TITLE PAGE

THE IMPACT OF EXCHANGE RATE FLUCTUATION ON THE NIGERIA ECONOMIC GROWTH (1980 – 2010)

A PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF BACHELORS OF SCIENCE (B.Sc.) DEGREE IN ECONOMICS.

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APPROVAL PAGE

This is to certify that this research project titled the impact of exchange rate fluctuation on the Nigeria economic growth has been fully supervised and found worthy of acceptance in partial fulfilment of the award of Bachelor of Science (B.Sc.) Degree in Economics, Caritas University, Enugu State

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DEDICATION

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

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I want to express my profound gratitude to God almighty for his mercies and love towards the completion of my project work.

Special thanks and appreciation goes to my mum for her financial support, moral support and prayer what would I have done without you, my gratitude also goes to my siblings, David, Favour, Peculiar and Emmanuel. I also want to acknowledge my big mum Mrs C.A Ajeka for all the support she gave me all round, may God richly bless you.

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ABSTRACT

This research work is centred on the impact of exchange rate fluctuation on the Nigeria's economic growth with special emphasis on purchasing power of the average Nigeria and the level of international trade transaction. Without exchange rate the exchange of goods and services among trading partners will be faced with a lot of problems, which may virtually narrow it down to trade by barter. This exchange also is used to determine the level of output growth of the country. Hence, the rate at which exchange fluctuates calls for a lot of attention. However, with already existing exchange rate policies, a constant exchange rate has not been attained. The rate by which exchange rate fluctuates brings about uncertainty in the trade transaction, and also the rate of naira has been unleashed and continues to depreciate. This has resulted to declines in standard of living of the population increase in costs of production (this is because most of the raw materials needed by industries are usually imported), which resulted in cost-push inflation. We made use of many tests, like the t-statistics table, f-statistic table and the chi-square etc. When we found out real exchange rate has a positive effect on the GDP.

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CHAPTER ONE

1.0 INTRODUCTION

1.1 BACKGROUND OF THE STUDY

the exchange rate is perhaps one of the most widely discussed topic in Nigeria today. This is not surprising given it's macro-economic importance especially in a highly import dependent economy as Nigeria (Olisadebe, 1995:20). Macroeconomic policy formulation is a process by which the agencies responsible for the conduct of economic policies manipulate a set of instrumental variables in order to achieve some desire objectives.

In Nigeria these objectives include achievements of domestic price stability, balance of payment equilibrium, efficiency, equitable distribution of income and economic growth and development. Economic growth refers to the continuous increase in a country's national income or the total volume of goods and services, a good

indicator of economic growth is the increase in Gross National Product (GNP) over a long period of time. Economic development on the overhead implies both structural and functional transformation of all the economic indexes from a low to a high state (Siyan, 2000:150) one of the macro –economic variables of importance is the exchange rate policy country.

Exchange rate policy involves choosing where foreign transaction will take place (Obadan, 1996). Exchange rate policy is therefore a component of macroeconomic management policies the monetary authorities in any given economy uses to achieve internal balance in medium run. Specifically internal balance mean the level of economic activity that is consistent with the satisfactory control of inflation. On the contrary, external or sustainable current account deficit financed on lasting basis expected capital inflow.

It is important to know that economic objectives are usually the main consideration in determining the exchange control. For instance from 1982 – 1983, the Nigerian currency was pegged to the British pound sterling on a 1.1 ration. Before then, the Nigerian naira has been devalued by 10%. Apart from this policy measures discussed above, the Central Bank of Nigeria (CBN) applied the basket of currencies approach from 1979 as the guide in determining the exchange rate was determined by the relative strength of the currencies of the country's trading partner and the volume of trade with such countries. Specifically weights were attached to these countries with the American dollars and British pound sterling on the exchange rate mechanism (CBN, 1994). One of the objectives of the various macro – economic policies adopted under the structural adjustment programme (SPA) in July, 1986 was to establish a realistic and sustainable exchange rate for the naira, this policy was

recommended in 1986 by the International Monetary Fund (IMF). On exchange mechanism and was adopted in 1986.

The key element of structural adjustment programme (SAP) was the free market determination of the naira exchange rate through an auction system.

This was the beginning of the unstable exchange rate; the government had to establish the foreign exchange market (FEM) to stabilize the exchange rate depending on the state of balance of payments, the rate of inflation, Domestic liquidity and employment. Between 1986 and 2003, the federal Government experimented with different exchange rate policies without allowing any of them to make a remarkable impact in the economy before it was changed. This inconsistency in policies and lack of continuity in exchange rate policies aggregated unstable nature of the naira rate. (Gbosi, 1994:70).

1.2 STATEMENT OF THE PROBLEM

The exchange rate of the naira was relatively stable between 1973 and 1979 during the oil boom er (regulatory require). This was also the situation prior to 1990 when agricultural products accounted for more than 70% of the nation's gross domestic products (GDP) (Ewa, 2011:78).

However, as a result of the development in the petroleum oil sector, in 1970's the share of agriculture in total exports declined significantly while that of oil increased. However, from 1981 the world oil market started to deteriorate and with it's economic crises emerged in Nigeria because of the country's dependence on oil sales for her export earnings. To underline the importance of oil export to Nigerian economy, the gross national product (GNP) fell from $76 billion in 1980 to $40 billion in 1996, a number of economic growth

became negative as result of the adoption of structural adjustment programme (SAP).

This major problem which this study is designed to solve is whether the exchange rate has any bearing on Nigerians economic growth an d development. While some Economist dispute the ability of change in the real exchange rate to improve the trade balance of developing countries (Hinkle, 1999:21) because of elasticity of their low export, others believe that structural policies could however change the long-term trends in the terms of trade and the prospects for export led growth. Instabilities of the foreign exchange rate is also a problem to the economy.

1.3 OBJECTIVE OF THE STUDY

the objective of the study is to show the impact of exchange rate on gross domestic product and hence how this effect the growth and

development of the Nigerian economy identifying the impacts of the unstable exchange rate of the naira on these major macro-economic variables would however, depend on the conditions prevailing in the economy at a given time.

The main objectives of exchange rate policy in Nigeria are:

(1) To present the value of the domestic currency.

(2) To maintain favourable external reserve position.

(3) To ensure price stability and price stability and price levels which are consistent with those of our trading partners.

(4) To have a realistic exchange rate which will remove the existing distortions and distortions and disequilibrium in the external sector of the economy.

(5) To have a stable and realistic exchange rate that is in consonance with other macro-economic fundamentals.

1.4 FORMULATION OF THE RESEARCH HYPOTHESIS

Based on the objectives of the study, the following hypothesis were formulated.

Ho: Exchange rate fluctuation has no significant impact on Nigeria economic growth and development.

Hi: Exchange rate fluctuation has a significant impact on Nigerians economic growth and development.

1.5 SIGNIFICANCE OF THE STUDY.

The significance of this research work lies in the fact that if the cause of the unstable exchange rate of the naira is identified and corrected, the economy will rapidly grow and develop into an advance one. This is so because if the unstable exchange rate of naira is proved to be affecting the macro- economy major variables badly, including Real

exchange rate, Real interest rate, inflation rate, gross domestic product and trade openess of the country, attempts should be made to stabilize the exchange rate. This is because these variables are gauge for the measurement of growth and development of any economy. Importantly, this study would help the government and the central bank of Nigeria (CBN) to identify the strength and weakness of each foreign exchange system and hence adopt the policy that suits the economy best. This will definitely enhance growth and development of the economy, the study will also serve as a guide to future researchers on this subject.

1.6 LIMITATIONS OF THE STUDY

The study is structured to evaluate the Nigeria exchange rate as the pilot of economy growth and development. The study is therefore

limited to the core economic growth in Nigeria and not the socio-political factors of the foreign exchange rate.

1.7 THE SCOPE OF THE STUDY

This research work is designed to cover the period 1980-2009 a period of thirty years. The scope consist of the regulatory and deregulatory exchange rate period i.e. the fixed exchange rate and the floating exchange rate period. The study is based on core macro-economic performance of Nigeria between 1980-2010 more so, it rests can core economic growth and development in Nigeria for the period of thirty-one years.

CHAPTER TWO

2.0 REVIEW OF RELEVANT LITERATURE

2.1 THE PURCHASING POWER PARITY THEORY

The purchasing power parity (PPP) is one of the earliest and perhaps most theory of exchange rate between two currencies would be equal to the relative national price levels, it assumes the absence of the trade barriers and transactions cost and existence of the purchasing power parity (PPP). In it's version the purchasing power parity (PPP) doctrine equates the equilibrium exchange rate of the ratio of domestic to foreign price level (Lyon, 1992).

$$E - \frac{pd}{PE}$$

Where,

E = is the nominal exchange rate defined interims of domestic currency per unit of foreign currency.

Pd is the foreign price, PE level with perfect efficiency and absence of trade barriers transactions cost and the purchasing power parity./ the PPP doctrine would be tantamount to the application of the law of one price if all the countries produced exactly the same tradable goods. It is important to know that the PPP is a major component of the monetary approach. The PPP between the two currencies as provided by Gustav Cassel 1998 is the amount of the purchasing power. The PPP is long-term approach used in the determination of equilibrium exchange rate. It is often applied s a proxy for the monetary model in exchange rate analysis (CBN, 1998).

The relative 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 relate

Purchasing power party (PPP) as

$$E - \frac{pd}{PE} R_o$$

Where

R_o is the actual exchange rate at the base period (the number of units of domestic currency per unit of foreign currency). The purchasing power theory parity theory defines two equilibrium rate systems. The first is the short run equilibrium exchange rate which is defined, in this context, as the rate that would exist under a purely freely floating exchange rate balance. Second is the long-run equilibrium that would yield balance of payment equilibrium over a time period in cooperating and cyclical fluctuations in the balance of payments (including those of prevailing exchange rate from the relative purchasing power in a currency are generally attributed to problem of arbitrage and expectations in the goods market. Some4 of the assumption of PPP theory however are quite unrealistic.

Efficiency level for examples vary from country to country and as such there are deferring cost functions.

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 policies move both causality could be quite exogenous or bi-directinal (Argy and Frenkel, 1978: 4)

2.2 THEORETICAL ISSUES

There is consensus in the literature on the impact of exchange rate stability neither on economy growth nor on the mechanism through

which oil price fluctuations affect growth. While macro-and micro-economic analysis of exchange rate system are relied upon in the former, supply and demand analysis of the impact of changes in oil price is used in the latter. From the macro-economic perspective, Schnabel (2007) argued that theoretically, flexible exchange rate allows an easier adjustment in response to asymmetric country specific real shocks. The macro-economic effect of low exchange rate volatility under the fixed exchange rate system are associated with low transactions costs for international trade and capital flow thereby contributing to higher growth. Indirectly, fixed exchange rate enhances international price countries more easily. If exchange rate volatility is eliminated international arbitrage enhances efficiency, productivity and welfare. Earlier, Mundell (2973a, 1973b) opined that monetary and exchange rate policies are the chief source of uncertainty and volatility in small open economics and economic growth is enhanced when exchange rate fluctuations are smoothed.

Schnabel (2007) argued that even large, comparatively closed economics such as Euro area and Japan are sensitive to large exchange rate swings, in particular in the case of application.

The transmission mechanics, through which oil prices affect real economic activity include both supply and demand channels. The supply side effects are related to the fact that crude oil is a basic input to production and an increase in oil price leads to rise in production costs that induces firms lower output, the demand side effect is derived from the fact that oil price changes affect both consumptions and investment decisions. Consumption is adversely affected because such increase in oil price also affects firms input prices and thereby increasing their costs.

2.3 THE TRADITIONAL FLOW MODEL

The traditional flow model, views exchange rate as the product of the interaction between the demand for and supply of foreign exchange (Augustus, 2003,:105). In this model, the exchange rate is in equilibrium when supply equals demand for foreign exchange, (Olisadebe, 1991:56). The exchange rate adjust to balance the demand for foreign exchange depends on the demand domestic resident's have for domestic goods and assets. On the assumption that the foreign demands for domestic goods is determined essentially by domestic income, relative income plays a role in determined exchange rate under the flow model. Since assets demand can be said to demand on difference between domestic and foreign interest rates differential is other major determinants of the exchange rate in this frame work.

Under the traditional flow model i.e. the balance of payments model, the exchange rate is assumed to equilibrate the flow supply of and the flow demand for foreign currency. The B.O.P by deficits (surplus) in current account is offset by surplus in (deficits) in the capacity account. The major limitation of the traditional model or the portfolio balance model include the over-shooting of the exchange rate target and the fact that substitutability between money and financial asset may not be automatic, this led to the development of the monetary approach.

2.4 THE ELASTICITY APPROACH

This approach merely restricts to trade invisible goods. According to this approach, the success of devaluation in improving the balance of trade, and the rough it the balance of payment depends upon the

demand elasticities of import and export of devolving country (Dewett, 1982:502).

In other words, an improvement in the balance of trade will depend upon whether the demand for import and export is elastic. Devaluation makes import of the devaluing country costlier than before and in case her demand for imports is elastic, a higher amount will be adversely the balance of payment of the devaluing country. However, if her demand for exports is elastic then with a fall in the prices of exports as a result of devaluation, the foreigners, which in turn will help in resting equilibrium in her demand for imports is elastic, then the imports of the country will be significantly reduced by devaluing country.

However, some rules are needed to relate the required degree of elasticities for the success of devaluation in improving balance of trade. In this connection will improve the balance of trade of country

of the sum of the elasticities of demand for assuming both elasticities of demand for assuming both elasticities are infinite.

Let Ex^d Em^d = price elastic of demand for exports and imports respectively Ex^s Em^s = price elastic of supply for exports and imports respectively. Then, according to learners conditions devaluation will increase a country's balance of trade, $Ex^d=Em^d$ >1 give infinite Ems. It should be emphasized that the marshal learners conditions relate. The response of capital should be taken into consideration before it can be determined whether devaluation will improve the balance of payments or not. This is because if sufficient amounts of autonomous capital flow into the devaluing country it would be possible to have the sum of elasticites of demand less than one and yet would aggravate the definition and investors fear further devaluation will not make any impact on the import and or export of the devaluing country her demand for imports and exports may elastic.

2.5 THE MONETARY APPROACH

The monetary approach is predicted on the importance of money. It identifies- exchange rate as a function of relative shift in money stock. Inflation rate as a proxy and domestic output between an economy and a trading partner economy. It is important to know that the Purchasing Power Parity (PPP) is a major component of the monetary approach. The monetary approach is recent development in the theory exchange rate determination; it views the exchange rate as being the relative prices of two asset (national monies) is determined primarily by the relative supplies of and demand for those monies and that the equilibrium exchange rate is attained when the existing stocks of the two monies are willingly held (Gbosi, 2003:105). It therefore argues that a theory of exchange rate should be stated conveniently in terms of the supplies of and demands for these monies. In this model, exchange in question in the asset

market. This new theory of exchange rate determination according to (Gartner's and Hoffman, 1985) can be presented in one or two terms: the monetary approach or the asset market approach of exchange rate determination. These approaches emphasizes the roles – of money and other assets in determining the exchange rate when it is flexible. The asset market or monetary approach attributes variation in exchange rate essentially as well as to the factors that influence the supplies of and demand for the various nation monies coven the relative supplies of monies and the fact that the demand for money is viewed to depend on the level of real income and the interest, the monetary approach postulate that the exchange rate is determined primarily by three key factors, namely relative real income and the interest rate differentials. These are several versions of the monetary approach to exchange rate determination. The early flexible price model is based on the price monetary model as based on the assumptions of continued purchasing power parity (PPP) and

the existence of stable money demand functions for the domestic and foreign economies. The sticky price monetary model is an extension of the flexible price model except that it allows for accommodation of short-term deviation from PPP in other words, the sticky price model accepts the fact that there may be deviations from PPP in the short-run both in the long-run; the deviations will tend to disappear.

The sticky-price monetary theory takes interest rate differentials as captured by exchange rate deviation. Price exchange is an automatic and in response to changes are automatic and in response to exchange rate changes.

Inflation therefore depresses the exchange rate unlike the BOP model where the effect of y on exchange rate is positive. It is negative in the sticky-price monetary theory.

2.6 THE PORTFOLIO MODEL

The portfolio balance model views exchange rate as the result of the substitution between money and financial assets (Gbosi, 2003:105). In the monetary approach, there is no room for current movements to play a role in determined exchange rate. Thus the monetary approach cannot explain the often observed tendency of the currency of a country with a current account supplies (deficit) to appreciate (depreciate). This apparent shortcomings of the monetary approach as said to be related to its rather narrow view of an exchange rate as the relative price of two monies in addressing this shortcoming the portfolio balance approach posits that an exchange rate as determined at least in short run by the supply and demand in the markets for a wide range of financial assets. The model assumes that individual allocate their (w) which is fixed at a point in time among alternative asset. Domestic money (m) domestically issued both (b)

and foreign denominated in foreign currency (f) in a simple one-country model.

Theories of economic growth provide the empirical framework for the study, the classical theory of economic growth assumed the existence of a perfectly competitive economy where invisible hand allocate resources efficiently. Though Adam Smith recognised the starts if the development process when argued that division of labour increased productivity which raised output relatively, the classicist regard capital accumulation as key of economic development. The Harrods – Domar growth model is that net investment has a dual effect in that, on the one hand it constitutes a demand for output and the other hand it increase the total productive capacity of the economy. The mechanism through which economic development is accomplished is net investment. Both Harod as well as Domar assume fixed capital –

output ratio, i.e. rigid relationship between capital stock and output, (O. Domar 1957).

The neoclassical growth theory on the other hand stresses efficiency in the allocation of resources and largely ignores social and political factors in economic growth in spite of growth in National output relative, poverty and imbalance – among sector continued to increase. The structural imbalance – among sector continued to increase. The structural change theories of which Arthur Lewis tow sector surplus labour theory is a well known representative addressed these structural distortions. The expected growth of output and employment in the modern sector may both be realised. This is so when capital stock embodying labour sawing technical progress is used in the modern sector in such a situation the expected transfer of the assumed surplus labour from the traditional to the modern sector has often failed to nationalise structural change theory,

therefore emphasise the desegregation of the economy to facilitate greater understanding of the development process. In traditional neoclassical growth theory the emphasis on capital formation has favoured the use of more – capital relative to labour in order to increase output. Capital formation has been emphasis as it related to the production of capital goods, like machines, plants and equipment. To measure economic growth economist use data on Gross Domestic product (GDP) which measures the total income of everyone in the economy, the real GDP per person, also observed large differences in the standard of living among countries (mankiw Gregory N, 1994).

The Solow growth model shows how growth in the labour force and advances in technology interact and how they affect output. The first steps in building the model, we examine how the supply and demand for goods determine the accumulation of capital. To do this, we hold the labour force and technology fixed later we relax these

assumptions, fixed by introduction changes in technology. The Solow growth model enables us to describe the production, distribution and allocation of the economy's output at a point in time.

Moreso, the Solow growth model shows how savings, population growth and technological process affect the growth of output over time. The supply of goods in the Solow model is based on the low familiar production function Y=F (K,L). Output depends on the capital stock and the production function has constant returns to scale.

However the new endogenous growth model propounded that technological changes is endogenous to growth because it is responsible to the signal" as price and profits in the economic system, the endogenous growth theorists introduced the concept of human capital (learner and education) as a factor for growth, these new growth theorist include mankiw, Romar and well, Arrow, Villanueva Rebelos A k Model.

The increasing returns theorist opposed the one classical growth theory that are subject to decreasing return and said that the investment in some new area, product, power source or production technology proceeds through time that each new increment or investment is more productive than the previous increment, the source of these increasing return can be seen through cost and ideas. Investment in the early stages of development may creates new skill and attitudes in the work force whose cost may be lower than the previous investment at the initial stage. Also each investor may find environment that are conducive or favourable to invest because of the infrastructure that has been created by those who came before.

Finally, the new growth model do not predict convergence and hence countries with abundant physical and human capital will grow permanently faster than countries with small capital in contrast to the

slow-swan model, the new growth model predicts divergence as implied in (Romer, 2008: 2.5 18).

2.7 EMPIRICAL LITERATURE

Empirical evidence has shown strong effect of short-run and long-run adverse effect of exchange rate swings on economic growth performance through the trade channel. The nature of the effect, however, runs in either position or negative direction. According to IMF (1984) and European commission (1990) empirical evidence in favour of a systematic positive (or negative) effect of exchange rate stability on trade (and thereby growth) in small open economies has remained mixes. Bachetta and van wincoop (2000) found based on a general equilibrium framework that exchange rate stability on trade. Gravity models have been used as frame work to quantify the impact of exchange rate stability on trade and growth, in particular in the

context of monetary union. Using panel estimations for more than 180 countries Edwards and Levy Yeyati (2003) found evidence that countries with more flexible exchange rate grow faster. Eichengreen and Lablang (2003) found strong negative relationship between exchange rate stability and growth for 12 countries over a period of 120 years. They conclude that the results of such estimations strongly depend on the time period and the sample Schnabel (2003) found robust evidence that exchange rate stability is associated with more growth in the EMU periphery. The evidence, according to him, is strong for EMERGING Europe which has moved from an environment of high macro-economic instability to macro-economic stability during the observation period. Other empirical studies examines the role of capital market in ensuring exchange stability and economic growth.

Vamvakidis (1998) study undertook and investigation aimed at finding any relationship between regional trade agreement (RTA) and growth. He focused on whether openness size of population and the gross domestic product (GDP) affect growth of countries that have entered into RTA. The results show that economies with open economics gorw faster. He also provided evidence that the level of development on neighbouring open economies have some spill over effect. By contrast, the lead level of development in open economics has no little on domestic growth. Similar studies were done by Langhammer and Heinmenz (1990). Their empirical work found out that regional agreement made up of developing nations has had no significance contributions to trade expansion.

Barron and Sala-Martins (1995) estimated the impact of trade protection on growth. Using tariff on capital goods and intermediate goods as a measure of protect their result indicated negative impact

between trade liberalization and growth. Countries with low results according to them grow faster than those with high tariff. This confirms the earlier theoretical literature in favour of trade liberalization the forgoing literatures examined have known all positive relationship between trade and growth, in the words of Onah (2002), trade liberalization policy. In Nigeria, was a companied in 1987 budget and the rate of inflation has been encouraging. In her own view, the rate of inflation has been reasonably controlled though not reduced thoroughly. In spite of their effort to reduced prices the local industries are collapsing because of inadequate demand for their products.

However, Boadiary and Trendenick (1978) using static applied general equilibrium (first generation) found that remove or tariff in Canada would cause welfare to declined by about to trade deterioration resulting from an import tariff reduction, as implied by

national product differentiation assumption has lid Broom (1987) to conclude rather caterically that unilateral trade liberalization is and E (>0) and (<0) – the income elasticities of demand for exports and imports respectively.

Extensive empirical research (sees mc combine and thirwall, 1994, and 1977) shows that x/p is a very good predictor of country's long run growth performance, so that allowing for differences INP, income growth and export growth are highly correlated. The conclusive evidence that most developing countries are balance of payment constrained growth rate (or financed by capital inflows) while resources lie idle domestically in these circumstances, export growth will raise output growth by relating balance of payments constraints on demand irrespective of any supply-side effects of capital flows.

In an open economy context the major component of autonomous demand is export growth and faster export growth allows for other

components of demand to grow faster. It is possible, as mc combine does, to then disaggregate the contribution to growth exports and other components of demand within this demand-oriented framework.

Onah (2002) has it that with trade liberalization, the structure of the export trade of developing countries has however, undergone a substantial transformation. Since 19890's with rapid growth in the export of manufacturer, this by the early 1990's and hand come to be the dominant flow of merchandise from developing to developed countries represented three continued to manufacture exports to developed countries represented three times the values of non-oil commodities had exceeded the value of manufactured exports.

The empirical work which has been undertake to explore possible links between exchange rates and macro-economic variables is based on the analytical framework developed by Kamin (1997) which

provides evidence on the existence of an empirical relationship between the rate of inflation and the level of the real exchange rate in selected Latin and Asian countries and advance industrialisation economics. As a fellow to the analytical framework provided by Kamin (1991), this study is designed to examine to foreign exchange market in Nigeria with the view of investigating the relationship between the exchange rates and some macro-economic variables.

Morely (1992) analyzed the effect of real exchange on output for twenty-eight devaluation experiences in developing countries using a regression framework.

It was explicitly concluded that exchange rate devaluation is a major factor for the upsurge inflation (Kamin 1996, Odedoolkun, 1996, Lane and Green (1991).

Kamin (1996) showed that the level of rate of inflation in Mexico during the 1980's and 1990s.

Canetic and Greene (1991), Falokun (1994) reached similar conclusions for some African countries including Nigeria. Dell' Arricia (1999) examined the effect of exchange rate fluctuation on the bilateral trade of European union members plus Switzerland over the period 1975 – 1994 using several definitions of volatility. In basic OLS regression, exchange rate fluctuation had a small but significant negative impact on trade; reducing volatility to zero in 1994 would have increased trade by an amount ranging from the ten to 13 percent, depending on the measures of fluctuation used using both fixed and random effects, the impact of fluctuation was still negative and significant but smaller in magnitude. The author found that elimination of exchange rate fluctuation would have increased trade by about 3 percent in 1994.

Mauna and Reza (2001) studies the effect of trade liberalisation, real exchange rate and trade diversification on selected North Africa

countries Morocco, Algeria and Tunisia. By decomposing in real exchange rate into fundamental and monetary determinants, and by using both standard statistical measures of exchange rate fluctuation and the measures of exchange rate risk developed by Puree and Steinher (1989), they reached the conclusion that exchange rate depreciation has a positive effect on the quantity or manufactured exports while exchange rate misalignment, volatility or fluctuation has a negative effect. According to them, the motivating result is that all manufacturing sub-sectors are responsive to exchange rate change but the degree of responsiveness differs across sectors.

In their study, Broda and Romails (2003) found that real exchange rate volatility depresses trade in differentiated goods. The study used bilateral trade model, where the oils (ordinary least square) and GMM (Generalized method of moment) methods were used. After taking into account the direction of causality, they ascertained that a 10

percent increase in volatility depresses differentiated product trade by 0.7 percent, while a 10 percent increase in trade reduces exchange rate volatility by 0.3 percent.

Their Ols estimated results showed that the effect or volatility on trade is reduced by 70percent. They justified the result by arguing that much of the correlation between trade and change to the effect that trade has in depressing fluctuation. Their study further revealed that a 10 percent increase in the intensity of bilateral trading relationship reduces the volatility if the associated exchange rate by 0.3 percent.

Moving to the studies of exchange rate volatility on trade in LDC'S Coes (1981) who used a log-level model specification to examine Brazilian exports, used annual data for 1965-1974 to arrive at the conclusion that a significant reduction in exchange rate uncertainty in

Brazilian's economy during the crowing – pg era was adopted in 1968.

Phillips (1986), Granger and Newbold (1974) found that export and exchange rate risks are related, however, they criticize the use of a log-level model when the data is non stationary.

Osuntogun et al (1993) in their analysis of strategic issues in promoting Nigeria's non oil exports, determined the effects of exchange uncertainty on Nigeria's non oil export performance as a side analysis. This is the pioneering effort in Nigeria to determine the effect of exchange rate risk on exports.

However, their model did not take into consideration the cross price effects.

exchange rate acts as shock absorb if rigidly fixed, the shocks of inflation and deflation and deflation from aboard are transmitted to internal economy systems. But variations in the exchange can wand

off the invasion of the inflationary and deflationary forces. If demand and supply could work excellently in economic sense, it would be better to allow exchange rate to be freely determined by both demand and supply.

In conclusion, most of the economic analysis indicated that devolutions (either increases in the level of the real exchange rate or in the rate of depreciation) were associated with a reduction in output and increase in inflation.

Nigeria is regarded as the largest oil producing nation in Africa and the tenth Largest oil producing nation in the world interim of oil reserves with a production level of close to 2 million barrels per day, though this level has been seriously affected due to crises in the oil production region Nigeria benefited handsomely from likes in the oil. Since the beginning of second guild war. The balance of payment portion of the country remains highly favourable with over 20 months

of imports, which translates to over & 55 billion of reserves. Exchange rate was moderately stable between 2000 and 2008, while real GDP growth average 5.01 percent within the same period.

However, oil consumption in the country heavily relies on the import of refined petroleum and products since the collapse of Local refineries in the late 1980's thus over 90% of the country domestic requirements of oil are sourced from imports. The near collapse of the power generation and distribution industry in the country further accentuates the acute shortage of energy. The burden on the government to provide energy resource at subsidy rate became very unwisely and between 1999 and 2008, the federal government of Nigeria has reduced it's subsiding approximately 9 times. This seriously affects production, consumption and instruments in the country between 1986QI and 2007Q4, while figures 23 and 4, all in the appendix, present the trends in the various in natural log.

2.8 LIMITATIONS OF THE PREVIOUS STUDIES

The impact of unstable exchange rate and devaluation on the economy have been a matter of concern to many scholars, researchers and business entrepreneurs. Another major problem is the issue of appropriate definition of the concept of equilibrium". This portion of the work reviews the studies of different people on aspect of exchange rate. Devaluation and lack of appropriate definition of the concept of equilibrium in the measurement and analysis of the real exchange rate.

Egon (1963), examined the effects of exchange rate on price level balance of payment and economic integration. He rightly pointed out how these economic variables are affected by variations in exchange rate of the currency.

Aluko (1988), in his own view on the appreciation and depreciation of the naira since 1970 with regards to its effect on balance of

payments and external reserves of the Nigeria, concluded that depreciation of the naira which he said was overvalued was necessary for the implementation of SAP. He did not however, consider the developing nature of the Nigerian economy. And as a developing economy, Nigeria mainly produces primary product and imports machinery and some (majors) raw materials for its industries. He did not consider the attendant high cost of imports which depreciation and devaluation would impose on such imports which would in turn, lead to high inflation rate. Kanyo (1988), in his work on blames competitive price floating exchange market. This he said is necessary due to the developing nature of the Nigerian economy.

Eze (1988), in his appraised of foreign exchange rate fluctuation on the Nigeria economy recommended that the central bank Nigeria should stabilize the value of Naira exchange at efficiently approved rate to the public. He action of the black market in which foreign

exchange is sourced faster than at the banks. He however suggested what the government should influence in the foreign exchange rate, positive economy reforms that will reduce the adverse effects on unstable foreign exchange rate on the Nigeria economy.

The proponent of the big push strategy are of the view that the economics of developing countries like Nigeria cannot be described as being stagnant but also lack the enthusiasm and courage to take the great leap to the exponents of this theory, the less developed countries needs to get out of it's underdevelopment and the only way is to use a huge amount of resources in order to start the process of development, the less developed economics needs to use more than half of the national income of the economy for all the investment. According to the proponent of this strategy, the idea of bit progress or step is not possible to help developing countries to achieve their goal of self sustaining growth. The advocate of the strategy stress

that as a car needs a big push before it can start when it has a battery problem so is development process, it needs serious out push for meaningful result. The advocate of the long push strategy does not indicate where the big push will come from, is it public sector or private sector.

The contribution of these authors is still in order to study the economic implication of exchange rate instability and how less developed countries can achieve economic growth and development.

2.9 DEFINITION OF TERMS

Real Exchange Rate (RER)

Real exchange rate is that which measures the relative price indicators we have in terms of economic international competiveness, that is to know the extent of international competitiveness. The real

exchange rate measures both changes in nominal exchange rate and change relative inflation rate (Obadan, 1994). It is the rate of the price level.

It is also a relative price between you as domestic partner abroad, therefore, it is the rate of the price indicator between the tradable and non-tradable goods.

The Nominal Exchange Rate(NER)

The nominal exchange rate (NER) is the derivation of the nominal exchange rate index differential ratio relationship to the base exchange rate where the value of the trade weight index of the country under consideration is of importance in computing the indices of all countries (Hinkle and Monties, 1999). The basis of computation of the nominal effective exchange rate index is the average of trade volume of a country (i.e. the value of important export) over a givern

period of time expressed as a ratio of the average total of the trade volume currencies which are included in the basket.

The purchasing power parity (PPP)

It is important to know that the Purchasing Parity (PPP) is a major component of the monetary approach. The PPP between two currencies Gustav Cassel is defined as the amount of purchasing power.

The purchasing power parity (PPP) is a long-term approach used in the determination of equilibrium exchange rate. It is often applied as a proxy for the monetary model in exchange rate analysis (CBN, 1998). Suppose there was only one commodity for eg. Bread and suppose that a loaf of bread cost $1:00 in USA, £1:00 in Britain and ₦1:00 naira in Nigeria, the exchange of dollar to pound and to naira will be express as $1:00 : £ 1:00 if this is not so, it will be

impossible to purchase goods at low prices in one country and result the higher prices in another country.

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 THEORETICAL FRAMEWORK

This lies in the fact that if the cause of unstable exchange rate of the naira is classified and corrected, the economy will rapidly grow and develop into an advance one. This is so because if the unstable exchange of the naira is printed to be affecting badly the major macroeconomic variables including Real exchange, Real interest rate, inflation rate, gross domestic product (GPD) and trade openness of the country, attempts should be made to stabilize the exchange rate. This is so, because these macroeconomic variables are the gauge for the measurement of growth and development of any country.

More so, one of the strongest arguments in support of flexible exchange rate is that it is possible to successfully offset basic charges

in supply and demand for any extended period of time either on exchange rate also requires little or no government intervention top offset the influence of changing supply and demand conditions on exchange rates. Finally, flexible exchange rates generally do not transmit.

3.2 MODEL SPECIFICATION

We will employ the single equation technique of econometric simulation for this study. This has become expedient because of its theoretical plausibility, explanatory ability, accuracy of the parameter estimate, simplicity and forecasting ability (Kotosoyianns, 1977, Gujarity, 2004).

The method that will be adopted is the classical least regression model that will use the ordinary least square (OLS). The choice of

this method is made because it is best suited for testing specific hypothesis about the nature of economic relationship (Studenmund, 1998).

the model thus becomes

$GDP = b_o + b_1 EXR + b_2 Int + b_3 + b_4 OPENESS$

Where

EXR = exchange rate

Int = Interest rate

INF = Inflation rate

$\frac{X+M}{GDP} = \text{Degree of trade opennes}$

GDP = Growth rate (GDP)

Where RER is the exchange rate, Intr Interest rate, Infl Inflation rate, To trade openness which are independent variables causing variations on the dependent variations.

Gross Domestic Product (GDP)

B_o is the intercept parameter, B_1, B_2, B_3, B_4, are coefficient of the variables, μi is the stochastic disturbances or error term.

The parameter B0, i.e. intercept signifies that even without the impact of other variables output growth (YG) will still be growing since it is not equal to 0.

The parameter B_1, B_2, B_3, B_4, which are coefficient of the variables denote the degree of change of the dependent variables (YG) as a result of a unit change of other independent variables the error term (μi) which is used to capture the impact of other variables that are not included in the mode.

3.3 METHOD OF EVALUATION

Time series econometric shall be employed, the classical linear regression model that will use the ordinary least square (OLS) method being the most popular and widely used among the variance time series econometric techniques. The ordinary least square (OLS) estimated on account of:

a. **Linear Estimator:** is often expressed as a linear relationship, it is by far the easiest computationally. An estimator is a linear function of the sample observation Y_1Y_2....., Y_n, a linear estimator will have the form $K_1Y_1 + K_2Y_2 + K_nY_n$. Where the Ki are some constants.

b. **Unbiased Estimator:** The expected value of the sample estimator is known to approximate the real value of the population parameter. b is an unbiased estimator of b if ∑(b) is different from b_1 that is ∑(b), that is ∑(b) – b.

c. **Minimum variance estimator (or best estimator):** an estimator is best when it has the smallest order estimate obtained from other econometric method symbolically a is best if $\sum(b\text{-}E(b))]^2$ or var(b) (Koutsoyiannis, 1977:102), where b is any other (not necessary unbiased estimate of the time parameter b).

d. **Sufficient Estimator:** A sufficient estimator that utilizes all the information a sample sustain about the true parameters, it must use all the observation of the sample. Large sample properties.

Asymptotic properties:

i. Asymptotic unbaisedness

ii. Consistency

iii. Asymptotic efficiency

3.4 ESTIMATION PROCEDURE

The ordinary least square method (OLS) of the classical linear regression model will be used to carry out this; this is because the equation is specified in a linear form. The OLS was chosen for estimation because of the following reasons:

i. The OLS is fairly easy to compute as compared to economic methods

ii. The mechanism of the OLS is simple to comprehend and interpret.

iii. Finally, the parameters estimated by the OLS methods have some desirable optical properties. They are best, linear, unbiased estimator (BLUE) since the regression we shall evaluate the parameters using an econometric package.

3.4.1 ECONOMIC A PRIORI TEST

The economic a priori test shall be conducted to enable us examine the magnitude and size of the parameters estimate. This evaluation is guided by economic theory to ascertain if the parameter estimate conforms to expectation.

The variable for real interest rate represents the user cost of capital. There exists a negative relationship between interest rate and investment in this economic growth.

The variables for political risk are expected to exhibit a positive impact on free flow of export. This is informed by the fact that trade will move freely into areas or economy with stable political system. The variable for trade in the economy is measured as trade to output ratio. Countries with high trade potential will attract inflow of capital into the country. So there exists a positive relationship between trade openness and economic growth.

Real exchange rate is expected to be positive because depreciation of the currency which is increase in exchange rate boost export and this brings about economic growth.

Variables	**expected signs**
Exchange rate (EXR)	Positive (+)
Interest rate	Negative (-)
Inflation rate	Negative (-)
Degree of trade openness	Positive (+)
Growth rate (GDP)	Positive (+)

3.4.2 STATISTICAL TEST (FIRST-ORDER)

Under the statistical test (first-order) test we will test for the goodness of fit, the individual significance of each regress or using

the t-test and finally significance of the regression model using the t-test.

(a) **Goodness of fit-test:** we shall make use of the coefficient of multiple determinations R^2 to find how well the sample regression line fits the data. R^2 measures how the variations in the explanatory variable effect the dependent variable.

(b) **Student's t-test:** It is used for testing the significance. We shall make use of 5% level of significance with n – k degree of freedom and where necessary, the probability value will be used as a rule thumb.

Where a = 0.05 (n – k), n = number of observation (sample size), k = total number of estimated parameters.

(c) **The f-test:** This will be used for testing the overall significance of the regression model. In other words, it will be used for testing the joint impact of the independent variables on the dependent variables.

The regression might not have influence on the dependent variable except in conjunction with other regressions. We shall use 5% level of significance with (k – 1) (n – k) degree of freedom where V_1 = k – 1, V_2 - n).

3.4.3 ECONOMIC (SECOND ORDER) TEST

Economic test will be used for empirical verification of the model. This will range from test including autocorrelation, normality and heteroscedasticity.

1. **Autocorrelation:** The classical linear regression model assumes that autocorrelation does not exist among the disturbance terms. In order to find out where the error terms are correlated in the regression, we will use the Brush-Godfrey serial correlation test.

Brush-Godfrey test is test for detecting autocorrelation. It allows for autoregressive (AR) and moving average (MA) error structure. It was jointly developed by Breusch and Godfrey (Gujarati, 2004).

2. **Normality Test:** This test will be conducted to find out if the error terms are normally distributed with zero mean and constant variance i.e. if μ N(0, 52). This is one of the assumptions of the classical linear regression model. The Jargue Bera test will be used to test for the normality in the time series variables used. This test will be conduced by augmenting the equation by adding legged values of the dependent variables.

3. **Heteroscedasticity Test:** Heteroscedasticity occurs when the variance of the error term additional of the chosen values of the explanatory variables is not constant. In order to

capture heteroscedasticity and specification bias, the cross-product terms will be introduced among auxiliary regressions.

3.5 NATURE AND SOURCE OF DATA

The data used for this study are annual times series from 1980 – 2009. They are sourced from the Central Bank of Nigeria (CBN) Statistical Bulletine (Dec, 2010).

CHAPTER FOUR

PRESENTATION AND ANALYSIS OF RESULT

4.1 Presentation and Interpretation of Result:

Dependent variable: Gross Domestic Product.
Method: Ordinary Least Square.
Period of study: 1980 – 2010
Included Observations: 31

Variable	Coefficient	Standard error	t-statistics	t-prob.	PartyRỳ
Constant	2.0700	3.7081	0.558	0.5815	0.0118
EXR	1.2095	20251	5.972	0.0000	0.5784
INT	-1.2527	1.9805	-0.633	0.5326	0.0152
INF	15380	58950	0.261	0.7962	0.0026
OPN	-3.0045	7.8866	-0.381	0.7063	0.0056

Rỳ = 0.678894 F{4, 26} = 13.743 {0.0000} ȧ = 4.88204

DW = 1.32 RSS = 6.196926499 for 5 variables and 31 observations.

From the above, the interpretation of the result as regard the coefficient of various repressors' is stated as follows:

The value of the intercept which is 2.0700 shows that the Nigerian economy will experience a 2.0700 increase when all other variables are held constant.

The estimate coefficients which are 1.2095 {EXR} shows that a unit change in EXR will cause a 1.2095% increase in GDP, -1.2527 {INT} shows that a unit change in INT will cause a 1.2527% decrease in GDP, 15380 {INF} shows that a unit change in INF will cause a 15380% increase in GDP and -3.0045 {OPN} shows that a unit change in OPN will cause a 3.0045% decrease in GDP.

4.2 ECONOMIC APRIORI CRITERIA

The test is aimed at determining whether the signs and sizes of the results are in line with what economic theory postulates. Thus,

economic theory tells us that the coefficients are positively related to the dependent variable, if an increase in any of the explanatory variables leads to a decrease in the dependent variable.

Therefore, the variable under consideration and their parameter exhibition of a priori signs have been summarized in the table below.

This table will be guarded by these criteria

When $\beta > 0$ = conform.

When $\beta < 0$ = not conform.

Variables	Expected signs	Estimate	Remark
EXR	+	$\beta > 0$	Conform
INT	+	$\beta < 0$	Not Conform
INF	+	$\beta > 0$	Conform
OPN	+	$\beta < 0$	Not Conform

From the above table, it is observed that the signs of EXR and INF parameters actually conform to the economic theories, while the reverse is the case for INT and OPN.

A positive relationship which exists between EXR, INF and GDP indicates that an increase in either EXR and/or INF will result in a positive change in the Gross Domestic Product. This conforms to the priori criteria because an increased or high EXR and INF over the years will increase GDP in the economy.

4.3 STATISTICAL CRITERIA {FIRST ORDER TEST}

4.3.1. COEFFICIENT OF MULTIPLE DETERMINANTS {R^2}

The R^2 {R-Squared} which measures the overall goodness of fit of the entire regression, shows the value as 0.678894 = 67.8894%

approximately 68%. This indicates that the independent variables accounts for about 68% of the variation in the dependent variable.

4.3.2. THE STUDENT'S T-TEST:

The test is carried out, to check for the individual significance of the variables. Statistically, the t-statistics of the variables under consideration is interpreted based on the following statement of hypothesis.

H_0: The individual parameters are not significant.

H_1: The individual parameters are significant.

Decision Rule:

If t-calculated > t-tabulated, we reject the null hypothesis $\{H_0\}$ and accept the alternative hypothesis $\{H_1\}$, and if otherwise, we select the null hypothesis $\{H_0\}$ and reject the alternative hypothesis $\{H_1\}$.

Level of significance = α at 5% = $\frac{0.05}{2}$

= 0.025

Degree of freedom: n-k

Where n: sample size.

K: Number of parameter.

The t-test is summarised in the table below:

Variables {t-value}	t-tab	Remark
EXR {5.972}	± 2.056	Significant
INT {-0.633}	± 2.056	Insignificant
INF {0.261}	± 2.056	Insignificant
OPN{-0.381}	± 2.056	Insignificant

The t-statistics is used to test for individual significance of the estimated parameters {β_1,β_2,β_3 andβ_4}. From the table above, we can deduce that EXR {5.972}, are greater than 2.056 {going by absolute values} which represents the t-tabulated implying that EXR is statistically significant. On the other hand, the intercept {0.558}, INT {-0.633}, INF {0.261} and OPN {-0.381} are less than the t-tabulated {2.056} signifying that they are all statistically insignificant.

4.3.3. F-STATISTICS

The F-statistics is used to test for simultaneous significance of all the estimated parameters.

The hypothesis is stated;

H_0: $\beta_1 = \beta_2 = \beta_3 = \beta_4$

H_1: $\beta_1 \neq \beta_2 \neq \beta_3 \neq \beta_4$

Level of significance: α at 5%

Degree of freedom: $\frac{k-1}{n-k}$

Decision Rule:

If the f-calculated is greater than the f-tabulated {f-cal > f-tab} reject the null hypothesis $\{H_0\}$ that the overall estimate is not significant and conclude that the overall estimate is statistically significant.

From the result, f-calculated {13.743} is greater that the f-tabulated {2.74}, that is, f-cal > f-tab. Hence, we reject the null hypothesis $\{H_0\}$ that the overall estimate has a good fit which implies that our independent variables are simultaneously significant.

4.4 ECONOMETRICS CRITERIA

4.4.1. TEST FOR AUTOCORRELATION

One of the underlying assumptions of the ordinary least regression is that the succession values of the random variables are temporarily independent. In the context of the series analysis, this means that an error {Ut} is not correlated with one or more of previous errors $\{U_{t-1}\}$. The problem is usually dictated with Durbin-Watson {DW} statistics.

The durbin-watson's test compares the empirical d* and du in d-u tables to their transforms $\{4-d_L\}$ and $\{4-d_U\}$.

DECISION RULE

1) If $d^* < D_L$, then we reject the null hypothesis of no correlation and accept that there is positive autocorrelation of first order.

2) If $d^* > \{4-d_L\}$, we reject the null hypothesis and accept that there is negative autocorrelation of the first order.
3) If $d_U < d^* < \{4-d_U\}$, we accept the null hypothesis of no autocorrelation.
4) If $d_L < d^* < d_U$ or if $\{4-d_U\} < \{4-d_L\}$, that test is inconclusive.

Where: d_L = Lower limit

D_U = Upper limit

D* = Durbin Watson.

From our regression result, we have;

D* = 1.32

D_L = 1.160

D_U = 1.735

$4-d_L$ = 2.84

$4\text{-}d_U = 2.265$

Conclusion:

Since d_L {1.160} < d* {1.32} < d_U {1.735} or if {$4\text{-}d_U$} {2.265} < {$4\text{-}d_L$} {2.84}, the test is inconclusive.

4.4.2. NORMALITY TEST FOR RESIDUAL

The Jarque-Bera test for normality is an asymptotic, or large-sample, test. It is also based on the ordinary least square residuals. This test first computes the skewness and kurtosis measures of the ordinary least square residuals and uses the chi-square distribution {Gujarati, 2004}.

The hypothesis is:

H_0 : $X_1 = 0$ normally distributed.

H_1 : $X_1 \neq 0$ not normally distributed.

At 5% significance level with 2 degree of freedom.

JB = $n\{(\frac{s^2}{6}) + \frac{(k-3)^2}{24}\}$ = 7.2834

While critical JB > $\{X^2_{\{2\}}$ df$\}$ = 5.99147

Conclusion

Since 7.2834> 5.99147 at 5% level of significance, we reject the null hypothesis and conclude that the error term does not follow a normal distribution.

4.4.3. TEST FOR HETEROSCEDASTICITY

Heteroscedasticity has never been a reason to throw out an otherwise good model, but it should not be ignored either {Mankiw Na, 1990}.

This test is carried out using White's general heteroscedasticity test {with cross terms}. The test asymptotically follows a chi-square distribution with degree of freedom equal to the number of regressors {excluding the constant term}. The auxiliary model can be stated thus:

$$Ut = \beta_0 + \beta_1 MS + \beta_2 RIR + \beta_3 RER + \beta_4 RGDP + \beta_5 MS^2 + \beta_6 RIR^2 + \beta_7 RER^2 + \beta_8 RGDP^2 + Vi$$

Where Vi = pure noise error.

This model is run and an auxiliary R^2 from it is obtained.

The hypothesis to the test is stated thus;

H_0: $\beta_1 = \beta_2 = \beta_3 = \beta_4 = \beta_5 = \beta_6 = \beta_7 = \beta_8 = 0$ {Homoscedasticity}

H_1: $\beta_1 \neq \beta_2 \neq \beta_3 \neq \beta_4 = \beta_5 \neq \beta_6 \neq \beta_7 \neq \beta_8 = 0$ {Heteroscedasticity}.

Note: the sample size {n} multiplies by the R^2 obtained from the auxiliary regression asymptotically follows the chi-square distribution with degree of freedom equal to the number of regressors {excluding constant term} in the auxiliary regression.

Using Pc Give software package saves us the above rigour by calculating the chi-square value.

Decision Rule

Reject the null hypothesis if $X^2_{cal} > X^2$ at 5% level of significance. If otherwise, accept the null hypothesis. From the obtained results, $X^2_{cal} = 16.662 > X^2\ 0.05\ \{8\} = 15.5$ we therefore accept the alternative hypothesis of heteroscedasticity showing that the error terms do not have a constant variance and reject the null hypothesis showing that the error terms have a constant variance.

4.4.4 TEST FOR MULTICOLLINEARITY

The term Multicollinearity is due to Ragnar Frisch. Originally it meant the existence of a "perfect" or exact, linear relationship among some or all explanatory variables of a regression model. The tests were carried out using correlation matrix. According to Barry and Feldman {1985} criteria; "Multicollinearity is not a problem if no correlation exceeds 0.80".

	GDP	EXR	INT	INF	OPN	REMARK
GDP	1.000					-
EXR	0.8179	1.000				M
INT	0.1291	0.2608	1.000			Nm, Nm
INF	-0.2829	-0.3270	0.3016	1.000		Nm, Nm, NM
OPN	0.3773	0.5341	0.4699	0.06219	1.000	Nm, Nm, Nm, Nm

Where M = Presence of multicollinearity

Nm = No multicollinearity.

From the above table, we can conclude that multicollinearity exists only between EXR and GDP.

CHAPTER FIVE

5.0 SUMMARY OF FINDINGS, CONCLUSIONS AND POLICY RECOMMENDATION

5.1 SUMMARY OF FINDINGS

This research work is meant to emphasis on the issue of fluctuating exchange rate and its impact on international trade, purchasing power of average Nigerian and output growth level of Nigeria.

This study investigated empirically the impact of variables such as exchange rate (EXR), interest rate (INT), inflation rate (INF). GDP and degree of trade openness (TO) were used for analysing purpose. All data used are secondary data obtained from the Statistical Bulletin of Central Bank of Nigeria.

Inflation rate has a negative impact on the GDP. The interest rate has a positive impact on the GDP. Trade openness has a negative

impact on the GDP. In the autocorrelation, we accept the null hypothesis. The estimator have constant variance and are well specified.

From the empirical reviewed work, some authors argued that exchange rate is positively related to output growth, while some authors argued that it is negatively related. However, from empirical analysis of the study, it was found that exchange rate is positively related to output growth.

5.2 CONCLUSION

Having seen that exchange rate fluctuation have an impact on the economy. Thus, there is need to maintain a stable exchange rate. Hence with stable exchange rate, it will help to curtail inflation, maintain a favourable balance of trade, boost export of domestic commodities and above all, maintains steady growth of the economy.

5.3 POLICY RECOMMENDATIONS

Sequel to the finding of this study, I specifically made the following policy recommendations to the maintenance of stable exchange rate.

To control exchange rate from fluctuating, these policies have to be adopted.

1. The government should create incentive such as loans subsidy etc to small scale industries, thereby encouraging them to process domestic goods into processed goods that will help boost our export.
2. The government should encourage the export promotion strategies in order to maintain a surplus balance of trade.
3. An effective policy should be made based on the fiscal and monetary policies which should be aimed at achieving a realistic exchange rate for naira.

4. An appropriate environment and infrastructural facilities should be provided so that foreign investors will be attracted to invest in Nigeria. This will provide job, increase income and level of the standard of living of the people.
5. Strict foreign exchange control policies be adopted in order to help in determination of appropriate exchange rate value. This will go a long way to strengthen the naira.
6. In the case of import, tariffs can be placed to be a very high on imported goods thereby discouraging imports.
7. Exchange rate liberalization is also critical in facilitating trade in any economy, we therefore advise the policy makers to ensure that exchange to ensure that exchange rate should determined by the forces of demand and supply.
8. Interest rate should be at a minimum, in order for the purchasing power of an average Nigeria to increase.

9. Finally, the government should influence the foreign exchange rate, by positive economic reforms that will reduce the adverse effect of unstable foreign exchange rate on the Nigerian economy with respect to trade flow.

BIBLIOGRAPHY

Amache, R.C and Cerbich, H.H (1986). *Principle of Macro Economics*. Chinati: South Western Publishing Company.

Anuanwaokoro, M. (1999). *Theory and Policy of Money and Banking*. Hosanna Publication.

Anyanwu, A. (1995). *Fundamentals of Economics*. Jonance: Educational Publisher Ltd. Onitsha.

Chinelo, I.M. (2006). *Basic Statistics and Probability. Nigeria*: Prince and Communication.

Cole, A. and Obstrald, S. (1991). *The International Economy*. London: McGraw Hill Inc.

Denis, A. and Alfred, J. (1998). *International Economics*. New York, Irewin: C.B.N Publication.

Mankiw, N.G. (1994). *Macro Economics*. New York: Worth Publishers.

Obandan, M.I (1993). *Overview of Nigeria's Exchange rate Policy and Management*. Lagos: C.B.N Publications.

Oleka, P. (2004). *Macro Economics Theory and Practice*. Lagos: C.B.N Publication.

Robert, J.C. (1998). *International economics*. United state: Little Brown and Company Inc.

Soludo, C.C. (1998). *Macro-Economic Policy Modelling of African Economics*. Lagos: Acena Publisher.

West, K. (2002). *Monetary Policy and the Volatility of the Real Exchange Rate*. New Zealand: McGraw Hill companies.