THE IMPACT OF EXCHANGE RATE ON ECONOMIC GROWTH IN NIGERIA
(1980-2012)

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ABSTRACT

This paper examined the impact of Exchange Rate on Economic Growth in Nigeria, 1980 to 2012, which is a period of 32 years. The Theoretical frame work of the study is Balassa-samulson theory .The estimation technique employed was Ordinary Least Square (OLS) of multiple linear regression analysis and Unit root test. The dependent variable is the Economic Growth (GDP) while the independent variables are Exchange Rate, Balance of payment, Money supply and Inflation. Secondary data were used. The data was sourced from Central Bank of Nigeria, Statistical Bulletin, and National Bureau of Statistics (NBS). Augmented Dickey-fuller (ADF) test was used, the result shows that all variables were stationary at level, I(0). Johansen unrestricted co-integration test was also used, the result shows that there was a long run relationship between the variables. Findings revealed that Exchange Rate was interrelated in the long run and has a positive impact on Economic Rate (GDP) between the years studied. It has been recommended that Nigeria Government and policy makers should employ policies that would increase productivity in all sectors of the economy, through the creation of an enabling environment and provision of flexible exchange rate so that business can grow; this in turn would lead to economic boost on gross domestic product in Nigeria and its general populace.

Keywords: *Exchange Rate, Economic growth, Money supply.*

1.0 INTRODUCTION

Exchange rate is a significant macroeconomic variable in an economy. Its behavior affects to a large extent the behavior of several other macroeconomic variables in an economy. This is especially so in highly import dependent economies such as Nigeria. Consequently, it is hardly surprising that most countries of the world pay close attention to the behavior of the exchange rate of their currencies vis-a-vis other currencies of the world. This is on account of the fact that apart from the implication its behavior has for the competitiveness of a country's goods and services around. It also has implications for the country or otherwise of an economic as well as the strength of the economy within the comity of nations (Oaikhenana, 2000).

Following the introduction of Structural Adjustment Programme (SAP), the Nigerian economy has begun to witness some strains which prompt the enunciation of an Austerity package. As the cost of import was crippling local manufacturers, a new industrialization policy was promulgated that required that goods that were hitherto imported be sourced and produced domestically in order to reduce the vulnerability of the economy to negative external shocks and promote the balance of payment. This industrialization policy was also aimed at promoting the export of manufactured goods. Moreover, the post-SAP reforms period was characterized by a mixed trade policy stance while export promotion confirmed, some controls were exercised on imports. In the same vein, the foreign exchange allocation mechanism witnessed reforms especially in the determination of the official exchange rate. Thus, the rate at the Autonomous Foreign exchange market (AFEM) which subsequently changed to inter-Bank Foreign Exchange market (IFEM) rate in the late 2000 and to Dutch Auction System in 2002. Ogikhenan and Edo, (2000).

The relationship between a country's exchange rate and economic growth is a crucial issue from both the descriptive and policy prescription perspectives. A country's exchange rate is an important determinant of the growth of its cross-border trading and it serves as a measure of its international competitiveness (Bah and

Amusa, 2003). The real exchange rate, in particular, defined as the relative price of foreign goods in terms of domestic goods is of greater significance, as it is an important relative price signaling inter-sectoral growth in the long run and acts as a measure of international competitiveness. In other words, the real exchange rate plays a crucial role in guiding the broad allocation of production and spending in the domestic economy between foreign and domestic goods. The role of international trade in economic development has been acknowledged worldwide. This is because it provides opportunities to expand both the production possibilities and consumption basket available to the people (Adewuyi, 2005). The Nigerian government has over the years engaged in international trade and has been designing trade and exchange rate policies to promote trade (Adewuyi, 2005). Although a number of exchange rate reforms have been carried out by successive governments, the extent to which these policies have been effective in promoting export has remained unascertained. This is because despite' government efforts, the growth performance of Nigeria non-oil export has been very slow. It grew at an average of 2.3% during the 1960-1990 period, while its share of total export declined from about 60% in 1960 to 3.0% in 1990 (Ogun, 2004). Looking at the sectoral contribution to non-oil export in the period before the introduction of the Structural Adjustment Programme (SAP) (1975-1985), it can be seen that agricultural sector contributed about 4.0% and 67.0% to total export and non-oil export respectively (Ogun, 2004). The shares of manufacturing 'sector in these categories of exports are about 1.0 and 12.0% respectively during that same period Ogun, (2004).

In support of Bah and Amusa (2003), Adewuyi (2005) and Ogun (2004), opined that Foreign Exchange rate plays an increasingly significant role in any economy as it directly affects domestic price level, profitability of traded goods and services, allocation of resources, investment decision, inflation, economic growth, etc. The movement in exchange rate poses serious concern not only for the monetary authorities faced with stabilization problems but also for firms engaged in international businesses. In fact, exchange rate fluctuations. Thus, foreign exchange rate management has fallen within the mainstream of economic policy of many countries. But the effects of exchange rate on macroeconomic performance depend on the type of exchange rate regime adopted by a country.

1.1 Problem Statement

In any country of the world, foreign exchange is an important macroeconomic policy instrument up to the time of structural adjustment programme (SAP, 1986), however, it appeared that Nigeria's exchange rate policy tends to encourage evaluation of the Naira and this in turn encouraged import, discouraged non – oil exports and helped sustain the manufacturing sector overdependence on imported inputs. The overriding exchange rate management was made concerned apparently with medium and long term balance of payment objectives. In other words, exchange rate policy was not geared to forward the attainment of long run equilibrium rate that would equilibrate the balance of payment in the medium and long term and facilitate the achievements of certain structural objectives e.g. (export diversification and input important dependence).

Hence in the face of relatively unstable oil revenues, the real effective exchange rate generally appreciated in the decade of the 1970's, this severally eroded international competitiveness. In the light of this, various policies have been formulated to enhance and encourage foreign exchange in Nigeria to prevent fluctuation of the various variables that might affect the GDP of the economy.

1.2 Statement of Research Hypothesis

This study shall test the following Null and Alternative Hypotheses:

Null Hypothesis (H₀): There   is no significant relationship between exchange rate and Economic growth (GDP) in Nigeria.

Alternative Hypothesis (H₁): There is significant relationship between exchange rate and Economic growth (GDP) in Nigeria.

1.3 Objectives of the Study

The broad objective of this study is to examine the effect of foreign exchange policy on the Nigerian economic growth (GDP) over the period of 1980 to 2012 a period of 32 years.

2.0 LITERATURE REVIEW

2.1 Introduction

The literature on exchange rate policy and economic performance has continued to generate interest among economists over the last four decades. Aliyu (2011) asserted that appreciation of exchange rate results in increased imports and reduced export while depreciation would expand export and discourage import. Also, depreciation of exchange rate tends to cause a shift from foreign goods to domestic goods. Hence, it leads to

diversion of income from importing countries to countries exporting through a shift in terms of trade, and this tends to have impact on the exporting and importing countries' economic growth. In the same vein, Hossain (2002) agreed that exchange rate helps to connect the price systems of two different countries by making it possible for international trade and also effects on the volume of imports and exports, as well as country's balance of payments position. Aghion, P., P. Bacchetta, R. Ranciere, and K. Rogoff. (2009) also opined that developing countries are relatively better off in the choice of flexible exchange rate regimes. Jhingan (2003) defined exchange rate as the rate at which one currency exchanges for another. Coyle (2000) shared a similar view and posited that the exchange rate is the price ratio of two nominal values. The above conceptual view of exchange rate was also supported by Okorie (2005); Husted and Melvin (2007) and Obadan (2004). The catalyzing event was the crumbling of the post-war international monetary system, under which countries had for the previous quarter century kept their exchange rate fixed with narrow range, which only occasional adjustments. According to Takaende (2006) who opined that an appreciation in the real exchange rate creates current account problems because it leads to overvaluation. Overvaluation in turn makes imports artificially cheaper while exports relatively expensive, thus reducing the international competitiveness of a country. In the same vein, Jhingan (2005) argued that foreign exchange is the means of payment for international transactions. It is made up of convertible currencies that are generally accepted for the settlement of international trade. Also, Odusola and Akinlo (2001) and Essien (2005) opined that exchange rate devaluation or depreciation includes higher import prices, external shocks and accentuates inflationary expectations.

2.2 Theoretical Literature

Many researchers have attempted to analyze the ways and the extent to which foreign exchange rate policy affects macroeconomic performance with reference to economic growth, inflation, money supply, interest rate, export and investment to mention few. Previous research on the impact of exchange rate stability on growth has tended to find weak evidence in favour of a positive impact of exchange rate stability on growth. For large country samples such as by Ghosh, Gulde and Wolf (2013), there is weak evidence that exchange rate stability affects growth in a positive or Negative way. Ogun (2004) examined the impact of foreign exchange rate on growth of non-oil export in Nigeria. Specifically, he analyzed the effects of foreign exchange rate misalignment and volatility on the growth of non oil exports. He employed the standard trade theory model of determinants of export growth and two different measures of real exchange rate. Misalignment, one of which entailed deviations of purchasing power parity (PPP) and the other was model based estimation of equilibrium real exchange rate. He reported that, irrespective of the alternative measures of misalignment adopted, both real exchange rate misalignment and volatility adversely affected growth of Nigeria's non-oil export. Odedokun (1997) studied a group of 38 African countries, by examining the impact of macroeconomic policies, devaluation and other economic fundamentals on the exchange rate movement. The author found that public sector fiscal deficits, growth of domestic credit, domestic absorption-GDP ratio, government consumption-GDP ratio, private consumption-GDP ratio, improvement in terms of trade, income per capita and black market exchange rate premium lead to exchange rate appreciation. On the contrary, devaluation, investment-Gross Domestic Product ratio, consumer-wholesale price ratio in trading partner countries, and economic growth in industrial countries result in exchange rate depreciation. Studies by Hsieh (1982), Marston (1987), and Edison and Kloyland (1987) indicated that productivity differentials lead to exchange rate appreciation, thus confirming the Balassa Samuelson effect. Drine and Rault (2003) analyzed the main determinants of the exchange rate in the Middle East and North Africa (MENA) countries and observed that output per capita, government consumption, real interest rate differentials, and the degree of openness of the economy influence the real exchange rate.

2.3 Theoretical Framework

The framework for this study is based on the Balassa-Samuelson theory, which states that productivity differentials affect the movement of the foreign exchange rate. For example, if productivity in the tradable sector of the economy grows faster than productivity in the non-tradable sector, it will push-up wages in the economy, including the non-tradable sector (David Faulkner and Konstantin Makrelor, 2008). The increase in wages in turn raises both domestic demand and prices of tradable and non-tradable, thereby leading to exchange rate appreciation. Thus, increases in productivity differentials results to an exchange rate appreciation. Besides productivity differentials, David Faulkner and Konstantin Makrelor (*ibid*) argued that other variables can also influence the foreign exchange rate. For instance, if a country is a net exporter of commodity, an improvement in the terms of trade would increase its wealth. This in turn increases domestic demand in the tradeables and the non-tradable sectors of the economy. The increase in demand leads to higher commodity prices as well as exchange rate appreciation. On the contrary, deterioration in the terms of trade would not only reduce the wealth of a country, but also leads to a decline in domestic demand and prices, consequently exchange rate will enhance its capacity to import for some time. In addition, it will raise the country's demand for domestically produced goods (both tradable and non-tradable) as well as their prices, thus leading to exchange rate

appreciation. Another important factor that affects the exchange rate is the degree of openness of the economy. If an economy protects its domestic producers by introducing high tariffs, exchange controls and quotas on imports, domestic demand and commodity prices will increase. These lead to exchange rate appreciation. However, if the economy becomes more open and protection is reduced, the demand for domestic goods and their prices will fall, thus resulting to exchange rate depreciation (David Faulkner and Konstantin Makrelor, 2008).

2.4 Empirical Literature

Previous research on the impact of exchange rate on economic growth has reached contrasting results. For example, Empirical evidence showed that real exchange rate variations can affect growth outcomes. 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. Edwards and Levy Yeyati (2003) found evidence that countries with more flexible exchange rate grow faster. Faster economic growth is significantly associated with real exchange rate depreciation (Hausmann, Pritchett, and Rodrik 2005). Rodrik (2009) argued that real undervaluation promotes economic growth, increases the profitability of the tradable sector, and leads to an expansion of the share of tradable in domestic value added. He claims that the tradable sector in developing countries can be too small because it suffers more than the non-tradable sector from institutional weaknesses and market failures. A real exchange rate undervaluation works as a second-best policy to compensate for the negative effects of these distortions by enhancing the sector's profitability. Higher profitability promotes investment in the tradable sector, which then expands, and promotes economic growth. Obansa, Okoroafor, Aluko and Millicent (2013) also examined the relationship between exchange rate and economic growth in Nigeria between 1970 –2010. The result indicated that exchange rate has a strong impact on economic growth. They concluded that exchange rate liberalization was good to Nigerian economy as it promote economic growth. Azeez, Kolapo and Ajayi (2012) also investigated the effect of exchange rate volatility on macroeconomic performance in Nigeria from 1986 –2010. They discovered that exchange rate is positive related to Gross Domestic Product.

Arize, Osang, and Slottje (2000) found a significant negative relationship between increases in exchange rate volatility and exports in developing countries. Servén (2003) showed that real exchange rate volatility negatively affects investment in a large panel of developing countries. This negative impact is significantly larger in countries with highly open economies and less developed financial systems. He also found evidence of threshold effects, whereby uncertainty only matters when it is relatively high. A similar study, Eme and Johson (2012) investigated the effect of exchange rate movements on real output growth in Nigeria for the period 1986 -2010. The result revealed that there is no evidence of a strong direct relationship between changes in exchange rate and output growth. Rather, Nigeria economic growth has been directly affected by monetary variables.

2.5 Conceptual Literature
2.5.1 The Concept of Exchange Rate
Exchange rate is simply the price of foreign currency which clears the foreign exchange market (Mcdonald,1990). Therefore, exchange rate of currency is the link between domestic and foreign prices of goods and services. Also, exchange rate can either appreciate or depreciate. Appreciation in the exchange rate occurs if less unit of domestic currency exchanges for a unit of foreign currency while depreciation in exchange rate occurs if more unit of domestic currency exchanges for a unit of foreign currency. However, exchange rate can be measured in two ways;
(i) The nominal exchange rate
(ii) The real exchange rate

The nominal exchange rate is the number of unit of domestic currency that must be given up to get a unit of foreign currency. In other word, nominal exchange rate is the price of domestic in term of foreign currency. It is denoted as E.

The real exchange rate is the relative price of foreign goods in term of domestic goods. In other word, it is the exchange rate adjusted for price. It is denoted as;

$$e = Ep^*/p$$

Where E= nominal exchange rate
p*=foreign price
p=domestic price

2.5.2 Volatility in the Exchange Rate

Exchange rate volatility is defined as the risk associated with the unexpected movement in the exchange rate (Ozturk, 2006). In other word, it is the risk associated with currency depreciation or appreciation. In the literature, the word volatility takes a very specific meaning. "Volatility is the day to day, month to month variability of exchange rate, a variability that may have no trend to it" (Marston et al, 1988). In other word, volatility is a high frequency concept referring to movements in the exchange rate over relatively short period of time. But it is not the only component of variability. There is also another component of exchange rate variability which is called misalignment. Misalignment refers to long-lasting movements of exchange rate from its long run equilibrium. Misalignment refers to capacity for an exchange rate to depart from its fundamentals over a long period of time. Distinction between volatility and misalignment is important because there is evidence that the movement in the exchange rate reflected in the volatility measures is unanticipated. So, trading firms must cope with uncertainty about exchange rates. That means international trade is affected by this kind of variability. In contrast to exchange rate volatility, misalignments mostly anticipated and they undermine economic performance in several dimensions. They may generate adjustment cost, recession, deindustrialization, inflation and protectionism.

Since 1973, collapsing fixed parity system, Bretton-Woods and moving to flexible exchange rates, the nature of exchange rate variability has changed considerably. There is strong evidence that volatility is much greater under flexible exchange rates regimes. Before the collapse of the Bretton-Woods system, exchange rates were fixed at an official rate and adjustment took the form of infrequent discreet jumps in the level of exchange rate. After 1973, exchange rates were allowed to adjust more or less continuously in response to market forces. There was widespread surprise in the early years floating at the size of the short-time fluctuations in the exchange rates, they were expected to diminish as markets learned to cope with rapid changing in market conditions. But volatility has not diminished (Oloba and Abogan, 2013)

Various statistical measures of volatility have been used in the literature. Some of these measures are standard deviation, deviation from trend, the difference between previous forward and current spot rates, Gini mean difference coefficient, and scale measure of variability. However, these all measures have their own shortcomings. Instead of using above measures of volatility, Autoregressive Conditional Heteroskedasticity (ARCH) type of models has often been used in the literature lately (Kayis and Ozturk, 2005).

3.0 METHODOLOGY

The estimation techniques employed in this study is the Ordinary Least Square (OLS) of multiple linear regression analysis and unit root test. The dependent or response variable is the economic growth (GDP) while the independent or explanatory variables are, Exchange rate, balance of payment, money supply, real interest rate and inflation rate.

3.1 Model Specification

For the purpose of this study, this model shall be modified such that, gross domestic product is a function of exchange rate, balance of payment, money supply, real interest rate, inflation rate.
Econometrically, the equation 2 can be mathematically written as:

$$GDP = F (EXCH, BOP\ MOSS, RIR, INF) \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ (1)$$
$$GDP = \gamma_0 + \gamma_1 EXCH + \gamma_2 BOP + \gamma_3 MOSS + \gamma_4 RIR + \gamma_5 INF + \mu_t \ldots\ldots\ldots (2)$$

Where,
GDP=Gross domestic product (Economic growth),
EXCH=Exchange Rate, BOP = Balance of Payment, MOSS=Money supply
RIR= Real Interest Rate, INF=Inflation rate, μ=Random variable, $\gamma_0 \ldots \gamma_5$ =Parameter to be estimated

3.2 A Priori - Expectation

In consonance with economic theory, an increase in exchange rate is expected to produce a positive change in output and increase in balance of payment, as well as an increase in money supply is expected to boost output in Nigeria. However, increase in real interest rate and inflation rate is expected to have negative relationships with economic growth in Nigerian economy. Hence, from the model, the *a-priori* expectation may be mathematically denoted as:

$$\frac{\partial GDP}{\partial EXCH} > 0, \frac{\partial GDP}{\partial BOP} > 0, \quad \frac{\partial GDP}{\partial MOSS} > 0, \frac{\partial GDP}{\partial RIR} < 0, \frac{\partial GDP}{\partial INF} < 0$$

Hence, symbolically: $\gamma_1 > 0, \gamma_2 > 0, \gamma_3 > 0, \gamma_4 < 0$ and $\gamma_5 < 0$

Based on *a-priori* expectation stated above, the signs of parameters in the model "γ_1", "γ_2", and γ_3 are expected to be positive because increase in exchange rate, balance of payment and money supply tend to increase gross domestic product (GDP) in Nigeria respectively while, "γ_4" and "γ_5" are expected to be negative because increases in real interest rate and inflation rate on Nigerian economy growth (GDP) tend to reduce the volume of GDP over the years. Hence, increase in RINTR will discourage investors from loans thereby limit the growth of Nigerian economy activities over time. Also, persistent in increase general price of goods and services will invariably have negative effect on GDP over time in Nigerian economy.

3.3 Source of Data

The type of data for this study was secondary data which were sources from Central Bank of Nigeria (CBN) statistical bulletin and National Bureau of statistics (NBS). The data on exchange rate, inflation rate and balance of payment are collected by a method extraction from CBN statistical bulletin between 1980 and 2012. The 1980 is chosen as base year because this is the period in which oil were majorly exchanged for dollar whilst 2012 as a current year; this is use to provide better understanding up till date for further research.

Table 1: GDP = Gross Domestic Product, RIR = Real Interest Rate, MOSS = Money Supply, BOP = Balance of Payment, EXCH = Real Exchange Rate, INF = Inflation Rate (1980-**2012**)

Year	GDP	*RIR*	BOP	MOSS	EXCH	INF
1980	10.35	6.50	2.4	84.71	0.5464	10.0
1981	12.23	6.50	-3.02	69.09	0.6100	21.4
1982	12.2	8.00	-1.4	82.43	0.6729	7.2
1983	12.13	8.00	-0.3	10.23	0.7241	23.2
1984	12.12	10.00	0.36	15.24	0.7649	40.7
1985	12.21	10.00	0.35	18.92	0.8938	4.7
1986	12.23	10.00	118930	22.75	2.0206	5.4
1987	12.22	15.80	-66.15	30.15	4.0179	10.2
1988	12.3	14.30	66.90	42.99	4.5367	56.0
1989	12.37	21.20	-130.00	46.43	7.3916	50.5
1990	12.49	23.00	269.49	65.79	8.0378	7.5
1991	12.48	20.10	-114.01	86.51	9.9095	12.7
1992	12.51	20.50	229.76	12.90	17.2984	44.8
1993	12.52	28.02	72.00	19.84	22.0511	57.2
1994	12.52	15.00	22.72	26.69	21.8861	57.0
1995	12.54	14.27	6.94	31.87	21.8861	72.8
1996	12.59	13.55	221.45	37.87	21.8861	29.3
1997	12.61	7.43	-11.27	37.03	21.8861	10.7
1998	12.64	10.09	-278.80	42.97	21.8861	7.9
1999	12.65	14.30	-53.19	69.97	92.6934	6.6
2000	12.7	10.44	-508.33	10.36	102.1052	6.9
2001	12.78	10.09	-64.93	13.15	111.9433	18.9
2002	12.97	15.57	-479.69	14.90	120.9702	12.9
2003	13.07	11.88	-46.91	18.62	129.3565	14.0
2004	13.17	12.21	-219.41	20.91	133.5004	15.0
2005	13.23	8.68	36.59	28.14	132.1470	17.8
2006	13.29	8.26	478.17	36.74	128.6516	8.2
2007	13.36	9.49	-19.38	45.68	125.8331	5.4
2008	13.41	11.95	2.35	35.62	129.30	11.6
2009	13.48	13.23	-31.19	36.72	112.38	12.4
2010	13.56	16.00	-22.62	74.35	109.1	12.8
2011	13.63	20.10	9.00	32.83	122.60	10.30
2012	13.7	22.64	4.88	24.64	155.27	14.7

Source: CBN Statistics Bulletin (Various issues) and National Bureau of Statistics

4.0 DATA ANALYSIS AND INTERPRETATION
4.1 Test of Stationary

Table II   Test for Unit Root at Level

Variables	Test Statistics	5% Critical Value	Level	Prob.*	S/NS
GDP	-9.032802	-2.986225	1(0)	0.0000	S
EXCH	-3.137751	-2.986225	1(0)	0.0365	S
BOP	-8.111763	-2.986225	1(0)	0.0000	S
RIR	-3.384884	-2.986225	1(0)	0.0214	S
INF	-5.430648	-2.986225	1(0)	0.0002	S
MOSS	-3.624792	-2.986225	1(0)	0.0125	S

Source: *Researcher's computations* (2014)

The results in table II show that all the variables are stationary at levels. This can be seen by comparing the test statistics (in absolute terms) of both the ADF test statistics with the critical values (also in absolute terms) at the 5% level of significance and their probability levels.

4.2 Johansen Co-Integration Test

The Johansen unrestricted co-integration test is used in this study. The statistic is used to testing whether a long run relationship exists among the variables. If it can be established, that at least one co-integration equation exists between the variables (GDP, EXCH,BOP,MOSS,RIR,INF) under investigation, then a long term equilibrium relationship exist between them. The trace test statistics and the maximum Eigen value are used. This is presented in table III and table IV below:

Table III: Trace test statistics

Hypothesized No. of CE(s)	Eigen value	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.999864	355.0083	125.6154	0.0000
At most 1 *	0.946601	159.1659	95.75366	0.0000
At most 2 *	0.855401	94.70668	69.81889	0.0002
At most 3 *	0.667777	52.16329	47.85613	0.0186
At most 4	0.476460	27.92039	29.79707	0.0810
At most 5	0.328004	13.68325	15.49471	0.0920

Source: *Researcher's computations* (2014)

From table III, it can be seen that trace test indicates 4 co-integrating equations at the 0.05 level of significance. This denotes that the null hypothesis is rejected and this shows a long run relationship between the variables.

Table IV: The Max-Eigen value

Hypothesized No. of CE(s)	Eigen value	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.999864	195.8425	46.23142	0.0000
At most 1 *	0.946601	64.45920	40.07757	0.0000
At most 2 *	0.855401	42.54338	33.87687	0.0036
At most 3	0.667777	24.24290	27.58434	0.1265
At most 4	0.476460	14.23714	21.13162	0.3459
At most 5	0.328004	8.745052	14.26460	0.3080

Source: *Researcher's computations* (2014)

From table three above, it can be seen that Max-Eigen indicates 3 co-integrating equations at the 0.05 level of significance. This denotes that the null hypothesis is rejected and this shows a long run relationship between the variables.

4.3 Regression Results

The results of the data analysis and estimation were obtained using the Ordinary Least Square (OLS) Mechanism. This is presented in Table VI below:

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-12.921823	7.249695	1.666828	0.0080
EXCH	10.540311	9.025354	1.989929	0.0235
BOP	9.243696	0.008043	1.759560	0.0095
RIR	0.350744	0.224780	1.860386	0.0003
INF	-0.620614	0.073896	-2.278958	0.0004
MOSS	0.940031	0.076119	1.825902	0.0032
R-squared	0.732712	Mean dependent var		9.318182
Adjusted R-squared	0.790621	S.D. dependent var		15.502906
S.E. of regression	6.201259	Akaike info criterion		15.650347
Sum squared resid	1038.302	Schwarz criterion		14.922440
Log likelihood	-103.7307	Hannan-Quinn criter.		14.741898
F-statistic	11.637771	Durbin-Watson stat		2.187147
Prob(F-statistic)	0.003950			

Source: *Researcher's Computation* (2014)

$$GDP = \gamma_0 + \gamma_1 EXCH + \gamma_2 BOP + \gamma_3 MOSS + \gamma_4 RIR + \gamma_5 INF + \mu_t$$

$$\textbf{GDP} = -12.292 + 10.540\textbf{EXCH} + 9.244\textbf{BOP} + 0.940\textbf{MOSS} + 0.351\textbf{RIR} - 0.621\textbf{INF}$$
$$(7.250) \quad (9.025) \quad (0.008) \quad (0.076) \quad (0.225) \quad (0.074)$$
$$(1.667) \quad (1.990) \quad (1.760) \quad (1.826) \quad (1.860) \quad (2.279)$$
$$(0.008) \quad (0.024) \quad (0.010) \quad (0.003) \quad (0.0004) \quad (0.0032)$$
$$\textbf{R}^2 = 0.73 \qquad \textbf{DW} = 2.19$$

Regression result shows that, the coefficient of EXCH reveals positive (10.540311) on GDP; this means that a unit per cent increases in EXCH will lead to about 10 per cent increase in economic growth in Nigeria. Better still, positive relationship existed between BOP and EXCH in the estimated model. Hence, it is statistically significant at 5% level as shown in the result above. This result suggests a direct relationship between BOP and RIR on MOSS while negative on GDP and INF in the estimated model. This indicates that a unit per cent increase in BOP will influence and increase by about 92 per cent in economic growth of Nigeria holding other determinants constant over time. Furthermore, holding other variables constant, money supply (MOSS) has a positive sign in the estimated model. It is statistically significant at 5% level in the short run. This implies that 1% increase in money supply will bring about 94% increase in gross domestic product (GDP) both in the short and long run respectively. This result is in agreed with *a-priori* expectation in the estimated model. However, holding other variables constant, gross domestic product (GDP) has a negative sign (-12.921823) this reveals that the parameter is positively related to inflation. This implies that holding other variables constant, a 1% increase in gross domestic product will influence inflation positively as economic growth increase or decreases overtime. Not all the coefficient estimated is positive both in short and long run in Nigeria. This implies that, the intercept value (γ_0) is still negative in the model over the estimated years (1980-2012). The adjusted R^2 shows the predictor power of a model and it is derived to be 0.790621. This implies GDP, EXCH, BOP, RIR, INF and MOSS explained about 79% systematic variation on the effects of foreign exchange policy on the Nigerian Economic Growth within the time period in Nigeria whilst the random or stochastic term accounts for the remaining 21% variation in GDP, outside (exogenous) the estimated model. F-test shows the overall significance of the regression model estimated. The calculated value of the F-test is 11.637771 while the

theoretical value at 5 per cent level of significance is 2.90. Since the F-statistic exceeds the theoretical value that is, 11 > 2.90. This implies that the estimated model is statistically significant. Durbin-Watson statistic is marginally above 2.18, i.e. 2.187147, then, we conclude that there is not presence of Auto-correction in the estimated model.

5.0 SUMMARY, CONCLUSION AND RECOMMENDATIONS
5.1 Summary
This study investigate the impact of exchange rate on Economic Growth in Nigeria within the period of 1980 to 2012, using the Ordinary Least Square (OLS) analysis, Augmented Dickey – Fuller (ADF) test to ascertain the level of stationary for each explanatory variable. Under this study, the following variables are considered as follows; gross domestic product (GDP) as depending variable, while exchange rate (EXCH), balance of payment (BOP), real interest rate (RIR), inflation rate (INF) and Money supply (MOSS) are independent variables. The **findings** revealed that exchange rate, balance of payment, real interest rate, inflation rate and Money supply are interrelated in the long run and as a positive impact on gross domestic product. This implies that there is existence of long run equilibrium relationship among the variables review in this study. There is no direct relationship between dependent variable and independent variables in the short run but in the long run in the period under study; and this is consistent with our *a-priori* expectation. Also, the co-efficient of all variables will be positive over the time period and also induced in the long run over the review period and beyond.

5.2 Conclusion
In conclusion, one important lesson from the foregoing analysis is that, as Nigeria continues the search for positive influence and stable economic growth system, care must be taken to be as holistic as possible, that is taking care of loopholes that have rendered previous policies and approaches futile. In this respect, one would like to observe the trade sector critically in order to avoid any loopholes. Indeed, if government sustains the relative expenses that are allocated and generated from foreign transactions, a unified capital will be achieved, an important condition for macroeconomic stability would also be satisfied as well. Intuitively, the long-run objective of economic growth should be to achieve to equilibrium, that would guarantee both internal and external balance without undue dependence on equilibrating short term currencies flows, acquisition of long-term external borrowing should be discourage and abrupt monetary policy interventions. For example the mopping of excess cash and loans from the banking system by the central bank of Nigeria.

5.3 Recommendations
The most radical move by the Central Bank Nigeria (CBN) to stabilize money excessiveness was the pursuit of a policy of fixing the ratio without recourse to the parallel market. The potency of this measure in stabilizing the economy, however, depends on the premium spread between the two markets as a result of this policy and its effect on the volatility of the CBN's policies in the future on how well they are able to check the major cause of the problems of the currency, which have been identified as: (i) High inflation in the economy (ii) Unbridled importation (iii) Huge extra-budgetary.

The economy should accommodate or tolerate some level of (mild-creeping) inflation in order to encourage producers to expand production of goods and services. This will eventually lead to high increase of profits and capital intensive appreciation in the long run.

This study recommends that the Central bank should institute policies that will minimize the magnitude of cash volatility while federal government exercises control of viable macroeconomic variables which have direct/inverse effects on leverage on companies.

The fiscal deficit should be minimized. That is, government consumption expenditure should be carried out in a manner. Consequently, it will lead to output appreciation.

The current exchange rate policy should be sustained with the enforcement of two-way quote system in the IFEM, money supply should be moderated to reduce destabilizing and speculative demand for foreign exchange and stem the rapid growth in domestic prices which will fairly benefit the industrial sectors at large. Government and policy makers should employ policies that would increase productivity in all sectors of the economy, through the creation of an enabling environment and provision of subsidies so that business can grow; this in turn would lead to economic boost on gross domestic product in Nigeria and its general populace.

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