TITLE PAGE

EXCHANGE RATE STABILITY AND EXPORT PERFORMANCE: THE CASE STUDY OF AGRICULTURAL PRODUCE IN NIGERIA, (1978-2010).

BY

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APPROVAL PAGE

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DEDICATION

This work is dedicated to God Almighty for His special blessings and Graces to see me through in this final lap. To my very good friend Mr. Raphael Inyaba and my family and siblings: Emmanuel, Kenneth, Okechukwu, Onyinye and Nkiruka

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ABSTRACT

Exchange rate is the price of one currency in terms of another currency. Exchange rate stability has to do with government actions in order to stabilize exchange rate so as to increase export in Nigeria especially export of primary products (agricultural produce) over the years, Nigeria has adopted various exchange rate regimes ranging from fixed exchange regime to floating exchange regime. The main purpose of this work is to determine to what extend does the volatility and risks of exchange rate affect exports of agricultural produce in Nigeria. To do this, the classical Linear Regression Model is applied and the ordinary least square econometric technique is also used to estimate the impact of exchange rate on agricultural export trade earning. The variables used are export trade earnings as the dependent variable and exchange rate, interest rate, inflation and agricultural out put as the independent variables. Economic test shows the piori criteria of the parameters used to determine if it conforms to the economic theory. The statistical criteria employed are the F – test, the T – test and R^2 which tests the significance of the parameters. The econometric criteria (second order test) used are the Durbin Watson test, which tests for the auto correlation and the randomness of the residuals. The Jarqu-Bera criteria is used to test for normality of the residuals. From the analysis of the result, it shows that there is a relationship export performance of agricultural product and real exchange rate stability in Nigeria. Exchange rate stability has a positive and significant effect on agricultural export. An increase in exchange rate stability raises the marginal utility of export revenue and therefore induces them to increase exports.

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CHAPTER ONE

1.0   INTRODUCTION

1.1   BACKGROUND OF THE STUDY

For clarity, it is pertinent that we start by defining the subject of this work. Exchange rate is the price of one currency in terms of another currency. It is the price of one foreign currency in terms of the domestic currency. It sends signals that affect consumption and investment decisions and therefore influences both the composition and value of aggregate demand and supply (CBN: Contemporary Economic Policy issues, 2003).

Exchange rate stability is therefore commitment of the government to allow the macro-economic policies to control the balance of payment. The government may fix the exchange rate policies either by legislation or by intervention in the Nigerian currency market.

According to Johnson (1984), the case for exchange rate stability is part of a more general argument for National Economic Policies conducive to international economic integration.

From a broader perspective, for exchange rate to be stable is to encourage international trade by making price of goods involved in trade more predicable and to promote economic integration. At the individual level, such decisions are usually taken in order to improve

future consumption prospects, investment and because exchange rate involves an increase in wealth of a nation which is desirable, it then influences the society. The Agricultural sector in the Nigeria context embraces all the sub-sector of primary industry, they include; farming (which include livestock, application of modern implements such as tractors and chemical), Anyanwu, (1997). Before independence, the reliance of this economy on agricultural income led to the establishment of marketing boards with monopolist powers to buy these crops from farmers and sell them overseas. The role of marketing board was very important especially in stabilizing farm incomes and generating funds for executions of development projects in the country.

The exchange rate stability has a lot of contributions to the volume of export and the level of the domestic production. Although given that agricultural output is influenced by prices among other factors, the depreciation of the naira and the abolition of the commodity boards were expected to result in an overall increase in production of exports. According

to Kwanashie et al (1994), the degree of fluctuation in prices is a major determinant of the changes in earnings given the trend in output over the years. But the exchange rate when applied in conjunction with other macro-economic policies

was expended to lead to the achievement of the goals of price stability, improved and sustained economic growth, reduced unemployment, balance of payment stability and increased agricultural exports. A stable exchange rate system would help

in meeting these goals, but in case when it is unstable, these achievements become difficult and often impossible.

According to economic indicators, the monetary Approach of Exchange rate determination confirmed exchange rate as a function of relative shifts in money, inflation rate or its proxy and domestic output between an economy and the trading partner. More so, the exchange rate of any counting is determined by the number of factors which include the state of the economy, the competitiveness and the volume of export, the level of

domestic production of foreign reserve which is the nation worth, because of its role as the determinant of the relative price of tradable to non-tradable, it is a major instrument affecting the structural change in an economy.

Exchange rate policies in Nigeria as in other countries are often sensitive and controversial mainly because the kind of structural transformation required such as reducing imports or expanding agricultural exports, invariably imply a depreciation of the nominal exchange rate. In the quest for stability of exchange rate, the Nigeria Monetary authorities tried several bidding system, including the Dutch

Auction system (DAS) and the Marginal Rate System. An attempt to ensure viability in the market led to many amendments of the rules, intervention by Central Bank of Nigeria (CBN), and opening of different exchange windows for operation during this period. Despite all these fluctuations, rate of exchange

continued to be an issue of concern to the authorities. This is as a result of causes

of changes in the exchange rate which are as follows;

- Changes in prices

- Capital flows

- Changes in exports and imports

- Political conditions

- Influence of Banks

This formed the basis of this study "Exchange Rate Stability and Export performance. The case of Agricultural produce in Nigeria, (1978-2010)".

1.2   STATEMENT OF THE PROBLEM

in the most developing country in general and Nigeria in particular, some of the economic tools used for both planning and implementation of the economic programme are normally based on educated guesses or on models which have been designed for other countries. The direction of this work

will be to understand the cardinal reasons for the inability of Nigeria to maintain a favourable external reserve.

What factors capture most the exchange rate instability on export performance in Nigeria? This will show succinctly the conformity of exchange rate in Nigeria to a priori economic expectations.

Economic theory informs that decision to exchange rates depend demand and supply of foreign exchange, that is change in income earnings of export crop producers which come as a result of either increase or decrease in International World price of exports or devaluation of currency and subsequent prices. Such exchange rate change may lead to a major decision in the future output if they are unpredictable and erratic.

How true these economic assertions in Nigeria exchange rate profile are becomes the question.

1.3   OBJECTIVE OF THE STUDY

the overall objective of this study is to determine empirically the dynamic effect of exchange rate stability and export performance of agricultural produce in Nigeria from (1978-2010).

The trust of the research will be to

- Evaluate the nature and extent of the impact of exchange rate stability on agricultural exports in Nigeria.

1.4   STATEMENT OF HYPOTHESIS

To test for the statistically significance or non-significance of data,

Ho represents the Null Hypothesis

H_1 represents the Alternative Hypothesis

Ho = H_1 there is no relationship between exchange rate stability and export performance of agriculture produce in Nigeria.

Results; If Ho > H_1 then we accept the alternative hypothesis and reject the

null hypothesis that exchange rate stability does not affect the export performance of agriculture produce in Nigeria.

1.5   SIGNIFICANCE OF THE STUDY

One of the most dramatic events in Nigeria over the past decade was the devaluation of the Nigerian naira with the adoption of a structural Adjustment programme (SAP) in 1986. significantly, this depreciation resulted in changes in the structure and volume in Nigeria's agricultural

export as empirically determined by many research (Oyejide, 1986; Ihimodu 1995; Osuntogun et al 1993; World Bank, 1994). The depreciation also increased the prices of agricultural exports and studies have shown a marked increased in volume of agricultural exports over the years. Appreciation of a country's real exchange rate caused by the sharp rise in export of a booming resources sector like oil draws capital and labour away from a country's manufacturing and agricultural sectors, which can lead to a decline in export of agricultural goods and inflate the price of non-tradable goods

(Corden 1982) and Corden and Nearly (1984) however, the volatility, frequency and

instability of the exchange rate movements since the beginning of the floating exchange rate raise a concern about the impact of such movements on agricultural trade flows.

1.6   LIMITATIONS OF THE STUDY

The concept of exchange rate stability has been generally acknowledged to have a strong relationship with economic development in Nigeria.

- The scope of this work will be limited to the rate of exchange in the geographical area Nigeria using its changes in the world prices or fluctuation in exchange rate (1978-2010) that is thirty (32) years.

- The study takes the United States Dollar ($) as widely most used currency in international trade by pitching it against the Nigeria naira (₦).

CHAPTER TWO

LITERATURE REVIEW

2.1 THEORITICAL LITERATURE

Since the adoption of floating exchange rates in the developing countries in 1973, the question of whether exchange rates variations have independent adverse effect on exports and trade has attracted a lot of attention in the literature. A review of the related literature shows that the issues is far from being settled though not all studies are fully comparative for example, Lastrapes and Koray (1990), Cushman (1988) and Coballaro and Corbo (1989), indicated a significant depressive effect of exchange risk or volatility. IMF (1984) and Gotur (1985) and Chambers and Yist (1991), however, supported a contrary view following the seminal work of Abel (1993), showed that if one assumes perfect competition converse, and symmetric cost of adjusting capital and risk neutrality, investment is a direct function of price uncertainty.

2.1.1   APPROACHES OF EXCHANGE RATE

The determination of exchange rate of any country depends on its balance of payment.

A.   ELASTICITY APPROACH

Devaluation can improve balance of payment and deficit of a country either by increasing its exports or reducing her import. According to Marshall Lerner conditions, which states that the sum of the elasticity of demand for a country's exports and its demand for imports has to be greater than unit for evaluation to have a positive effect on the balance of trade. Therefore, if the sum of this elasticity is less than unity, a country should improve its balance of trade by revaluation.

Devaluation will lead to an increase in import prices. Then the effect of this price will depend on the elasticity for import. The larger it is, the grater will be the fall in the volume of imports. Also, the value of demand elasticity depends on what type of goods the devaluing country imports.

For example, in Nigeria, the demand elasticity for export of crude oil is very low. So foreigners' demanding for crude oil is as necessities to them.

The extent to which exporters are able to expand sales abroad using devaluation depends on the foreign elasticity for Nigeria's export goods which is the nature of these goods and the market conditions.

The question we have to ask is how devaluation takes place?

The government can suddenly announce the devaluation of currency.

In 1985, there was a debate on the devaluation of Nigeria currency. During this period, there was no increase in income and every thing was rationed to people. Later, the IMF suggested Nigeria to devalue its currency the way it has been discussed today so as to improve its balance of payment.

B. ABSORPTION APPROACH

According to Sydney Alexander, after going into price and income determination, he came up with equation;

$DB = dy - Da$

Note: Y = C + 1 + G+ (x-m) is the equilibrium condition of national income

(x-m) means export value – import value

(+1+G is the total expenditure for consumption and investment purposes.

(+1+G is the total expenditure for consumption and investment purposes.

From the above equation, using A for absorption which represents (C+1+G) and B for balance of payment. It becomes B = Y-A, so for 1A (C+1+G). and the rate change for (X-M) will be dB. Since balance of payment is change in income change in absorption,

government can determine the balance of trade. Depreciation effects the balance of payment by either affecting the real national income Y or by affecting total absorption A.

Likewise, if there are unemployed resources when the country devalues, then the production can expand and balance of payment can be improved by increasing output more than absorption. Income expansion will begin by increases in exports, giving rise to an increase in national income through multiplier process.

The government can use macroeconomic policy to determine the rate of exchange.

C.   MONETARY APPROACH

The Monetary Approach to the balance of payment explains the changes in balance of payment in terms of demand for and supply of money. The approach focuses on two key aspects;

- Its monetary significance and

- Its relation with the level of economic activity in the economy. Making use of Alexander's approach, Johnson restate that the balance of payment as $B = R_r - P_r$ while the balance of payment is equal to the difference by residents from foreigners given by R_r and payment by residents to foreigners given by P_r

D.   STRUCTURAL APPROACH

The analysis of balance of payment adjustment policies and programmes are carried out through a blend of approaches.

The origin of the external disequilibrium is essential structure in nature and is due to intrinsic maladjustment in the growth and trade processes. According to this approach, devaluation should be considered with selective expansionary and demand polices.

A supply policy that stimulates production and investment in export and import substitution sector is adopted. This approach is at variance with IMF approach which is characterized by devaluation demand contraction and liberalization of domestic trade.

2.1.2 EXCHANGE RATE REGIME IN NIGERIA

Exchange rate arrangement in Nigeria have undergone significant changes over the past four decades. It shifted from a fixed regime in the 1960s to a pegged arrangement between the 1970s and mid – 1980s, and finally to the various types of the floating regime since 1986, following the adoption of the structural adjustment programme (SAP).

A regime of managed float, without any commitment to defending any particular parity, has been the predominant characteristic of the floating regime in Nigeria since 1986. The US Dollars was fixed in gold terms until 1971 when it was de-linked and has since been floating.

The fixed exchange rate regime induced an overvaluation of the naira and was supported by exchange control regulation that engendered significant distortion in the economy. That gave vent to massive importation of finished goods with the adverse consequences for domestic production balance of payments position and the nation's external reserve level.

Moreover, the period was bedeviled by sharp practices perpetrated by dealers and end users of foreign exchange. These and many more other problems informed the adoption of a more flexible exchange rate regime in the context of the SAP, adopted in 1986.

Numerous exchange rate regimes are practiced globally, ranging from the extreme case of fixed exchange rate system, such as the currency boards and unions to a freely floating regime.

In practice, countries tend to adopt an amalgam of regimes such as adjustable peg, crawling peg, target zone or crawling bands, and managed float, whichever suit their peculiar economic conditions.

A fixed exchange rate regime entails the pegging of the exchange rate in the domestic currency or a basket of currencies or the SDA, with the primary objective of ensuring a low rate of inflation.

The advantages and disadvantages of the fixed exchange rate regime have been well documented in the literature.

The floating exchange rate regime, on the other hand, implies that the forces of demand and supply will determine the exchange rate. This regime assumes the absence of any visible hand in the foreign exchange market and that the exchange rate adjusts automatically to clear any deficit or surplus in the market. Consequently, changes in the demand and supply of foreign exchange can alter exchange rates but not the country's international reserves.

In this arrangement, the exchange rate serves a "buffer" for external shocks, thus allowing the monetary authorities full discretion in the conduct of monetary policy.

Since the establishment of the CBN, Nigeria's exchange rate policy has been aimed at preserving the external value of the domestic currency and maintaining a healthy balance of payments position which indeed, is a major provision of the enabling law. With the failure of the Autonomous Foreign Exchange Market (AFEM), introduced in 1995, an Inter-bank Foreign

Market (IFEM) was also introduced in October 25, 1999. The IFEM was designed as a two way quote system, to diversify the supply of exchange in the economy by encouraging the

funding of the inter-bank operations from privately earned foreign exchange. The IFEM also aimed at assisting the naira to achieve a realistic exchange rate. The operation of the IFEM however experienced similar problems and setbacks as the AFEM.

By 22nd July, 2002, the CBN re-introduced the Dutch Auction System (DAS) to replace the IFEM. The DAS was designed to achieve a stem the excessive demand for foreign exchange and achieve a realistic exchange rate for the naira. The DAS conceived as a two-way auction system in which both the CBN and the authorizes dealers would participate in the foreign exchange market to buy and sell foreign exchange.

A realistic exchange rate would also ensure that the naira is not overvalued in real terms and this made the CBN to employ the Purchasing Power Parity (PPP) model as a guide to gauge movements in the norminal exchange rate. A strong naira will make imports cheaper, help produce more, import less and export more. The right exchange rate, therefore, is the one that facilitates the optional performance of the Nigerian economy.

2.1.1.1   STRUCTURAL ADJUSTMENT PROGRAMME AND AGRICULTURAL EXPORT PERFORMANCE

According to Back (1969), no country can begin to develop from a subsistence level by merely producing for the home market,

and no highly developed country can maintain a high growth rate if it neglects exports.

The Federal Government of Nigeria largely played a supportive role, while Regional and State Governments were left to take major initiatives on crop production. Small holder farmers produce the bulk of the output for both local and export markets. Government focused on research, extension services and marketing and pricing of export crops.

The period 1975-1985 witnessed more direct government intervention in agriculture. In the face of noticeable decline in the sector's performance, a variety of policies were introduced during this period that marked the upsurge of oil revenue accruing to the government, micro-economic policies became expansionary, including direct government involvement in agricultural inputs. Fiscal in being identified as one of the constraints the sector was then facing, finance institution was created. The Nigeria Agriculture and co-operative Bank (NACB) were established in 1973,

The agricultural Credit Guarantee Scheme Fund (ACGSF) was established in 1978. During this period, World Bank assisted Agricultural Development Programmes (ADP) were introduced in a number of states. The programmes were designed to provide an integrated approach to agricultural and rural development. River Basin Development Authorities were also established to provide all year round water through irrigation to farmers. According to Omoniyi (1987), during the period (1982-1986), a number of policy measures largely demand management in content, were taken. These measures were in form of intensified payment and trade controls which were not only largely unsuccessful but led to a situation of drastic short supply of industrial inputs, plant closures large scale retrenchment of workers, shortage of goods and price inflation.

At the same time, external debt increased rapidly through an indiscriminate recourse to external borrowing and accumulated unpaid trade bills, Ahmed, (1987). During the period 1986-1999 this combines both SAP and post-SAP era, market oriented and not-so market- oriented agricultural development policies and programmes were introduced.

River Basin Authorities were restructured from 21 to 11,

The Directorate for Food, Roads and Rural Infrastructure (DFRRI)

was established, as well as The National Agricultural Insurance Corporation, and Peoples Bank. Farm input supply policy was actively pursued during this period. In pursuance of the goal of economic emancipation and consequent self- reliance, the government then created an alternative pathway for the anticipated increase in external sector's activities which would be generated by the devaluation of the naira. The attractive pathway was borne in the package of incentive introduced to increase and enhance a high level of agricultural export. As a result, trade liberalization was an important aspect of policy reforms under SAP.

This allowed individuals and groups to participate in export due to the abolition of export prohibition as contained in Finance Act No 2 of 1981, except for commodities where exports remained banned. The monopoly of exportation granted to the Commodity Board Act of 1977 was also cancelled. With these reforms,

export earners became entitled to 100 percent of their foreign exchange earnings provided this are kept in a domiciliary account. As a result, farmers could sell their product directly to foreign buyers and local processors without any intermediary,

thus obtaining higher prices for their products. This was expected to remove the excessive taxation on farmers' products by the erstwhile marketing boards and leave producers price to be determined by market forces. Given agricultural output is influenced by prices among other factors, the depreciation of the naira and abolition of the commodity boards were expected to result in an

overall increase in production of exports as confirms the expected trade in agricultural output. There was major increase in five major agricultural export crops that has been on the decline since the 1977. By 1985, only 37 percent of the 1970 output was achieved, by 1988 and 1989, output reached 79 percent of 1977 level.

The output performance of the major product groups during the SAP period as compared with the pre-SAP period. The crops included in each group accounted for at least 60 per cent of all crops in the group. (CBN Annual Report 1970-1999). The comparison of the two periods shows that export crops performed best with an average output of the group increasing by about 42 per cent over the pre-SAP era. As a result of very high increases in the normal producer price during the SAP era,

coupled with the moderate output increase of most crops during 1986-1994 periods, the nominal incomes of producers rose substantially. According to Kwanasline et al, (1994), the degree of fluctuation in prices is a major determinant Incentive and Miscellaneous Provision Decree of 1986 were enacted through which CBN could provide refinancing. There is no doubt that the tremendous boost in producer prices was due to naira devaluation, Onyejide (1986), World Bank (1994).

2.2   EMPIRICAL LITERATURE

There are a huge number of studies that investigates the impact of exchange rates in export of agricultural produce.

Oyejide (1986) examines effects of trade and exchange rate polices in the Nigeria agricultural export using Ordinary Least Squares (OLS) over the period 1960-1982 and concludes that appreciation of real exchange rate adversely influence non-oil export.

Ros (1993) analysis Mexico's non-oil trade and industrialization experience during 1960-1990 and concluded that appreciation of real exchange rate dude to oil revenues is harmful for non-oil export performance.

The influences of trade and exchange rate policies on agricultural export which is the main part of non-oil export of Cameroun is studied by Amin (1996) over the period of exchange rate policy especially appreciation of national currency which impedes agricultural export

.

The effects of real exchange rate, its movement and volatility on the growth of non-oil export in Nigeria are studied by Ogun (1998) over the period of 1960-1990. The result shows that real exchange rate and also both its misalignment and volatility affect non-oil export growth adversely.

Sorsa (1999) analyzes Algerian non-oil export promotion issues in presence of oil sector dominancy over the period 1981-1997 and reveals that appreciation of real exchange rate is the major factor that impedes non-oil expofrt growth and its diversification.

Adubi and Okunmadewa (1999) also investigate impact of exchange rate and price indexes and also their volatilities on the agricultural export of Nigeria in the period 1986-1993. Results of ARIMA and OLS estimation indicates that appreciating of exchange rate and its volatility have negative impacts on agricultural export earnings.

Bernadina (2004) investigates impacts of the real exchange rate, real non-oil GDP, and the world income on Russia non-oil export by using an Error Correction Model over the period 1994-2001

Bernadina (2004) investigates impacts of the real exchange rate, real non-oil GDP, and the world income on Russia non-oil export by using an Error Correction Model over the period 1994-2001. Auther finds that there is a robust and negative long-run co-integration relationship between the real exchange rate and the Russian non-oil exports.

Egert Balazs and Morales-Zumaquero (2005) estimates export functions both in nominal and real terms in the case of transition countries of Central and Eastern Europe including Russia over the period of 1990-2005 by employing panel Regression and ARDL modeling. They use domestic and foreign direct investment, relative prices, the nominal exchange rate for nominal exports, the exchange rate for exports, and a volatility measure of the nominal and exchange rates respectively as explanatory variables and concludes that in general, appreciation of exchange rate (nominal) and also its volatility are harmful to export earnings.

Shitt M.A. et al, (2007). The study examined the agricultural export response within the framework of Vector Error Correction Modeling (VECM).

The study found that the anticipated inverse relationship exist between agricultural export and exchange rate as postulated in trade theories.

By employing pooled Mean Group over the period of 1990-2003, Benbouziane and Benamar (2007) investigates the impact of exchange rate regime on the real sector in some Middle East and North African Countries including Algeria, Bahrain, Iran, Kuwait, Libya, Saudi Arabia and Sudan, which are oil rich. Study finds that as a whole, exchange rate over valuation reduces competitiveness of manufactured goods in these countries.

Another study that investigates relationship between exchange rate and non-oil export goods in Nigeria comes from Yusuf and Edom (2007). By applying Johasen co-integration approach over the period of 1970-2003, they reveal that depreciation of official exchange rate promotes export of round word and Sawn wood in Nigeria.

Also another study related to Iranian non-oil comes from Sabuchi and Piri (2008). They explored the effect of exchange rate, export volume, domestic saffron production on price of Saffron-Iran's major non-oil export goods in the short and long-run. Employing Auto Regressive Distributed Lag model (ARDL),

shows that appreciating exchange rate has statistically significant negative impact on export price of saffron while there is no significant relationship between export price and domestic production of saffron in the long run.

By using static OLS and Fixed Effect based on Two-Stage LS, Masoud and Rastegan (2008) estimate effect of certain factors as well as real exchange rate no-oil export over the period 1995-2005. Study concluded that Iran's non-oil export is positively related to increase in population per capital income and consumer price index while negatively depends on appreciation of real exchange rate.

Mohamad et al, (2009), conduct panel data estimation to account for the role of real exchange rate and other economic fundamentals such as macro-economic stability, terms of trade, capital goods investment, external demand and human capital on the export performance of Indonesia, Malaysia, Singapore and Thailand. They find that appreciation of real exchange rate and also its misalignment and volatility have strong negative impact on export performance.

By applying OLS on the Time Series of relevant variables including exchange rate over the annual period of 1970-2005, Abolagba et al, (2010) find that appreciation of real exchange rate has statistically significant and negative impact on export of cocoa and rubber in Nigeria.

In 1986, Nigeria adopted the National Adjustment Programme that it is adopted a number of strategies. They are:

- Reduction of income

- Allowing naira to find its value of foreign currency. This can be done through parallel market and unofficial exchange rate.

- Creation of national development employment.

During this period, many products were banned in order to save Nigeria's money that is based on our domestic product. The effectiveness of SAP policy content was further questioned in the review of Kirk Patrick and Onis (1985). They maintained that SAP hardly the panacea for the economic difficulties facing LDC's. This view has also been corroborated by an empirical study which was carried out by the overseas Development Institution of the opinion that SAP has led very insignificant impact on the main target variables. Typically, the overall balance of payment has shown some small improvement, but inflation has not reduced and output growth has declined or remained unchanged, (CBN, 1987). However, against these negative findings, it was suggested by Donovan (1982) and Guitan (1982) that the failure of SAP to achieve its vaunted objectives arises from the

inability of the programme manager in LDC to implement successfully and on sustained basis of the policy prescription of the programme.

Maskus (1986), however provided a link between his study and previous work by comparing the effect of exchange rate across major sections of an economy example Agriculture, Manufactured goods. He found that aggregate bilateral agricultural trade is particularly sensitive to exchange rate uncertainly, Maskus agreed that agriculture compared with manufactured goods trade is more responsive to exchange rate changes because,

- Agricultural trade is relatively open to inter-national trade

- Agriculture exhibits a low level of industrial concentration.

In Nigeria, Ajayi (1988) and Osegie (1985), while taking the structuralist approach in the study of external trade flow, opposed the adoption of a more flexible exchange rate policy in Nigeria.

Their arguments were based on the structuralist theses that exchange rate devolution would be stagflationary and have no significant effect on external trade balance in LDCs.

The findings of Ayayi (1988) and Osagie (1985) support an early study by Oyo (1978) who suggested that exchange rate changes need not play any significant role in the explanation of Nigeria import-export trade balance.

Also, Egwaiklide (1993) worked on the determinant of import in Nigeria using a dynamic specification. The study concentrated on the imports alone and left out the effect on exports, the effect on the domestic disappearance was also not examined. Theirs is the powering effort in Nigeria to determine the effect of exchange rate risks on export. However, their model did not take into consideration the cross

price effect and fixed exchange rate, that is, they did not consider what will be the export performance of Nigeria if their rate of exchange is fixed or stable.

Based on difference in methodologies and time frame, Guitan (1982) and Donovan (1982) have carried out studies in which they contented that the economic problems of several LDCs can indeed be reversed, provided these countries adopt and sustain a mix of appropriate economic measures that are often prescribed under the umbrella of SAP.

Paradoxically, while the broad policy objective is mainly, "the restoration and maintenance viability in the balance of payment in an environment of price stability and sustainable price stability, and sustainable economic growth". Guitan (1982) is generally accepted by

both and its critic in retardation in economic growth as well as severe hardship on those whom the programme is ostwnsibly designed to assist (Kirk Partrick or Onis (1985).

This section highlights the major constraints of agricultural output growth in Nigeria, output needs to first grow before exports can take place, as could be attributed to government emphasis on local processing of some of these produce. However, besides this, Garba (2000) shows that the implementation

deviation was persistent and volatile, if it was then concluded that the concern private agents have about government not keeping its work is legitimate and that there concern about policy discontinuities is valid.

Agricultural production faces 14 uncertainties due to weather variations. To and policy-induced uncertainties may be an explanation to low out-put growth. The two other aspects of policy-induced constraints may be noted. One relates to naira exchange rate policy and the other relates to input prices' policy.

Fertilizer use by farmers provides a meeting point for these two policies (CBN, NISR, 1992).

A prominent element in government agricultural policy since the 1980s is fertilizer procurement and distribution policy. Recognizing fertilizer as a key farm input, government has continued to pursue a policy to ensure its use by farmers. Its supply has been increased virtually annually. For example, between 1989 and 1990, it increased by 33 per cent in 1991 by 14 per cent in 1993, even today it depots was increased and the Federal Government took up the responsibility of bearing the cost of transportation from domestic plants and seaports to the depots.

In addition to allowing states to monitor the delivery from the depots, an allocation formula 80:20 ratio for allocation of the commodity of the fertilizer between local and state government was introduced in 1994.

Input price subsidy was also aspect of government's agricultural policy, this is ensure its affordability to small holder farmers. However,

following SAP, the subsides were steadily reduced. This thus, become a case of conflict of policies. On the one hand, a policy seeks to encourage fertilizer use by farmers; on the other hand, a policy raises the cost of procurement (CBN/NISER 1992). A national outcome of this has been low usage of fertilizers. Yearly, nation-wide survey of agriculture shows that increase in price of inputs made it difficult for farmers to procure them in required quantities. This has been attributed to naira depreciation, increased costs of public utilities, reduction of subsidies on fertilizer, fuel agro-chemicals and seeds (CBN Annual Report). For example, the bulk of guaranteed loans has been availed of by big farmers and co-operatives, while the loans received by small farmers always represent an insignificantly percentage in the scheme (see CBN Annual Report, (1992.)

Also rural infrastructure inadequacies as well as inadequate extension services has been a source of constraint to agricultural exports out-put growth, economic theory suggests that whatever raises the cost of production is likely to acquiring basic farm inputs by rural small holder farmers.

were intended to address the problem of rural infrastructure. The failure of DFRRI to make such impact on rural infrastructure is well known, though the causes may include the politicization of its administration.

Similarly, the ADPs, in addition to making little sustained impact on rural infrastructural provision of extension services which is an important component of the programme has also suffered.

Furthermore, estimates of exchange rate risk and volatility obtained are not standard and are sensitive to the measure of exchange risk and volatility proxy that is used.

Finally, the present work, apart from introducing dynamism into the study, uses a standard measure of exchange rate that has been defined in the literature.

CHAPTER THREE

3.0   RESEARCH DESIGN AND METHODOLOGY

3.1   METHODOLOGY

The study follows an econometric research methodology. According to New Bold and Boss (1990) that it will always pay to incorporate what is known from subjective matter into model building, since theory is likely among things to postulate behavioral relationship among exchange rate stability, agricultural performance and economic growth. The kind of economic tool we are going to apply is the Ordinary Least Square (OLS) method in estimating the relationship between the exchange rate stability and export performance.

The choice of this method is based on the "BLUE" property that is Best Linear Unbiased Estimation. This is because it helps to ascertain quantitatively the impact of certain factors on a given phenomenon under study.

According to Koustsyianis (1977) states that in attempting to study any relationship between variables, it is important to express the relationship in mathematical form.

3.2   THE MODEL SPECIFICATION

the model specification will be

AGEX   =   F (EXR, INT, INF)

where

AGEX is the Agricultural exports

EXR is the Exchange Rate

INT is the interest Rate.

INF is the inflation

The Agricultural export is the dependent variables while the exchange rate, interest rate and inflation are the independent variables. To show the effects of exchange rate stability on export performance will be,

AGBX $\quad$ = $\quad\quad$ $\beta_O + \beta_1$ EXR $+ \beta_2$ INT $+ B_3$ INF $+ Ut$ where Ut are those variables that can affect the exports which are not stated in the model specification.

3.3 $\quad\quad$ METHOD OF EVALUATION

The ordinary Least Square method of classical Linear Regression model is the econometric technique adopted in the study which covers a period of thirty three years (1978-2010)

Economic Test (A PRIORI CRITERIA)

i. $\quad$ Economic Test (A PRIORI CRITERIA)

The econometric test involves examining the economic meaningfulness of the equation with regards to meeting the el priori expected signs. Theoretical 'a priori' evaluation of the signs of the parameters will be employed as determined by the principles of economic theory.

Therefore, it is our utmost expectation that this parameters will turn up with signs and magnitude conforming to trade theories.

ii.   Statistical Criteria (first order – Test) these are determined by statistical theory and at evaluation of statistical reliability of the estimates of the parameters of the model. In this research coefficient of determination (R^2) will be used to capture how well the regression fits the data. The student – t – tests will be used to test the significance of the impact of the individual parameters on the dependent variable.

iii.   F – test criteria or second order test.

Durbin – Watson which tests the randornness of the residuals or more specify for testing of auto correlation in the error term.

3.4   DATA SOURCES

The study adopted a time series approach so that estimates are based on Secondary annual time series data from 1978 – 2010, Obtained from various sources.

Data on Agricultural output was generated from the Annual Reports and statement of Accounts, while data on interest rate, exchange rate and exports are generated from the statistical Bulletin of the Central Bank of Nigeria (CBN), the Golden Jubilee Edition 2010.

3.5   ECONOMETRIC SOFTWARE PACKAGE

This study adopted the use of Pc – gvie version 8.0 among other software's for the analysis. The choice of this software is formed from its ability to present a better result of all assumptions of OLS.

CHAPTER FOUR

PRESENTATION AND ANALYSIS OF RESULT

4.1   PRESENTATION OF RESULT

The estimation from the regression carried out are presented and evaluated in this chapter, the OLS and results of model we estimated using a computer software package E-views.

The empirical results are presented in a table. The table shows estimated parameters, there is statistic and other diagnostic test of equation.

The result obtained from the estimation techniques are presented in table below:

Table 1

Variable	Coefficient	St error	+-value	+-Prob
C	20987	32767	0.640	0.5269
EXR	1424.6	216.67	6.575	0.0000
INT	-2495.3	2171.2	-1.149	0.2599
INF	262.60	719.43	0.365	0.7177

$R^2 = 0.646132$, F = (3.29) = 17.65 [0.0000], DW = 0.376

4.2 EVALUATION OF RESULT

Evaluation based on the economic criteria over parameter estimates are expected to conform to apprion expected on as it is discuss in chapter three.

The table below shows the outcome of our model parameter on apprion ground.

Variable	Expected sign	Obtained sign	conclusion
C	Positive (+)	Positive (+)	Conform
EXR	Negative (-)	Positive (+)	Not conform
INT	Positive (+)	Negative (-)	Not conform
INF	Negative (-)	Positive (+)	Not conform

EXR has a positive relationship with Agricultural Exchange Rate Stability and Export Performance (AGEX). A unit increase in exchange rate will reduce AGEX by 14% approximately.

INF has a negative relationship with AGEX. It implies that a unit decrease in interest rate will decrease AGEX by -25% approximately.

INF has a positive relationship with AGEX. This implies that a unit decrease in INF will increase AGEX by 26% approximately.

4.3 STATISTICAL CRITERIA (FIRST ORDER)

These test are determined by statistical theory and aims at evaluating the statistical reliability of the estimates and parameters of t he model. From the sample observation, the first order test is carried out based on the following R^2, t-prob and f- test.

4.3.1 COEFFICIENT OF DETERMINATION (R^2)

In this model, $R^2 = 0.646132$ and its implication is that 65% of changes in the dependent variable can be accounted for by the explanatory variable. It shows that coefficient of determination has a good fit.

4.3.2 STUDENT T-TEST

In this section, we use t- statistics to test for the individual significant of the parameters. The significance of the result is shown below.

Hypothesis:

H_O: the parameter is not statistically significant

H_i: the parameter is statistically significant.

Table 4.3.2

Variable	Coefficient	T-values	T-tab	Result
C	20987	0.640	±2.045	Not significant
EXR	1424.6	6.575	±2.045	Significant
INT	-2495.3	-1.149	±2.045	Not significant
INF	262.60	0.365	±2.045	Not significant

Decision Rule:

Reject Ho if t-cal > t-tab

Otherwise, accept Ho

At = 0.05%

$1 - 0.05\% = 95\%$ level of significant

df = degree of freedom (k-1)

where k = no of parameter

df = 4-1 = 3

T = tabulated = 2.045

Conclusion:

The student t-test result above suggests that all the variables except EXR rate are insignificant as indicated in the remark column above.

4.3.3 F-TEST

The f – test is conducted to ascertain if the model is stationary significant and to know if the data actually fit into the model to enable us ascertain the adequacy of the model for our analysis.

Hypothesis:

H_0: $b_1 = b_2 = b_3 = b_n = 0$ (the model is not significant)

H_1: $b_1 \neq b_2 \neq b_3 \neq b_n \neq 0$ (the model is significant)

Where r = 0.05 (at 5% significant level)

Decision rule:

Reject H_0 if $f^* > f$ 0.05

Otherwise accept H_o if $f^* < f$ 0.05

7 (3, 29) = 17.65 (0.0000)

f-tab = 2.60

Conclusion:

Since f* calculated is > f – tabulated we reject H_0 and conclude that the model is statistically significant.

4.3.4   STANDARD ERROR

The null hypothesis for test is

$H_0 = \beta_O = 0$ against alternative

$Hi = \beta_1 \neq 0$

   If the standard error is smaller than half of the numerical value of the parameter estimates that is $s(b_1) < b_1/2$, we conclude that this estimates is statistically significant. We therefore, reject the null hypothesis that is $b_1 = 0$ and accept the alternative that $b_1 \neq 0$ and vice versa.

This conclusion of significant of b is based on of significant of b is based on a two tier test at 5% level of significant.

Table 3

Summary of error test

Variable	St error	Coefficient (1/2)	Decision	Conclusion
C	32767	10493.5	$S(b_1)>b_1/2$	Not significant
EXR	216.67	712.3	$S(b_1)<b_1/2$	Significant
INT	2171.2	-1247.65	$S(b_1)>b_1/2$	Not significant
INF	719.43	131.3	$S(b_1)>b_1/2$	Not significant

4.3.5 TEST AUTO CORRELATION (SECOND ORDER)

One of the assumptions of OLS regression model is that errors are independent. In th content of time series analysis, this means that an error U_t is not correlated with one or more previous errors U_t:-

The Durbin Watson d^* test compares the empirical d^* value calculated from the regression residuals, with dL and du in the tables with their transform (4-dL) and (4-du).

Decision rule:

1. If $d^* <$ dL, we reject the null hypothesis of autocorrelation and accept that there is positive auto correlation of first order.

2. If $d^* >$ (4-dL), we reject the null hypothesis and accept that there is negative auto correlation of first order.

3. if du $< d^* <$ (4-du) we accept the null hypothesis of no auto correlation.

4. if dL$< d^* <$ du or if (4-du)$< d^* <$ (4-dL), the test is inconclusive from one regression result, the $d^* = 0.376$

dL $= 1.198$

du $= 1.650$

4-dL $= 2.802$

$4 - du = 2.35$

Hence d* <dL <du, we reject the null hypothesis and conclude that there is auto positive auto correlation in the model.

4.3.6   TEST FOR NOMALITY TEST

The test is conducted to ascertain if the error term follows a normal distribution. It follows a chi-square (x^2) test with two degrees of Freedom (2df). The hypothesis is stated as

Ho:$\mu i = 0$ normally distributed

Hi: $\mu i \neq 0$ not normally distributed

Decision rule:

Reject Ho if x^2 cal > x tab $^{2(0.05)}$ at 2 degree of freedom and accept H$_o$ if otherwise.

Test statistics:

$$JB = n \left(\frac{52}{6} + \frac{(k-3)^2}{24} \right)$$

where n= sample size.

S= skewness coefficient

K= kurtosis coefficient

For a normal distribution residual, the value of S and K are O and 3. Since the JB computed is expected to be zero with 2 degree of freedom, if the value is close to zero/the p-value reasonably high. The residuals are normally distributed from the result obtained from Jaque– Bera (JB) test of normality, JB = 11.998 which is shown in appendix and from chi-square table x^2 tab, therefore, since x^2 cal = 11.998 x^2 tab $^{(0.05)}$ = 42.557 at 5% level of significant and for this reason, we reject H_o and conclude that the error does not follow normal distribution.

4.3.7 TEST FOR HETREROSCEDACITY

This test asymptotically follow a chi-square distribution with degree of freedom equal to the number of regressiors (excluding the constant term). The auxiliary model can be stated thus:

$$\mu t = \beta_0 + \beta_1 \, EXR + \beta_2 \, INT + \beta_3 \, INF - \beta_4 \, EXR^2 + \beta_5 \, INT^2 + \beta_6 \, INF^2 + V_i$$

Where Vi = pure white noise error

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

The hypothesis to be tested is

H_o: $\beta_1, = \beta_2 = \beta_3 = \beta_t = 0$ (Homosedacity)

H_i: $\beta_1 \neq \beta_2 \neq \beta_3 \neq \beta_t \neq 0$ (Hetrosedacity)

Note:

The sample size (n) multiply by the R^2 obtained from the auxillary regression asymptotically follows the chi-square distribution with degrees of freedom equal to the no of regresors (excludint the constant term) in the auxillary regression. Using pc-given software package saves the above rigors by calculating the chi-square.

Decision rule:

Reject H_o if x^2 cal > x^2 tab at 5% level of significant, if otherwise, accept H_o from the obtained results, calculated x^2 = 14.288 while tabulated x^2 0.05 (6) = 12.592 we reject the null hypothesis of Homoseadacity and conclude that error term have a constant variable.

4.3.8 TEST FOR MULTICOLLINEARITY

This test was carried out using correlation matrix. According to Barry Feld

man (1985) criteria multicollinear ity exceed 0.080.

Table 4

	AGEX	EXR	INT	INF	
AGEX	1.000				___
EXR	0.7935	1.000			NM
INT	0.1432	0.3257	1.000		NM,NM
INF	-0.2533	-0.2965	0.3103	1.000	NM,NM,NM

Where m shows, signifies the presence of multicollinearity. The pressure of

multicollinearity does not exist in any of the variable.

CHAPTER FIVE

SUMMARY OF FINDING, CONCLUSION AND POLICY RECOMMENDATIONS

5.1 SUMMARY OF FINDING

The work adopted OLS (Ordinary Least Square) method, which was used to estimate the unknown parameter in quest and to realize the objective of the study. Also it is clear and obvious that there is a relationship between exportation performance of agricultural product and exchange rate stability in Nigeria.

For this reason, we first undertook a brief survey various approaches of exchange rate and the exchange rate requires in Nigeria and agricultural export performance after the adoption of national structural adjustment programme. It is important to note that the various theories of exchange rates have been greatly influenced overtime by changing nature of international economic programmes.

The results of the different studies are difficult to compare since the measures of risk vary widely in the literatures observed.

Following the studies of Egwaklide (1993), he did not consider the cross price effect and fixed exchange rate export that is the effects on domestic disappearance were not examined.

Also, Ajayi (1988) and Osagie (1985), find that exchange rate devolution would be stag flationary and have no significant effects on external trade balance in the LDCs.

5.2   CONCLUSION

Having conducted this research in the study of exchange rate stability on agricultural export product, performance, I also formulated an econometric model incorporating explanatory variables of which were supported by economic theory. Using time series data from 1978-2010, I estimated the effect of exchange rate on export performance of agricultural produce in Nigeria, our result showed that export trade are influenced by exchange rate

stability. The study showed that Nigeria exchange rate stability has a positive and significant effect on agricultural export, which is if export are sufficiently risk averse, an increase in exchange rate stability raises the marginal utility of export revenue and therefore induces them to increase exports. This is consistent with the findings of similar empirical studies. Government should adopt a favorable and stable exchange rate regime or system that will foster and increase economic activities in the

agricultural sector so as to increase the agro-allied sectors and agro-based products. A stable exchange rate, hence, increases exports and the balance of payment position, making it favourable and help to solve the problem of deficits and increase the external reserve of the economy.

5.3   POLICY RECOMMENDATION

1) The government should adopt a policy consistency and macro-economic stability that will create predictable exchange rate.

2) A strong advocating should be directed towards increase in budgetary allocation to help agro-sector grow.

3) Community exchange performance should be explored as a mechanism for assisting farmers and exporters to fight some changes in the marketing system of exchange rates.

4) To boost production through cost-reduction, the naira exchange rate policy of government would need to be reexamined.

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