Effect of Exchange Rate on Agricultural Growth in Nigeria

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Abstract
Exchange rate and its effect on agricultural growth on the economy has become a global phenomenon. The study examined the effect of exchange rate on agricultural growth in Nigeria, its trend, movement and effect on agricultural production between the period of 2002 and 2013. Exchange rate is a strong economic indicator for assessing the overall performance of an economy. It is one of the macroeconomic variables that reflects the strength and weakness of an economy. As a potent monetary tool, exchange rate is used in achieving certain economic objectives, the common objective, is to equilibrate the balance of payments, but in Nigeria, the major objective of the exchange rate policy is how to have a realistic exchange rate, put differently, an effective or equilibrium exchange rate

For the purpose of this study, secondary data were obtained from Central Bank of Nigeria statistical Bulletin, Food and Agricultural organization, World Bank Development Indicator. Time series data for macro-economic variables were collected from these sources. The data collected were analyzed using: graphical analysis, unit root test, and Ordinary least square regression analysis. The graphical analysis was employed to present the trend in agricultural growth in the country from 2002 to 2013. Unit root test shows non-stationarity among the variables making use of Augmented Dickey-Fuller test. The stationarity was induced in series after the first differencing. Regression analysis was later used to find out the relationship among the variables under consideration.

From the findings of the study, the graphical analysis explains the trends of some variables such as Gross Domestic Product (GDP), human capital, export value and inflation rate as it relates to agricultural growth in the Nigerian economy covering the period of 2002-2013 on a quarterly basis. It had proved that agricultural growth, GDP, Inflation (INF), export value (EXPV), export (EX), human capital (HC), crude oil price (PO), capital (K), labour (Lb), and foreign direct investment (FDI) are bound together when agricultural growth is made the dependent variable. It was revealed that the effects of crude oil price have an inverse relationship on Agricultural growth and are not significant at all known level of significance. It was revealed that co-efficient of regression associated with inflation (-1.71735e05), export (-0.00469359), human capital (-0.0766241), price of crude oil (-0.00692613), and capital (-0.503755) have negative impact on agricultural growth while export value (0.0160678), labour (12.6110) and foreign direct investment (5.98999e-06) has positive impact on agricultural growth. Moreover, agricultural growth in Nigeria helps to reduce the dependence on the oil sector and importation of goods and services, therefore, encouraging agricultural practices. This study recommends that local agricultural growth should be encouraged in order to reduce importation of goods and produce as well as high reliance on oil sector.

Key words: Exchange rate, Inflation, Human capital, Price and Gross Domestic Product (GDP)

Introduction

Exchange rate like other economic variables, for example, interest rate, inflation rate, unemployment rate, money supply, etc. is a strong economic indicator for assessing the overall performance of an economy. It is one of the macroeconomic variables that reflects the strength and weakness of an economy. As a potent monetary tool, exchange rate is used in achieving certain economic objectives, the common objective, according to Obadan (2006) is to equilibrate the balance of payments, but in Nigeria, the major objective of

the exchange rate policy is how to have a realistic exchange rate, put differently, an effective or equilibrium exchange rate. The reality that emerged shows that Nigeria export products are essentially inelastic and the prices of the export products are fixed by the international market and are not positively correlated to changes in the naira exchange rate. Other adverse effects of depreciation include: unemployment, lack of direct foreign private investments, increased external debts, balance of payments disequilibrium and low per capita income. It also undermined the international competitiveness of non-oil export, making planning and projections difficult at both micro and macro levels. In addition business capacity utilization in Nigeria became low up to 40 per cent with accumulated inventories while a number of small and medium scale enterprises were strangulated as a result of the low dollar/naira exchange rate.

Equilibrium exchange rate can be said to be the real rate, which promotes the achievement of external balance in a manner that is consistent with other targets of economic policy. It is a rate, which would remove the existing distortions and disequilibrium in the external sector of the economy as well as ease the persistent balance of payments problem in Nigeria. Exchange rate instability can have a serious adverse effect on price, investment and international trade decisions. Similarly, a realistic exchange rate is one that reflects the strength of foreign exchange inflow and outflow, the stock of reserves as well as ensuring equilibrium in the balance of payments.

Exchange rate policy has been a significant instrument for macroeconomic management in Nigeria as it has been frequently applied in the past to preserve the value of the naira, maintain a comfortable external reserves position and ensure price stability. In the past different exchange rate policies have been used depending on the conditions of the economy at that period and sometimes in response to the changing exchange rate policies with the rest of the world. Often these policies are directed largely at efforts to restrict or ration the use of foreign exchange at officially determined rates, but recent policy shifts have reflected a move towards market- determined exchange rate (Agu, 2002).

Exchange rate determination varies from country to country and from one period to another. Nigeria has witnessed frequent shifts in the exchange rate policies for the past three decades. In a market friendly economy, the exchange rate is market determined, that is, through response to the forces of demand and supply of foreign exchange. Sometimes in Nigeria exchange rate is determined through administrative fiat, that is, by fixing the rate to one or more convertible currencies without regard to the appropriate market value of the home currency. Between the two extreme cases of exchange rate determination, there is a dual exchange rate system, an admixture of both regimes of fixed and market determined exchange rates system where different rates are applied for different transactions. In a sense, exchange rate determination is influenced by the type of exchange rate regime being adopted (Agenor, 2000). For example, the Nigerian foreign exchange market in the 1990s was made up of three segments: the official foreign exchange market; the autonomous market (i.e. interbank and bureau de change), and the parallel market. The various segments of the market evolved overtime and emerged due to development in the economic and regime's priority.

The problem of how to reduce inflation has been a central issue among policy makers since the 1970s. Although available data show that the Nigerian economy has on the average experienced moderate inflation in the pre-SAP period, the unfavorable consequences of inflation have since assumed an intolerable dimension. Several authorities have attributed it to the expansion of public expenditure arising from the increase in oil revenue, which culminated into a vast expansion of aggregate demand and the inelastic supply of domestic output.

The rapid growth in money supply arising from the monetization of oil earnings also exerted an upward pressure in general price level. When the price of crude oil slumped during the 1st half of 1980's, Nigeria's crude oil, which sold at slightly above US$41 per barrel in early 1981, fell to less than US$9 by August, 1986.This triggered off a series of developments in the economy. One example of such developments is the state of fiscal crisis as reflected in the persistent budget deficit, which culminated to approximately N17.4 billion in the five years between 1980 and 1984. Monetary policy became highly expansionary as a large part of the deficit incurred during this period were financed through the creation of credit thus the local domestic credit to the economy recorded an average annual growth rate of 29.9% in 1980–84 and most of the increase was attributable to net claim by government. However, the inflation in 1984, which stood at almost

40%, is often explained in terms of acute shortage of imported goods and services imposed by inadequate foreign exchange earnings, a derivation of the steep fall in crude oil prices.

SAP was adopted in July 1986 to among other things get the price right using the foreign exchange rate reform as its central tool. In pursuit of this, the second tier foreign exchange market was introduced in late September 1986 and since that time; the naira has depreciated sharply against the US dollar and the other major currencies. This development shows that a depreciation of the naira has a role to play in Nigeria's recent inflationary trends. In addition to the above, the frequent fiscal deficit operation in the last two decades in which budget deficit is financed through banks has further exerted upward pressure on the general price level. This suggests that the current inflation may have been caused by these factors. While the channels through which exchange rate depreciation affect prices are well known, the extent to which this phenomenon engenders price inflation in Nigeria is one of the reasons for the study. Therefore, this research work was designed to examine the extent to which exchange rate depreciation will cause inflation in Nigeria.

The exchange rate of the naira was relatively stable between 1973 and 1979 during the oil boom period (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) (Agu, 2002).

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 its 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 Program me (SAP).

The major problem which this study is designed to solve is whether the exchange rate has any bearing on Nigerians economic growth and development. While some Economist dispute the ability of change in the real exchange rate to improve the trade balance of developing countries (Hinkle, 1999) 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. This paper was designed to examine the effect of exchange rate on agricultural growth in Nigeria, its trend, movement and effect on agricultural production in Nigeria. The hypothesis of the study is stated in null form as: Ho: There is no significant relationship between exchange rate and agricultural growth in the Nigeria economy.

The fiscal action of government and the concomitant actions of the monetary authority through its monetary policy (tight and expansionary) and the reactions from the economic agents have profound effects on the stability of the exchange rate. According to Akanji (2006), exchange rate performance can be attributed to the repercussion of various shocks, consequent on changes in external reserves for the purpose of fiscal adjustment, domestic shocks, such as liquidity, domestic prices and other financial shocks associated with monetary instruments. Velasco (1996) observed that gradual and timely devaluation with adequate fiscal management could have been the key ingredient of macro-stability, but over-emphasis on exchange rate auctions and the inter-bank market as a means of ensuring continued flexibility has resulted to exchange rate depreciation. He argued that U.S. dollar, which is the most widely traded currency, is subjected to gyrations commonly unrelated to fundamentals. How, therefore, can the naira that uses the dollar as a base, resist similar instability?

Sani (2006) and Berelrix and Lanel (2009) advised that, to reduce or eliminate the over-valuation of the naira, the inflation rate should be brought down through fiscal and monetary restraint and the application of appropriate supply increasing measures. Sani (2006) went further to state that, although the market driven exchange rate has succeeded in removing the problems of over-valuation, he argued that, problem of over-valuation is as a result of over-liquidity in the system resulting from expansionary fiscal and monetary developments, and the indiscipline of some speculative market operators.

Finally, to achieve a sustainable stability in the exchange rate, Akpan (2006) asserted that stability does not imply fixing the exchange rate but the rate should be allowed to vary in a manner that should further the achievement of other macro-economic objectives. Lizondo and Montriel (1989), supports that, an emphasis on sustainability implies a preference for a variance of limits which the exchange rate should move.

Sani (2006) advised that, to reduce or eliminate the over-valuation of the naira, the inflation rate should be brought down through fiscal and monetary restraint and the application of appropriate supply increasing measures. Akanji (2006) argued that an exchange rate policy for achieving structural transformation and longtime development is very unlikely to find a simple market determined rate adequate, particularly for a country like Nigeria, which is an enclave sector receiving large windfalls in Forex receipts from oil. Dornbusch (1986) confirmed that the availability of foreign exchange earnings from oil sector provided a "false sense" of economic well-being as well as an artificial blur of the underlying structural distortions. This shows that, the continuous reliance on oil revenue for determination or stability in the naira exchange rate is grossly unfounded because the oil prices are subject to external shocks, and are determine by OPEC

Generally, there are three main theoretical foundations of exchange rate determination. These include: the traditional flow model; the port-folio balance model; and the monetary model as well as the purchasing power parity model, which is a sub-set of the monetary model.

The traditional flow model

The theory states that, exchange rate is determined simply by the forces of supply and demand of foreign exchange. The exchange rate is in equilibrium when supply equates demand. The current account imbalance is offset by the net flow of capital in the opposite direction. A current account surplus is financed by acquisition of financial assets abroad or outflow of capital. Similarly, a deficit is financed by an inflow of capital. The current account is assumes to be determined by changes in relative prices and real income. Increases in domestic prices relative to foreign prices leads to exchange rate depreciation. This is because increase in the domestic price level feed into costs thereby making exports costly and highly competitive. Consequently, the supply of foreign exchange is constrained. Imports on the other hand increase since the inflation- ridden economy is a more profitable place to export. If imports are very inelastic, import payments increase thereby increasing the demand for foreign exchange.

According to the model exchange rate is determined by three factors: the relative price, income and relative interest rate. This can be related as;

$$EXCHR = f (p/pf, y, r/rf) \tag{1}$$
$$EXCHR = \lambda_0 + \lambda_1 p_1 + \lambda_2 y_2 + \lambda_3 r_3 + \mu_1 \tag{2}$$
$$EXCHR = \lambda_0 + \lambda_1 p_1 + \lambda_2 y_2 + \lambda_3 r_3 \tag{3}$$

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Where; p = domestic price, pf is foreign price, y = real income, r = domestic interest rate and rf = foreign interest rate.

The equation (3) posits that an increase in domestic interest rate relative to the foreign interest rate causes an appreciation of the exchange rate through induced capital inflow. Therefore, a country that intends to strengthen its exchange rate must raise interest rate, lower prices and reduce real growth. An increase in real income will lead to increase in the demand of imported commodity, which will lead to exchange rate depreciation. Equally, an increase in domestic price relative to foreign prices brings a negative effect on the exchange rate. The domestic goods will be more expensive relative to foreign goods; this will lead to an increase in import and finally lead to disequilibrium in exchange rate. The problem of this model is that it ignores the relevance of the asset market and it does not take into consideration the total money supply or the demand and supply of money.

The monetary model

The monetary model tries to explain changes in exchange rate in terms of changes in the demand for and supply of money between two countries. The factors that determine exchange rate, according to the model include money supply, real income, and interest rate.

Thus:

$$EXCHR = f (Ms, y, r) \tag{4}$$
$$EXCHR = \beta_0 + \beta_1 p_1 + \beta_2 y_2 + \beta_3 r_3 + \mu_1 \tag{5}$$
$$EXCHR = \beta_0 + \beta_1 p_1 + \beta_2 y_2 + \beta_3 r_3 \tag{6}$$

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Where: EXCHR = Exchange rate, Ms = Money supply, y = real income, r = interest rate.
According to the model (6) increase in money supply causes the exchange rate to depreciate as a result of inflationary pressure it generates. An increase in the real income with fixed nominal money supply causes prices to change leading to an appreciation of the exchange rate. While an increase in domestic interest rate lowers money demand raises prices (with a given stock of money) the increase in prices leads to the depreciation of the exchange rate.

From what we have discussed so far, it can be deduced that, the traditional flow model and the monetary model specify the same factors affecting the exchange rate; the results are in the opposite directions. The traditional flow model predicts that increase in interest rate leads to exchange rate appreciation but it causes the exchange rate to depreciate in the monetary model. Similarly, increase in real income causes depreciation of the exchange rate in the traditional flow model but the exchange rate appreciates when real income is increased in the monetary model.

One of the criticisms of the monetary model is the assumption that domestic and foreign bonds are perfect substitutes. If two assets are not perfect substitutes, then account must be taken of the differences in their prices and yields. Another criticism is that it does not seem to make distinction with the different assets (domestic and foreign currencies).

The port-folio balance model

The port-folio balance model assumes that residents distribute their wealth among three forms of assets namely: monetary base, domestic bonds and foreign bonds. The exchange rate is in equilibrium when the holdings of these assets are in their desired proportion.

Thus: Where: W= wealth, MB = Money base, DB = Domestic bonds, FB = Foreign bonds.

The model (9) states that, an increase in domestic wealth may arise either from increase in monetary base, holdings from government bonds or from the current account surplus. An increase in wealth increases the demand for foreign bonds or assets leading to a depreciation of the exchange rate as a result of capital outflow so generated. However, an increase in private sector holding of government bonds drive bond prices down and raises interest rate. This causes an appreciation of the exchange rate. Thus, an increase in domestic government bonds has an uncertain effect on the exchange rate. The exchange rate may appreciate or depreciate, depending on the relative strength of the substitution and income effects. The exchange rate will appreciate if the substitution effect is stronger. On the other hand, it will depreciate if it is weaker than the income effect. An increase in the foreign bonds will lead to capital flight, thereby increasing the demand for foreign exchange. Consequently, it will lead to depreciation in the exchange rate. A major criticism of the asset-disturbance model is that it ignores the fundamental determinants of trade, the role of expectations as well as the role of purchasing power parity (PPP).

The concept of purchasing power parity (PPP) is straightforward. It is an important assumption in some version of the monetary and port-folio balance models but not in the Keynesian/Dombusch models. The theory was propounded by a Swedish economist, named Gustar Cassel in 1920. The theory essentially represents a synthesis of the work of the nineteenth century economists like Ricardo, Wheatley and Thornton, etc. The theory suggests that we should be able to buy the same bundle of goods in any country for the same amount of currency (or, put slightly differently, people value currencies for what they buy). It states that the equilibrium exchange rate between two inconvertible paper currencies is determined by the equality of their purchasing powers. The fundamental notion of the PPP theory is that, the exchange rate depends upon the relative prices levels and not the other way round. The implication is that with every change in the price level, the exchange rate also changes.

The theory attempts to explain the equilibrium value of the exchange rate in terms of differences in inflation rate between two countries. It assumes that exchange rate of currencies of two countries move in a manner that seeks to offset the inflation differential between the economies thereby maintaining, the real purchasing power of either currency in the other economy

$$W = f (MB, DB, FB) \qquad\qquad (7)$$
$$W = \alpha_0 + \alpha_1 MB_1 + \alpha_2 DB_2 + \alpha_3 FB_3 + \mu_1 \qquad\qquad (8)$$

$$W = \alpha_0 + \alpha_1 MB_1 + \alpha_2 DB_2 + \alpha_3 FB_3 \qquad\qquad (9)$$
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Materials and Method

The study area is Nigeria. Nigeria which is the most populous country in Africa is the study area for this project. Nigeria extends between latitude 4° 17N and longitude 2° 20E and longitude 14° 30E. It has land area of 92377 sq kilometers. It is located in West Africa and plays a big role in ECOWAS, with headquarters in Abuja. Nigeria is bounded on the North by Niger Republic, on the South by the Gulf of Guinea, on the East by Chad and Cameroon and on the West Benin Republic. The country's vegetation ranges from tropical forest and swamps in the South, to grassland merging into desert in the North. The dry season moisture deficit varies from 1300mm in the North to 200mm in the South while the wet season moisture surplus varies from 100mm in the North to 1800mm in the South. Nigeria has an estimated population of about 150million with growing range of about 3.5percent per year with nearly three quarter of its workforce employed in agriculture (FOS, 2000). The major cash crops grown in Nigeria are Groundnut, Cocoa, Kola nut, Rubber, Cashew and Cotton. Nigeria accounts for one fifth of the total population of sub-Saharan Africa. About 63percent of the population consisting of 150 million people lives in rural area and are largely dependent on subsistence agriculture while the rest (37 percent) lives in the urban areas.

The use of secondary data was employed for this study. these data were obtained from the; Food and agricultural organization (FAO) statistical data base, The Central Bank of Nigeria (CBN) statistical bulletin, World Bank development Indicators (WDI). Time series data from macro-economic variables were collected from these sources spanning from 2002-2013 quarterly data. Graphical analysis, unit root test and regression analysis were used as tools of analysis in this study. Graphical analysis was used to determine the trend in the movement of selected macro-economic variables while regression analysis was used to analyze the relationship between selected independent variables and the dependent variable.

Model Specification

The hypothesized structural relationship for the study is specified as follows:

$$LAGDP = \beta_0 + \beta_1 INF + \beta_2 EXPV + \beta_3 EX + \beta_4 HC + \beta_5 LPO + T + \varepsilon_t \text{-------------- 10}$$

Where:

LAGDP = Natural logarithm of gross domestic profit

LINF = Natural logarithm of Inflation

LEXPV = Natural logarithm of export value

LEX = Natural logarithm of export

LHC = Natural logarithm of human capital

LPO = Natural logarithm of population

T = Time Trend

ε_t = other unobserved variables

The estimated linearized function of the above specification was found to give the lead equation, on which discussions were made.

Result and Discussion

Graphical Analysis

The graphical analysis was employed here to show the movement of various indices of agricultural growth in Nigerian economy. The items of growth considered are. Human capacity in Nigeria, Inflation, trend in export and Nigeria Gross Domestic Products (GDP). The results of the findings were shown in figures 1 to 4. It was revealed from figure 11 that there is a steady movement in human capital from the first quarter of 2002 to the third quarter of 2005. It rose steadily between the first quarters of 2006 to the third quarter of 2007. It rose steadily from 2008-2009. In 2009, it sporadically rose from 20% due to change in government. From that moment it continued to increase at increasing rate giving room for more sustainability of agriculture.

Inflation in Nigeria between 2002 and 2013 is reported in Figure 2. The figure depicted that there is no stable rate of inflation in the country, rather it fluctuating all year round. Though it reached the peak in the third quarters of 2008. In the first quarter of 2002 it stood at 14% and rose slightly only to drop sharply to 2% in the third quarters of 2002. In 2003, it rose to 35% and dropped steadily to 10% in the first quarter of 2005. Inflation rate continued to rise and fall *i.e.* causing a dwindling economy in the country.

Export earnings was also considered from 2002 to 2013 and the result of the finding was presented in figure 3. The export earnings rose from 5 billion in 2002 and continued to rise steadily until 2004 when it sharply rose from 15 billion to 30 billion, after which there was a sharp fall in 2006. It started rising steadily again in 200, since then it continued to rise gradually to 2009 when there was a new government in the country which gave encouraged local production of produce, therefore leading to exportation of goods and thereby increased the earnings in the economy.

The trend in Gross Domestic Products (GDP) stands at 3E+10Nm in 2002 and continued to increase in small ranges until 2009. From 2009, it rose sporadically from 6E+10Nm to 1.2E+11Nm in 2012 which continually indicates the inception of a new government that encouraged local production of goods and services. From this trend it shows us what our local reserve used to be to what it is at the moment and how new agricultural policies helped in developing the economy.

Unit Root Test

Unit root test was presented in Table 1. The table shows the unit root which is a condition for using data for regression analysis that the stationary properties of the variables will be carried out. The unit root properties of the data used in the regression analysis was determined to ascertain the unit root before it is being used in the regression analysis. Of all the variables used LEXPV, LF, LFDI and LEX were stationary at level i.e. I (0). Hence, they have order of recreation of zero. However, variables ATOT, LPO, LK, LLb, LLda, LIMPV, LHC, LGEXP, LAGDP and LINF have unit root properties and became stationary at 1st differencing i.e. I(1) as shown in the table below. Each data were used in the regression analysis at the level they became stationary. Augmented Dickey Fuller (ADF) was employed to study the unit root test as sown in the table below.

Regression Analysis

The regression analysis shows the relationship between dependent (agricultural growth) and independent variables (export value, labour, foreign direct investment inflation, export that occur in economy, human capital, price of crude oil, capital and time trend) was revealed in Table 2. The table reported the input and output relationship as well as joint association between the variables under consideration. The coefficient determination R^2 from the regression analysis was 0.610923, this value implies that 61% of the factor affecting exchange rate on Agricultural growth in Nigeria is explained as a result of linear association

between the exogenous and endogenous variables. The remaining 39% of the variation in factors affecting exchange rate on agricultural growth is accounted for by error term. Three (3) variables: export value, labour and foreign direct investment were positively related to agricultural growth in the country while six (6) variables :inflation, export that occur in economy, human capital, price of crude oil, capital and time trend were negatively related. Whereas positively related variables tend to increase the agricultural growth of the economy, negatively related variables will give decrease in agricultural growth.

However, three (3) out of nine (9) variables under consideration were statistically significant at 5% and 1% respectively. The coefficient regression associated with export value is statistically significant at 1% level of significance and has a positive relationship with agricultural growth, which is in line with the theoretical expectation and it significantly affecting the growth of agricultural production in the economy. The magnitude of export value of 0.0160678 implies that a unit increase in export value which is the value of goods at the U.S. port of export, will cause 0.0160678 unit increase in the growth of agriculture in the country.

Also, Human capital has a negative relationship with agricultural growth and it's significantly affecting the growth of agriculture at 1% which is not in line with the theoretical expectation. The coefficient of regression associated with human capital has a value of -0.0766241 which implies that agricultural growth in the economy will reduce by 0.0766241 unit with a unit increase in human capital.

Furthermore, Price of crude oil is negative but significant at 5% and the negative sign present is not in line with the theoretical expectation. The magnitude of the coefficient of regression attached with price of crude oil is -0.00692613, which implies that a unit increase in price of crude oil will decrease the growth of agriculture in the economy by 0.00692613 units.

In addition, it was also revealed from table 1 that Inflation, export, Capital, and time trend had negative relationship with agricultural growth though they are not significant affecting the growth of agriculture at any level. At the same time labour

labour is positively related with agricultural growth which follows the a priori expectations though the relationship is not statistically significant at any level. Others include the foreign direct investment, which was equally related positively with growth of agriculture in Nigerian economy.

Conclusion

The result of the study shows that agricultural growth in Nigeria is not significantly affected by exchange rate in the Nigerian economy. 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 openness 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.

Recommendation

From the study above, the following recommendations are made for further study or consideration.

• There is need for government to ensure the implementation of policies that will encourage local agricultural growth in order to reduce import, by providing price policy, perfect market and credit facilities to work side by side with crude oil production.

• Policy makers should make effort to invest heavily on agriculture in order to meet local consumption and export to compete with crude oil for foreign exchange earnings, because a time will come when agriculture will be more viable than crude oil.
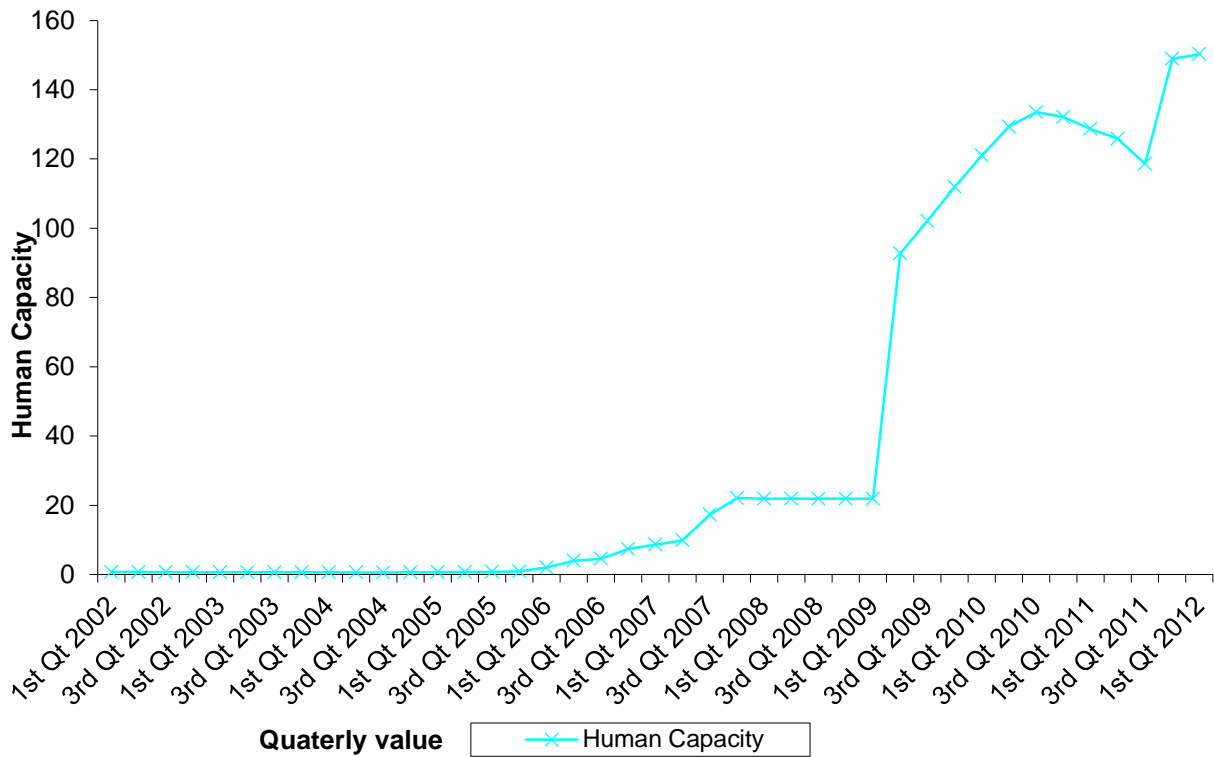
Human Capacity in Nigeria 2002 - 2013

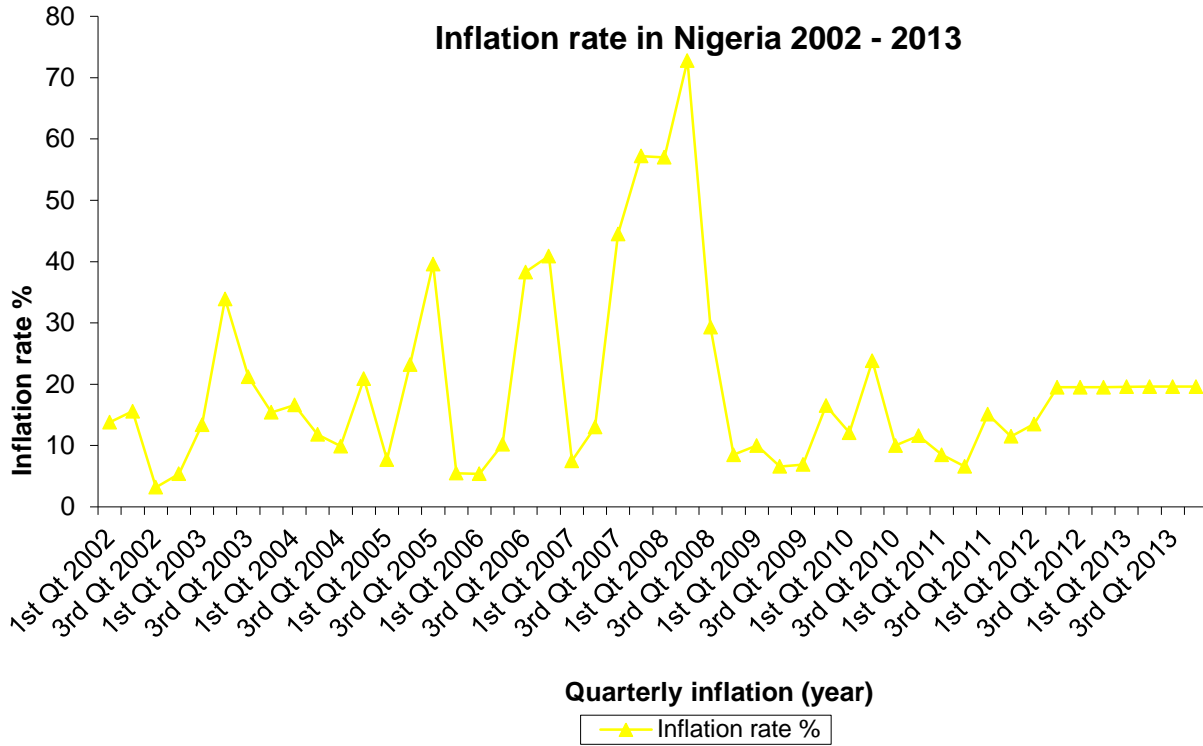*Figure 1: Human Capacity in Nigeria 2002 - 2013*

Inflation rate in Nigeria 2002 - 2013

Figure 2: Inflation rate in Nigeria 2002 - 2013

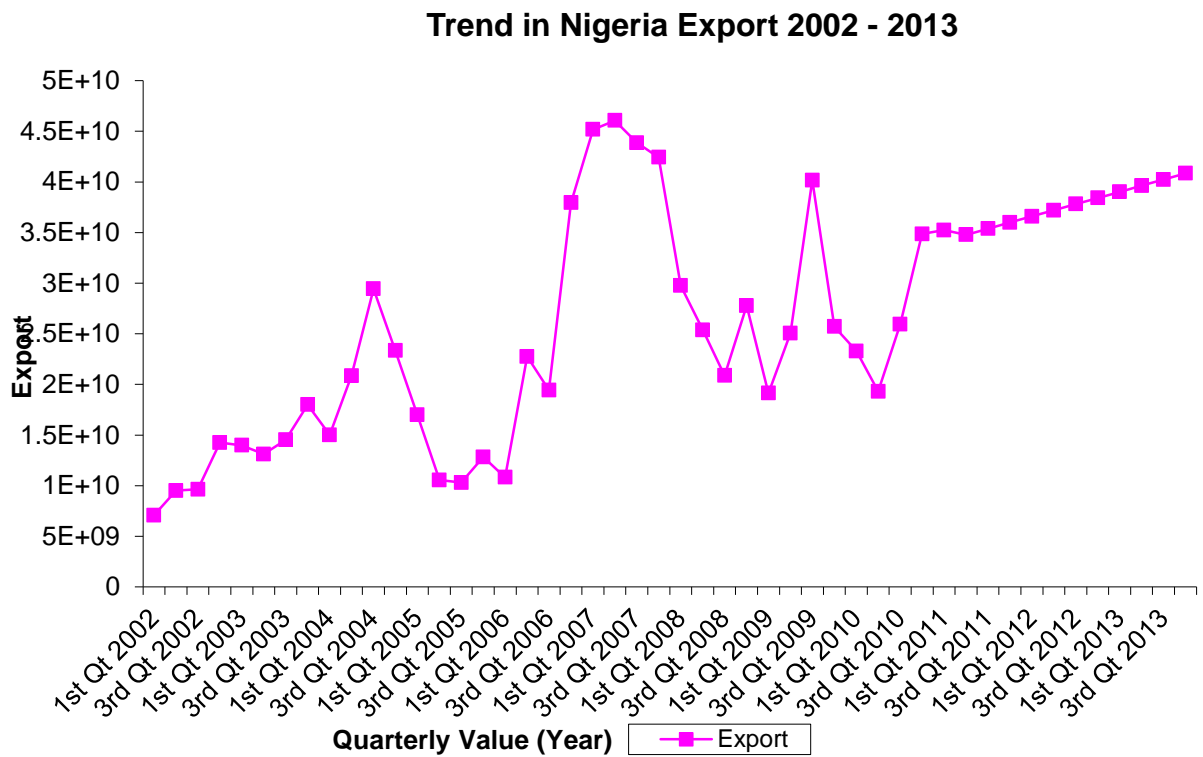**Trend in Nigeria Export 2002 - 2013**

Figure 3: Nigeria Exports 2002 - 2013
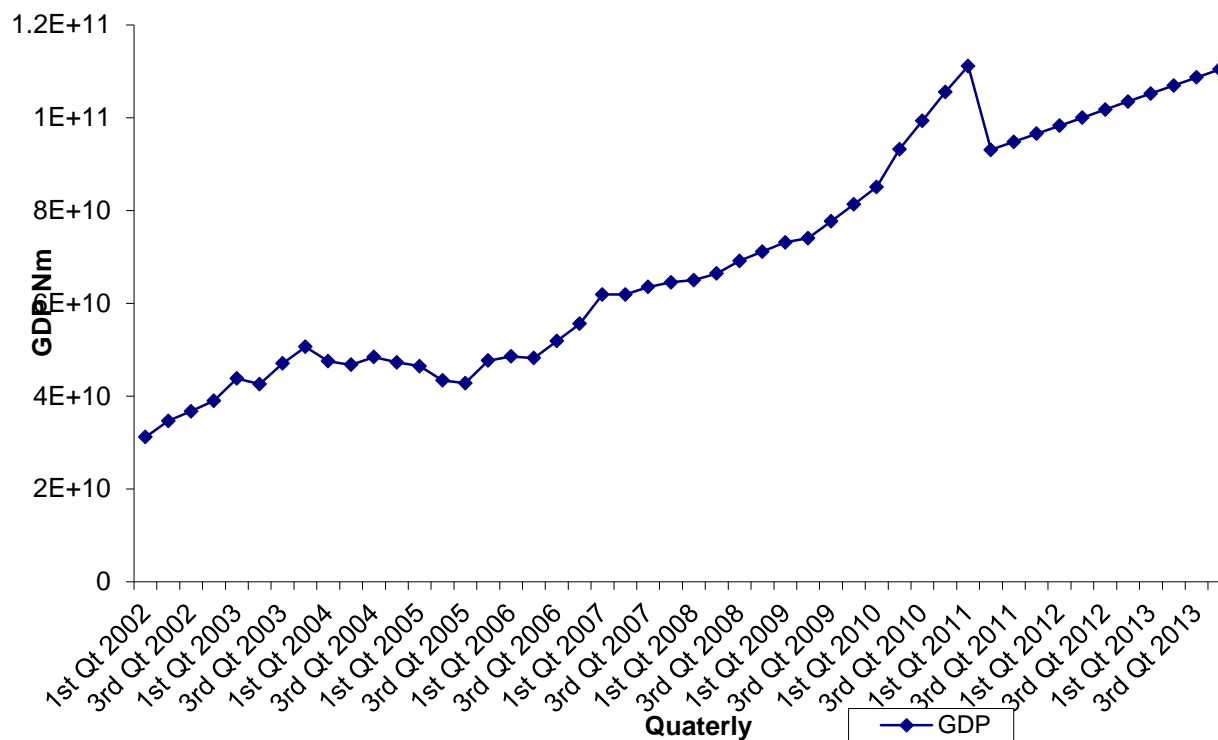
Nigerian Gross Domestic Products (GDP) 2002 - 2013

Figure 4: Gross Domestic Products in Nigeria 2002 - 2013

Table 1: UNIT ROOT TEST

	t-statistics		
Variable	Level	1st differencing	Orders of integral
LEXPV	-4.25254***	-3.34313*	0
ATOT	-2.5025	-5.28323***	1
LPO	-3.05838	-3.64717**	1
LK	-3.07728	-12.4906***	1
LLb	-3.06544	-12.4976***	1
LF	-5.80406***	-3.77003**	0
Llda	-2.34456	-3.31074*	1
LIMPV	-1.9143	-12.6419***	1
LHC	-2.5778	-3.61802**	1
LGEXP	-2.01323	-3.72711**	1
LFDI	-3.80098**	-8.65189***	0
LAGDP	-2.08582	-3.78072**	1
LINF	-2.44984	-12.1377***	1
LEX	-3.16919*	-3.95078**	0

Sources: Data Analysis 2015

Table 2: Interpretation of Regression Result

Variable	Coefficient
d_LINF	**-**1.71735e-05(-0.6196)
LEXPV	0.0160678(2.804)***
LEX	-0.00469359(-1.115)
Dlhc	-0.0766241(-6.955)***
d LPO	-0.00692613(-2.599)**
dLK	-0.503755(-0.4660)
dLLb	12.6110(0.4693)
LFDI	5.98999e-06(0.02303)
Trend	-1.74398e-05(-0.3083)
Constant	-0.284098(-2.596)**

Sources: Data Analysis 2015

Significant at: 1% ***, 5% ** and 10% * $R^2 = 0.610923$ F = 6.455205 (0.000018)

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