2≠X_3≠0 (The model is significant)

Decision Rule

Reject H_0 if f-cal> f- tab otherwise accept H_0

V_1=K-1=4-1=3 (numerator)

V_2=n-k=41-4=37 (denominator) (model 1 and 2)

MODEL 1 below analysis the result

Table 4.3.2.3.1 F-stat table for model 1

F-calculated	F-tabulated	Decision rule
64.96158	4.31	Reject H_0

Source: Author's computation using E-views 10 software

From the result, since F-cal > f-tab (i.e 64.96158 >4.31), We therefore reject the null hypothesis H_0 and accept the alternative hypothesis H_1 and conclude that at 5% level of significance the overall regression is statistically significant.

MODEL 2 below analysis the result

Table 4.3.2.3.2 F-stat table for model 2

F-calculated	F-tabulated	Decision rule
5.742068	4.31	Reject H_0

Source: Author's computation using E-views 10 software

From the result, since F-cal > f-tab (i.e 5.742068>4.31). We therefore reject the null hypothesis H_0 and accept the alternative hypothesis H_1 and conclude that at 5% level of significance the overall regression is statistically significant.

4.3.3 ANALYSIS BASED ON ECONOMETRIC CRITERIA

4.3.3.1 (2nd Order Test)

This test is at ascertaining if autocorrelation occurred in the model. To achieve this, we assume that the values of the random variables are temporarily independent by employing the technique of dubin- Watson (d) statistics.

Decision rule

Null Hypothesis (Ho)	Decision	If
No positive autocorrelation	Reject	$0 < d < du$
No positive autocorrelation	No decision	$DL \leq d \leq du$
No negative autocorrelation	Reject	$4 - dL < d \leq 4$

No negative autocorrelation	No decision	$4 - du \leq d \leq 4\text{-}dL$
autocorrelation (positive or negative)	Do not reject	$Du < d < 4 \leq dL$

Source: Author's computation using E-views 10 software

Where:

dL = lower unit

du = upper unit

d = durbin Watson calculated

From Durbin-Watson table

MODEL 1	MODEL 2
dL= 1.336	dL= 1.336
du= 1.720	du= 1.720
d^*= 0.727782	d^*= 0.821249

Decision rule

MODEL 1: $0< d^*< dL$

$0<0.727782 <1.336$

MODEL 2: $0< d^*< dL$

$0<0.821249 <1.336$

Conclusion

The durbin-Watson test shows that there is no positive autocorrelation in the two models. Therefore, we reject the null hypothesis for the two models.

4.3.3.2 NORMALITY TEST

This test is carried out to test if the error term follows normal distribution. It is done using the Jarque-Bera statistic which follows chi-square distribution with 3 degrees of freedom at 5% level of significance

Test Hypothesis

Ho: ei = 0 (The error term is normally distributed)

H1: ei ≠ 0 (The error term is not normally distributed).

a = 5% (0.05 significant level)

Decision Rule

Reject Ho if X^2 cal > X^2 tab otherwise accept Ho

From the result, obtained from Jarque-Bera test of normality, for model 1

(JB) = 1.270800

That is X^2 cal = 1.270800

X^2 tab = 7.815

Conclusion: We accept and conclude that the error term is normally distributed since X^2 cal < X^2 tab i.e. (1.270800 < 7.815).

From the result, obtained from Jarque-Bera test of normality, for model 2

(JB) = 0.048339

That is X^2 cal =0.048339

X^2 tab = 7.815

Conclusion: We accept and conclude that the error term is normally distributed since X^2 cal < X^2 tab i.e. (0.048339 < 7.815).

4.3.3.3 HETEROSCEDASTICITY TEST

This test is carried out to test if the error term has a constant variance. The test follows chi-square distribution with degrees of freedom equal to the number of regressions in the auxiliary heteroscedasticity regression, excluding the error term.

Test Hypothesis

Ho: Homoscedasticity (The variance is constant)

H1: Heteroscedasticity (the variance is not constant)

Decision rule

Reject Ho if X^2 cal > X^2 tab otherwise accept Ho.

From the heteroscedasticity test result X^2 cal = 198.179 and X^2 tab = 55.758

From the result, X^2 cal > X^2– tab (i.e., 198.179 > 55.758)

therefore, reject the null hypothesis of homoscedasticity and accept the alternative hypothesis of heteroscedasticity showing that error term has a constant variance.

4.3.3.4 MULTICOLLINEARITY TEST

Multicollinearity means the existence of a perfect linear relationship among the explanatory variable of a regression model.

4.3.3.4.1 Multicollinearity Table

	INRGDP	INT	ININFL	INEXR	INEXPT	INDOP
INRGDP	1.000000	0.377337	-0.185149	0.839575	0.167345	0.276523
INT	0.377337	1.000000	-0.514108	0.428234	0.173037	0.187842
ININFL	-0.185149	-0.514108	1.000000	-0.102545	0.019106	-0.011038
INEXR	0.839575	0.428234	-0.102545	1.000000	0.557093	0.658275
INEXPT	0.167345	0.173037	0.019106	0.557093	1.000000	0.963424
INDOP	0.276523	0.187842	-0.011038	0.658275	0.963424	1.000000

Source: Author's computation using E-views 10 software

Decision Rule

From the rule of thumb, if correlation coefficient is greater than 0.8, we conclude that there is multicollinearity but if the correlation coefficient is less than 0.8, there is no multicollinearity

Conclusion: Multicollinearity exist only between

RGDP AND EXR

EXPT AND DOP

4.4 EVALUATION OF THE RESEARCH HYPOTHESIS

The research hypothesis stated in chapter one as

Hypothesis 1

Ho: There is no causality effect of the Nigerian exchange rate fluctuation on the Nigerian economic growth

Hi : There is causality effect of the Nigerian exchange rate fluctuation on the Nigerian economic growth

Hypothesis 2

Ho: There is no significant relationship between currency rate and Nigerian export

Hi : There is significant relationship between currency rate and the Nigerian export

Hypothesis 3

Ho: There is no significant relationship between inflation rate and economic growth in Nigeria.

H1: There is significant relationship between inflation rate and economic growth in Nigeria.

CONCLUSION

From the results and analysis so far, we see that EXR has a positive impact on RGDP. The T- test showed that the impact of EXR on RGDP is significant. Also, inflation rate does not have a significant impact on RGDP meaning that inflation rate does not have a significant effect on RGDP

with the t-test of model 1 and model 2. Therefore, for hypothesis 1 we accept H_1 which states that There is causality effect of the Nigerian exchange rate fluctuation on the Nigerian economic growth, for hypothesis 2 we will accept H_0 which states that There is no significant relationship between currency rate and Nigerian export hypothesis 3 we accept H_0 which postulates that There is no significant relationship between inflation rate and economic growth in Nigeria.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND POLICY RECOMMENDATION

5.1 SUMMARY OF FINDINGS

The purpose of this research is to focus on the topic of currency rates and its impact on economic growth in Nigeria. This study looked at two models empirically. The first model experimentally explored the impact of variables such as the real exchange rate (EXR), real interest rate (INT), and degree of trade openness (DOP) on the economy's GDP. The second model experimentally explored the impact of variables such as the real exchange rate (EXR), real interest rate (RIR), and inflation rate (INF) on the economy's export rate. All secondary data used were obtained from the CBN and WDI statistical bulletins. According to model I, the real exchange rate has a positive effect on GDP, the interest rate has a negative effect on GDP, and the degree of trade openness has a negative effect on GDP. According to model II, the inflation rate has a positive impact on export (EXPT), the real exchange rate EXR has a positive impact on EXPT, and the real interest rate RIR has a negative impact on EXPT. We reject the null hypothesis in both models of autocorrelation.

The estimators are well specified and have a constant variance. corelation exists solely between the real exchange rate (EXR) and the RGDP, EXPT, and DOP. According to the empirical work reviewed, some authors contend that the exchange rate is positively associated to production growth, while others contend that it is negatively related. However, the study's empirical research revealed that the exchange rate is positively associated to output growth.

5.2. CONCLUSION

As a result of this research on the implications of exchange rate determination on economic growth, there is a need to keep the exchange rate steady. Using time series data from 1980 to 2020, I assessed the effect of exchange rate stability on Nigerian export performance. Our findings indicate that exchange rate stability has an impact on export trade performance. According to the study, if exporters are sufficiently risk averse, an increase in the exchange rate enhances the marginal utility of export revenue, prompting them to boost exports. A stable exchange rate will aid in lowering inflation, increasing exports, maintaining a positive trade balance, resolving deficit issues, and increasing the economy's external reserves.

5.3 POLICY RECOMMENDATIONS

Based on the study's findings, I made the following policy recommendations to maintain a stable exchange rate. These measures must be undertaken in order to keep the exchange rate under control.

1. Small-scale enterprises should be given incentives, like as loan subsidies, to motivate them to process domestic items into commodities that will assist boost our exports.

2. To maintain a trade surplus, the government should promote export oriented initiatives.

3. An effective policy based on fiscal and monetary policies should be devised with the vision of attaining a sustainable rate of exchange for the naira.

4. To persuade international investors to make investments in Nigeria, a proper environment and social infrastructure should be given. This will improve work prospects, as well as income and living standards.

5. To aid in the selection of a suitable exchange rate value, strict foreign exchange control rules should be enacted. This will aid in the strengthening of the naira.

6. Tariffs on imported goods might be particularly high in the case of imports, discouraging imports.

7. It is strongly advised that policymakers ensure that the exchange rate rate is set by the forces of demand and supply since exchange rate liberalization is crucial for promoting commerce in any economy.

9. Finally, the government should exert influence over the foreign currency rate by implementing constructive economic reforms that offset the detrimental impact of a volatile exchange rate on the Nigerian economy from the perspective of trade flow and export.

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