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THE EFFECT OF EXCHANGE RATE VARIATION ON THE NIGERIA ECONOMIC INSTABILITY FOR A PERIOD OF 1986-2017 (A CASE STUDY OF NIGERIA STOCK EXCHANGE AND CENTRAL BANK OF NIGERIA)

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Abstract

This research work investigated the effect of exchange rate variation on Nigeria economic instability for the period of 1986 to 2017. A secondary source of data were employed in this work from the Central Bank of Nigeria Statistical Bulletin. Maximum Likelihood estimation from the R-software was carried out to evaluate the parameter estimate of the multiple regression coefficients and analyzed the influence of the explanatory variables (Gross Domestic Product, Unemployment and Inflation on the dependent variable (Exchange rate). The result revealed that Gross Domestic Product and Unemployment rate had negative effect on the Exchange rate but significant with (β = -1.646, t = -2.409, sig.val = 0.0228) and [redacted] (β = - 0.8602, t = - 3.302, sig.val = 0.00263) respectively. Also that Inflation rate has positive effect on the Exchange rate but not significant with (β = 1.311, t = 0.852, sig.val = 0.40122). The Coefficient of determination (R^2 = 82.7) implies that exchange rate variation has effect on the Nigeria economy instability

KEYWORDS: *Economic instability, Exchange rate, Gross Domestic Product, Inflation*

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from 1986-2017. Therefore, the paper recommended that the Government should endeavor to control the rising rate of inflation inorder to have a stabilized exchange rate and a promising economy for the citizens, government should encourage the export promotion strategies in order to maintain a surplus balance of trade, adequate security, effective fiscal and monetary policies, as well as the provision of infrastructural facilities so that foreign investors will be attracted to invest in Nigeria.

INTRODUCTION

BACKGROUND TO THE STUDY

Exchange rate is the price of one country's currency expressed in terms of some other currency. It determines the relative prices of domestic and foreign goods, as well as the strength of external sector participation in the international trade. Exchange rate regime and interest rate remain important issues of discourse in the International finance as well as in developing nations, with more economies embracing trade liberalization as a prerequisite for economic growth (Obansa, Okoroafor, Aluko and Millicent, 2013). In Nigeria, exchange rate has changed within the time frame from regulated to deregulated regimes. Ewa, (2011) agreed that the exchange rate of the naira was relatively stable between 1973 and 1979 during the oil boom era and when agricultural products accounted for more than 70% of the nation's gross domestic products (GDP). In 1986 when Federal government adopted Structural Adjustment Policy (SAP) the country moved from a peg regime to a flexible exchange rate regime where exchange rate is left completely to be determined by market forces but rather the prevailing system is managed whereby monetary authorities intervene periodically in the foreign exchange market in order to attain some strategic objectives (Mordi, 2006). This inconsistency in policies and lack of continuity in exchange rate policies aggregated unstable nature of the naira rate (Gbosi, 2005).

Benson and Victor, (2012) and Aliyu, (2011) noted that despite various efforts by the government to maintain a stable exchange rate, the naira has depreciated throughout the 80's to date. Aliyu (2011) noted that macroeconomic indicator is a piece of economic data that is used by analysts to interpret current or future investment possibilities or to judge the overall health of an economy. These indicators can be anything the investor chooses, but specific pieces of data released by government and non-profit organizations have become widely followed. Such indicators include but aren't limited to: the consumer price index (CPI), gross domestic product (GDP), unemployment figures and the price of crude oil.

However, macroeconomic indicators are key statistics that indicate the direction of an economy. While the indicators can be numerous, there are three broad categories of macroeconomic indicators: leading indicators, coincident indicators and lagging indicators.

Leading indicators, such as consumer durables, net business formations and share prices, are used to predict the future movements of an economy. Coincident indicators, which include such things as GDP, employment levels and retail sales, are seen with the occurrence of specific economic activities. Finally, lagging indicators, such as gross national product (GNP), CPI, unemployment rates and interest rates, are only seen after a specific economic activity occurs. Most of these macroeconomic indicators have a specific schedule for release, allowing investors to prepare for and plan on seeing certain information at certain times of the month and year.

Mordi (2006) noted that indicators provide signs along the road, but the best investors utilize many economic indicators, combining them to glean insight into looking patterns and verifications within multiple sets of data.

Macroeconomic indicators are often combined to produce a composite view of economic performance. For example, the state of Florida, on July 11, 2016, released an analysis on its macroeconomic indicators for the month of May 2016. The analysis consisted of its CPI, employment levels, unemployment insurance, unemployment rate, real estate and housing price index. This research study intends to investigate the effect of exchange rate variation on the Nigeria economic instability for a period of 1986-2017 with the research hypothesis. **Ho:** exchange rate variation has no effect on the Nigeria economic instability from 1986-2017

STATEMENT OF THE PROBLEM

Previous researches on the effect of exchange rate fluctuation have been posited towards economic growth in Nigeria thereby identifying the significant effect of exchange rate fluctuation on the economy, for instance, Asher (2012) examined the impact of exchange rate fluctuation on the Nigeria economic growth for period of 1980 – 2010. The result showed that real exchange rate has a positive effect on the economic growth. In a similar study, Akpan (2008) investigated foreign exchange market and economic growth in an emerging petroleum based economy from 1970-2003 in Nigeria. He found that positive relationship exists between exchange rate and economic growth.

However, past studies also showed that exchange rate has no significant effect on economic growth performance. Ubok-udom (1999) examined the issues surrounding the implementation of SAP in Nigeria, and drew up a conclusion that the peculiar features of Nigerian economy reduced the efficacy of currency depreciation in producing desirable effects. From the study of the relationship between exchange rate variation and growth of the domestic output in Nigeria (1971-1995); he expressed growth of domestic output as a linear function of variations in the average nominal exchange rate. He further used dummy variables to capture the periods of currency depreciation. The empirical result showed that all coefficients of the major explanatory variables have negative signs. David, Umeh and Ameh (2010) also examined the effect of exchange rate fluctuations on Nigerian manufacturing industry. They employed multiple regression econometric tools which revealed a negative relationship between exchange rate volatility and manufacturing sector performance. However due to different results posited by different researchers, this research work is aimed at investigating the effect of some macro-economic indicators (Inflation rate, Gross Domestic Product, and Unemployment rate) on exchange rate variations on the Nigeria economic growth for a period of 1987-2017.

Ho: exchange rate has no effect on the Nigeria economic instability from 1986-2017

NIGERIAN ECONOMY

The Nigerian economy as generally described is a developing nation with over 200 million people with different ethnic group is been faced from the onset with the problem of economic instability. According to the Oxford dictionary (6^{th} edition) defined instability as a situation in which things are likely to change or fails suddenly. Before the discovery, exploration and exportation of oils in the late 1960's and early 1970's the Nigeria economy was purely agrarian. Agriculture was the major sources of employment for more than 70% of the population and the major source of foreign exchange. However with the advent of oil came the neglects of agriculture as a result of lack of visionary leaders and this worsened the state of the economic situation putting the economic in total disarray and a dependent nation on others. The economy became a mono-product economy and oil became the main stay of the economy providing more than 90% of the foreign exchange. (Economy of Nigeria Wikipedia)

The Nigerian economy has been polarized with the inability of the government to raise the standard of living of the average Nigerian beyond poverty level coupled with massive unemployment which has dampened the morals of some of the Nigerian people. According to Odogwu (2012) the Nigeria economy witnesses some transformation in the contribution to its GDP through telecommunication, banking and films industry. However as a result of this the Nigeria economy added up to 89% growth to its GDP, making it the largest economy in Africa, yet the economy is still faced with the problem of instability.

Furthermore, the fact that the Nigeria economy is a determinant of the foreign earnings through the world price oil, however the recent fluctuation and fall in world price oil as further crippled the economy. Ajayi (2007) noted that lack of infrastructural development, resources misappropriation and corruption, lack of integration of macroeconomic plans and absence of harmonization and coordination of fiscal policies are causes of Nigerian economic instability, Onoh (2007) stated that gross mismanagement, misappropriation of public funds, impudent spending and weak sectoral linkages among other socio-economic maladies had contributed to the instability of the Nigeria economy.

The change in leadership over the years has brought about weak policies and economic performance which has caused a huge setback to the nation economic development.

According to Akuta (2009), once a new government takes over power, it usually abandons previous government agenda and programmes. This inconsistency has created ways of siphoning public funds thereby causing instability in the Nigeria economic growth and as well setting the people and the nation backwards socially and developmentally.
The state of the nation continues to create great worries among international agencies. However the Transparency International has ranked Nigeria the 136th most corrupt country in the world and the 3rd most corrupt in West Africa (Leadership Newspaper, 4th Dec, 2014). Although the federal government in recent times has made several attempt to curb this dreaded diseases which have eaten deep into the economy and frustrating the country's economic development, but the resistance from the corrupt leaders keep truncating the effort.
The instability of the Nigeria economy continues to increase in its magnitude due to lack of honesty, selfish ambition of politician and leaders in the elm of affairs, lack of transparency and foresight in all levels, national insecurity such as the threat of the Boko Haram insurgency in the North-east, militancy in the Niger –Delta, massive unemployment, kidnapping, the widening gap between the poor and the rich, political thuggery and the collapse of the justice system.

PRINCIPLE OF FOREIGN EXCHANGE

According to Mordi (2006), the rate of exchange is the amount of currency that will be exchange for one unit of another currency while foreign exchange denote either a foreign currency or the rate at which one currency is converted into another or the means and methods by which one currency is exchanged for another. Thus foreign exchange is concerned with the settlement of international indebtedness, the methods of effecting the settlements and the instruments used in this connection, and the rates of exchange at which the settlements of international indebtedness
are made. With the development of international trade and the subsequent international division of labour, it has become imperative for countries to devote more and more attention to the complication mechanism of foreign exchange.

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STRUCTURE OF NIGRIA FOREIGN EXCHANGE MARKET

The evolution of the foreign exchange market in Nigeria up to its present state was influenced by a number of factors such as the changing pattern of international trade, institutional changes in the economy and structural shifts in production. Before the establishment of the Central Bank of Nigeria (CBN) in 1958 and the enactment of the Exchange Control Act of 1962, foreign exchange was earned by the private sector and held in balances abroad by commercial banks which acted as agents for local exporters. During this period, agricultural exports contributed to bulk of foreign exchange receipts. The fact that the Nigerian pound was tied to the British pound sterling at par, with easy convertibility, delayed the development of an active foreign exchange market. However, with the establishment of the CBN and the subsequent centralization of foreign exchange authority in the bank, the need to develop a local foreign exchange market became paramount The Nigerian foreign exchange market has witnessed tremendous changes.

EXCHANGE RATE MOVEMENT AND MACROECONOMIC PERFORMANCE

Analysis of Nigeria‘s exchange rate movement from 1970-2010 suggests a causal relationship between the exchange rate movements and macroeconomic aggregates such as inflation, fiscal deficits and economic growth. Evidently, the persistent depreciation of the exchange rate trended with major economic variables such as inflation, GDP growth, and fiscal deficit/GDP ratio.

The earliest and leading theoretical foundation for the choice of exchange rate regimes rests on the optimal currency area (OCA) theory, developed by Mundell (1961) and McKinnon (1963).

This literature focuses on trade, and stabilization of the business cycle. It is based on concepts of the symmetry of stocks, the degree of openness, and labor market mobility. According to the theory, a fixed exchange rate regime can increase trade and output growth by reducing exchange rate uncertainty and thus the cost of hedging, and also encourage investment by lowering currency premium from interest conversely, unstable political and industrial conditions will cause fluctuations in the rate of exchange against the country concerned.

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BASIC MACROECONOMIC INDICATORS

Macroeconomic indicators are statistics that indicate the current status of the economy of a state depending on a particular area of the economy (industry, labor market, trade, etc). They are published regularly at a certain time by government agencies and the private sector.

In truth, these statistics help investors monitor the economy's pulse, thus it is not surprising that these are religiously followed by almost everyone in the financial markets.

Gross Domestic Products (GDP)

The GDP is the broadest measure of a country's economy, and it represents the total market value of all goods and services produced in a country during a given year. Gross Domestic Product is one of the major economic indicators that generally reflects the state of the economy of the whole country. GDP measures an economy's total expenditure on newly produced goods and services. In particular, the GDP is the market value of all final goods and service produced within the country in a given period of time. According to Asher (2012) the formula used to compute GDP is Consumption spending + investment spending + Government spending + Imports and Exports

Gross National Products (GNP)

GNP is the total income earned by a nation's permanent residents. GNP, measures the goods and services made by a nation's residents throughout the world.

New Durable Goods Orders

Consumers primarily use these goods. New durable goods order measures the strength of manufacturing because durable goods are designed to last three years or more. These goods can include airplanes, machines parts for factories, cars and buses, cranes, appliances etc. Since this fundamental indicators measure new orders, it will have to make the durable goods to fill all the new orders. New orders directly affect the level of both unfilled orders and inventories that firms monitor when making production decisions

Retail Sales

The retail sales indicator is released on a monthly basis and is important to the foreign exchange trader because it shows the overall strength of consumers spending and the success of retail stores. The report is particularly useful because it is a timely indicator of broad consumers spending patterns that is adjusted for seasonal variables. Retail Sales impart information on the economy because it measure the amount of shopping consumers are doing. Retail Sales is a a seasonal indicator meaning that during certain month's retail sales are always expected to be up. It can be used to predict the performance of more important lagging indicators and to assess the immediate direction of an economy.

Consumers Price Index (CPI)

The Consumers Price Index (CPI) is probably the most crucial indicators of inflation. It represents changes in the level of retail prices for the basic consumer basket. Inflation is tied directly to the purchasing power of a currency within its borders and affects its standing on the international markets. If the economy develops in normal conditions, the increase in CPI can lead to an increase in basic interest rates. This in turn, leads to an increase in the attractiveness of a currency

Unemployment

Unemployment indicators reflect the overall health of an economy or cycles. In order to understand how an economy is functioning. It is important to know how many jobs are being created or destructed, what percentage of the work force is actively working, and how many new people are claiming being unemployed .

Balance of Payment

The Balance of Payments represent the ratio between the amount of payments received from abroad and the amount of payments going abroad. In other words, it shows the total foreign trade operations, trade balance between export and import, transfer payments. If coming payments exceeds payments to other countries and international organizations the balance of payments is positive. The surplus is a favorable factor for growth of the national currency.

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Inflation and Deflation

A general price increase across the entire economy is called inflation. When prices decrease, there is deflation. Economists measure these changes in prices with price indexes. Inflation can occur when an economy becomes overheated and grows too quickly. Similarly, a declining economy can lead to deflation. The Central Bank tries to avoid changes in price level by using monetary policy. Raising interest rate or reducing the supply of money in an economy will reduce inflation. Inflation can lead to increased uncertainty and other negative consequences.

Government Fiscal and Monetary Policy

Government Fiscal and Monetary policy means stabilization of the economy (i.e full employment, control of inflation, and equitable balance of payments) is one of the goals that governments attempt to achieve through manipulation of fiscal and monetary policies. Fiscal policy relates to taxes and expenditures, monetary policy to financial markets and the supply of credit, money, and other financial assets.

AIM AND OBJECTIVES

The aim of this study is to examine the significant effect of exchange rate on Nigeria economic instability for the period of 1986 to 2017 since some researchers have made contra-opinions and position on the topic, and this will be achieve through the following objectives:

1. To determine the regression model
2. To determine the effect of exchange rate on the Nigeria economy
   - To determine the effect of Gross Domestic on the Exchange rate
   - To determine the effect of Unemployment rate on the Exchange rate
   - To determine the effect of Inflation rate on the Exchange rate
3. To determine the variation that exists between the exchange rate and the macroeconomic indicators

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METHODOLOGY

RESEARCH DESIGN

The data for this study is a secondary data and were extracted from the publication of Central Bank of Nigeria (CBN) also from the Nigeria Stock Exchange publication. These compilations are published periodically by the planning and research department of the Apex bank. These data are laid out on quarterly basis and were collected solemnly for the purpose of this study. The data obtained is on foreign exchange rate using parallel market. The models used in this study are estimated using annual Nigeria data on some macro-economic indicators, which includes: Inflation Rate (IFR), Gross Domestic Product, and Unemployment rate on Exchange rate (EXCH) for the period of 1986-2017. Statistical approach to analysis of data involves the use of graphs, mathematical models and computation. However, the major statistical tool used for the estimation of the parameters of the multiple regression equation is the maximum likelihood estimator from the R- Software

DATA ANALYSIS

A CHART REPRESENTING THE EXCHANGE RATE OVER TIME

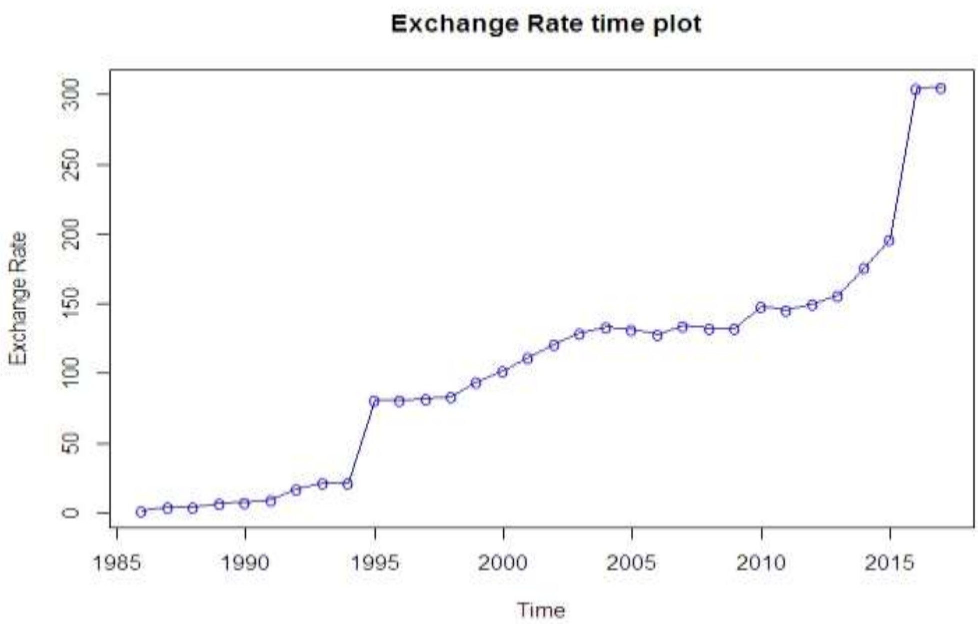

Fig. 5.1

The chart in Fig. 5.1 above shows a fluctuating trend in the continuous increase and decrease of the exchange rate from 1986 to 2017.

A CHART REPRESENTING THE UNEMPLOYMENT RATE OVER TIME

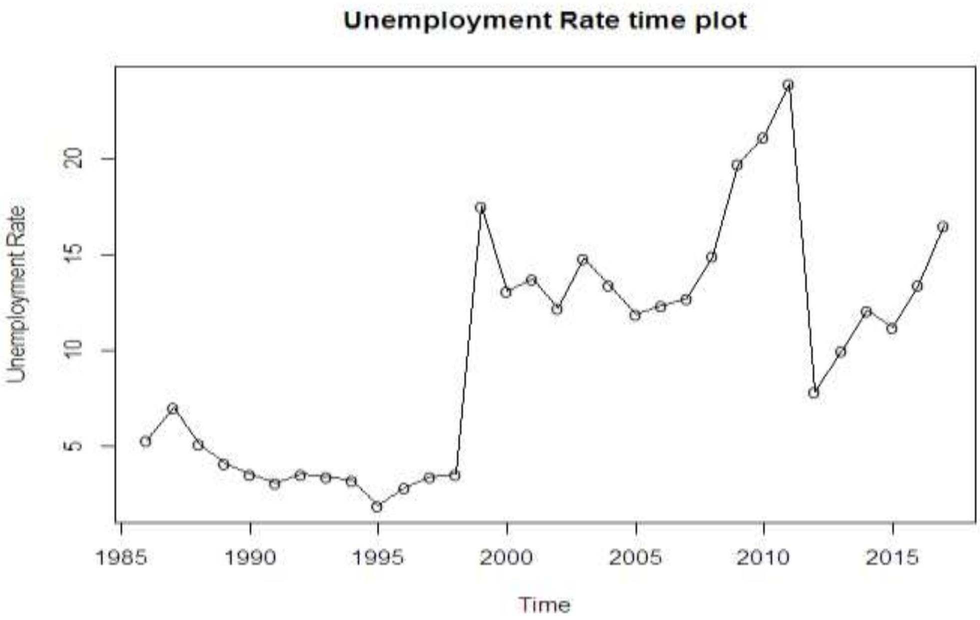

Fig. 5.2: The chart in Fig.5.2 above shows the fluctuating trend of the unemployment rate from 1986-2017.

A CHART REPRESENTING THE INFLATION RATE OVER TIME

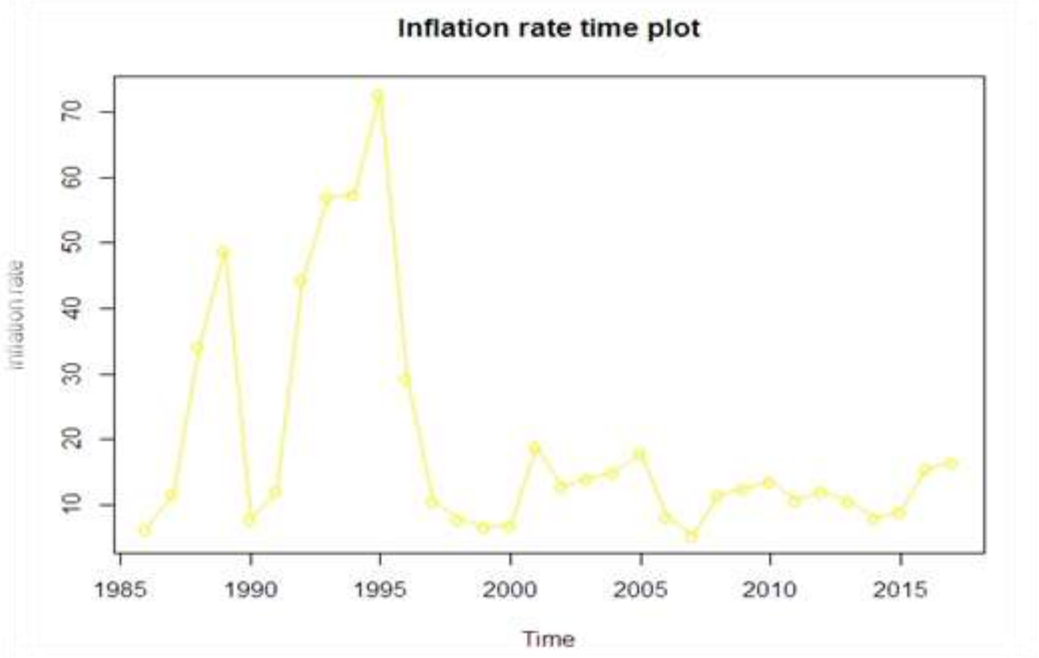

Fig. 5.3: The chart in Fig.5.3 above shows the fluctuating trend of the inflation rate from 1986-2017.

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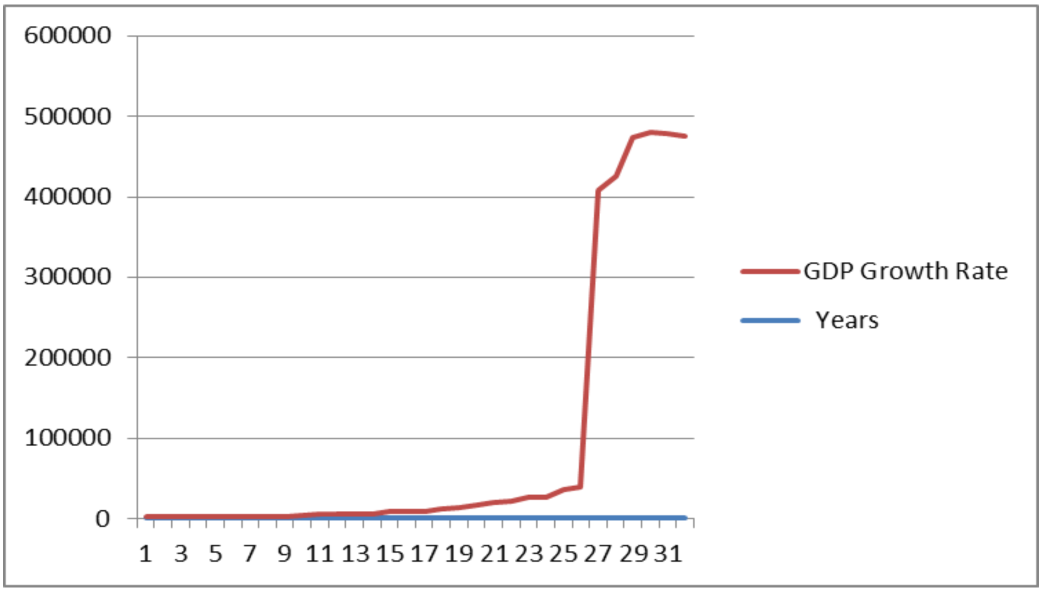
A CHART REPRESENTING THE GROSS DOMECTIC PRODUCT OVER TIME



The chart in fig 5.4 above shows the continuous upward increase in the Gross Domestic Product of the economy

MODEL SPECIFICATION

Multiple Regression Equation

EXCH = $\beta_0 + \beta_1$(GDP) + β_2(UNEMP) + β_3(INF)

Where β_0, β_1 and β_3 are the co-efficient of the variables

EXCH= Exchange rate

GDP = Gross Domestic Product

UNEMP= Unemployment

INF= Inflation

From the analysis of the data the regression equation becomes

y = 2.141 – 1.646 (GDP) —0.8602 (UNEMP) + 1.311 (INF)

RESEARCH HYPOTHESES

The hypothesis to be tested for the research work is stated as follows:

1. **Ho:** exchange rate has no effect on the Nigeria economic instability from 1986-2017
2. **Hi:** exchange rate has effect on the Nigeria economic instability from 1986-2017

REGRESSION RESULTS

Variables	Coefficient	t-value	sig value
Constant:	2.141	3.849	0.00063
Gross Domestic Product	- 1.646	-2.409	0.02281

Unemployment rate	- 0.8602	-3.302	0.00263
Inflation rate	1.311	0.852	0.852
R^2:	0.827		
Adj. R^2:	0.813		

DISCUSSION AND FINDINGS

From the above regression model, the value of the intercept (2.141) shows that the exchange rate will experience a 2.141 increase when all other variables are held constant. The estimated coefficient of the Gross Domestic Product (-1.646) indicates a unit change in GDP will cause a 0.016% decrease in exchange rate, the estimated coefficient of the Unemployment (- 0.8602) indicated that a unit change in Unemployment will cause a 0.0086% decrease in exchange rate, and the estimated coefficient of the Inflation (1.311) indicates that a unit change in inflation will cause a 0.013% increase in exchange rate. However both the Gross Domestic Product and Unemployment rate have negative effect on the exchange rate while the Inflation rate has positive effect on the exchange rate a such causing a fluctuation in the value of exchange rate. The possible explanation is that exchange rate has effect on the Nigerian economic instability since 1986-2017. Furthermore as observed, the increase in the inflation rate is a major factor affecting market changes thereby creating an increase in the price of good and services which automatically affect the level of economic output and deter the growth and development of the economy. The Coefficient of determination (R^2) implies that only 82.7% of the variation in exchange rate is explained by the entire explanatory variable under consideration indicating a strong relationship between exchange rate and Nigerian economic instability for the period of 1986-2017

CONCLUSION AND RECOMMENDATION

CONCLUSION

The Foreign exchange rate is one of the most important factor that measure the health and level of stability of the national economy, so it must be watched on regular basis. Hence from the study, it can adjudged that exchange rate has effect on the Nigeria economic instability for the period of 1986-2017. However from the model, Nigeria as a nation can lower the rising effect of exchange rate by continuously increasing her gross domestic product and also controlling the rising effect of inflation rate.

RECOMMENDATION

In order for the Nigeria government to tackle her instability effectively and to achieve stability in exchange rate, the following recommendations are apt:

1. The Nigerian economy should be diversified to reduce dependence on oil. The agricultural and solid minerals' sectors should be harnessed to complement inflows from the oil sector.
2. Government must encourage the development of the real sector (manufacturing sector) as this is a potent way to strengthen the exchange rate.
3. Development of import substitution industries particularly those concerned with production of raw materials should be encouraged.
4. There should be massive public expenditure on infrastructure upgrade to boost expansion of outputs. Specifically, the privatization of the energy sector must be constantly reviewed to ensure optimal performance.
5. There should be more investment in road construction, rehabilitation and maintenance as well as internal security.
6. Technological transfer, technical and professional training of human resources should be given more priority.
7. The introduction of price control system on goods and services inorder to curb the rising effect of inflation.
8. The Central Bank must continuously monitor money supply variables to keep inflation under check and stabilize interest rate.
9. Government should enable Small and Medium Scale (SMEs) to access funds and eliminate hostile conditions attached to lending to SMEs
10. The Government should continue to foster the culture of transparency, accountability and integrity in the conduct of both private and public sector business in the economy.
11. The Government should intensify effort on effective and efficient war against corruption.

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