



# Effects of Exchange Rate on Agricultural Sector Output in Nigeria 1987-2019

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## **ABSTRACTS**

Exchange rate is the rate at which a nation's currency is exchanged for another countries currency. The external value of each currency is reflected in the country's economic conditions in general and the purchasing power of the currency relative to that of other currencies in particular. Exchange rate is the main signposts signaling the current trends in the economy. Agricultural sector has been identified as the mainstay of the Nigerian economy since independence in 1960. Before the discovery and exploration of crude petroleum, the country depended on funds generated from agricultural export expansion for the development of other Sectors of the economy. The main objective of the study is to examine the effects of exchange rate on agricultural sector output in Nigeria. The specific objectives are to: Determine the effect of nominal exchange rate on agricultural sector output in Nigeria; Examine the effect of money supply on agricultural sector output in Nigeria; Analyze the effect of interest rate on agricultural sector output in Nigeria and determine the effect of inflation rate on agricultural sector output in Nigeria. To analyze the data, econometric techniques involving Augmented Dickey Fuller tests for Unit Roots and the Ordinary Least Square (OLS) were used. The result of regression indicate that nominal exchange rate and money supply has positive and significant effect on agricultural sector output while interest rate and inflation rate has negative and insignificant effect on agricultural sector output. The study therefore concludes that exchange rate have adverse effect on the performance of agricultural sector output and have not helped to improve the rate of investment in agriculture in Nigeria. The study recommends that; 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. To boost agricultural export volume, policy makers should take measures in stabilizing exchange rate from present downward trend since appreciation of exchange rate stimulate (increase) agricultural export output. Government should also reduce price of agricultural exports (mostly cash crop) indirectly through the provision of fiscal incentives examples, tax free on import of agricultural processing equipment and tax holidays for other agriculture related input thereby reduced the cost of production and price of the products

**Keywords:** exchange rate, agricultural sector output, Nigeria

## **INTRODUCTION**

Exchange rate is the price of one country's currency expressed in terms of some other currency. It determines the relative prices of domestic and foreign goods, as well as the strength of external sector participation in the international trade. Exchange rate regime and interest rate remain important issues of discourse in the International finance as well as in developing nations, with more economies embracing trade liberalization as a requisite for economic growth (Obansa, Okoroafor, Aluko and Millicent, 2013). In Nigeria, exchange rate has changed within the time frame from regulated to deregulated regimes. Adeniran, Yusuf, and Adeyemi (2014) agreed that the exchange rate of the naira was relatively stable between 1973 and 1979 during the oil boom era and when agricultural products accounted for more than 70% of the nation's gross domestic products (GDP). In 1986 when Federal government adopted

Structural Adjustment Policy (SAP) the country moved from a peg regime to a flexible exchange rate regime where exchange rate is left completely to be determined by market forces but rather the prevailing system is the managed float whereby monetary authorities intervene periodically in the foreign exchange market in order to attain some strategic objectives (Ismaila, & Imoughele, 2015). This inconsistency in policies and lack of continuity in exchange rate policies aggregated unstable nature of the naira rate (Ismaila, 2016). Benson and Victor, (2012) and Aliyu, (2011) noted that despite various efforts by the government to maintain a stable exchange rate, the naira has depreciated throughout the 80's to date.

### **Statement of the Problem**

Since the introduction of the Structural Adjustment Programme (SAP) in 1986, the Nigerian economy has become more open to market forces and their attendant problems. All those while, the Nigerian economy had to deal with problems of unstable exchange rate, high interest rate, high inflation rate and unstable agricultural sector output, high and increasing rate of unemployment, trade imbalances which had adversely affected agricultural sector output in Nigeria (Abdul & Marwan, 2013). Economists differ on which policies that could enhance long-run agricultural sector output. Antwi, Mills and Zhao (2013) argue that exchange rate policies are necessary for long-term agricultural sector output in Nigeria. However, Anderson and Jodon (1968) postulated that monetary policy has greater and faster impact on agricultural sector output, thus suggesting that greater reliance be placed on monetary measures than fiscal measures in the conduct of stabilization policy. Gatawa, Akinola, and Muftau (2017) asserted that exchange rate variable is more effective and dependable than fiscal variable in affecting changes in agricultural sector output. Other scholars argue that the growth of human capital, that is, investment in education and training contributes significantly to long-run agricultural sector output (Barro, 1990).

Previous attempts to understand the effects of exchange rate on agricultural sector output in Nigeria have resulted in conflicting opinions. The existing studies disagreed both in the line of significance and direction of relationship. A number of the findings highlight significant influence from exchange rate variables especially the moderating effect of nominal exchange rate (Gatawa, Akinola, Muftau, 2017; Olawale, 2015; Muftaudeen, Hussainatu, 2014; Ojede, Amin, Daigyo, 2013). Despite agreeing that agricultural sector output responds to exchange rate, these studies are at variance as to the direction of the effects.

For instance Holden, Sparman, 2013; Paul, Akindele, 2016, argued that all the exchange rate variables they employed have a negative effect on agricultural sector output in both the long and short run suggesting that growing exchange rate, money supply, interest rate, and credit extension will rather hamper agricultural sector output in Nigeria as against the belief from studies like Onwanchukwu, (2015), Ozei, Sezgin, Topkaya, (2013), that exchange rate variables enhance agricultural sector output of the economy. A number of studies outrightly argued that exchange rate variables have no effect on agricultural sector output (Onuorah, Osuji 2014; Olawunmi, Adedayo 2016). Aroriode and Ogunbadejo, (2014), noted that interest rate, exchange rate and inflation rate are not statistically significant tools for enhancing agricultural sector output. These shortcomings have somehow contributed to the knowledge gap in the literature which this study closes by using data from (1987-2019), a period of 32 years and increasing the number of exchange rate variables

## **REVIEW OF RELATED LITERATURE**

### **Conceptual Framework**

#### **Exchange Rate**

Exchange rate is the rate at which a country currency is exchanged for other countries currency. The external value of each currency is reflected in the country's economic conditions in general and the purchasing power of the currency relative to that of other currencies in particular (Ani, Ugwunta & Okanya, 2013). Diala, Kalu, and Igwe-Kalu, (2016), observed that the performance and profitability of industries and companies that depend mainly on importation are considerably affected by the exchange rate of the Naira against major currencies of the world. If there is depreciation of the local currency, this makes the export goods to be cheaper and thus encourages export and profit. This would stimulate the

growth of the economy and consequently increase the returns on Stock. The reverse is the case when there is an appreciation of the local currency. This therefore implies that the depreciation of the local currency has a positive effect on stock prices.

Movements in the exchange rate have ripple effects on other economic variables such as interest rate, inflation rate, import, export, output, etc. These facts underscore the importance of exchange rate to the economic well-being of every country that opens its doors to international trade in goods and services. The importance of exchange rate derives from the fact that it connects the price systems of two different countries making it possible for international trade to make direct comparison of traded goods. In other words, it links domestic prices with international prices through its effects on the volume of imports and exports. Exchange rate exerts a powerful influence on a country's balance of payments position (Adeniran, Yusuf, & Adeyemi, 2014).

### **Money Supply**

Money supply is the total amount of all forms of money in circulation in a given country at a given period of time (Jhingan, 2005; Abdullahi, 2009). Total money supply can be grouped into three broad categories as defined by the Central Bank of Nigeria: These money ( $M_1$ ) and broad money ( $M_2$ ) (CBN, 2003).  $M_1$  indicates currency in circulation plus current account deposits with commercial banks while  $M_2$  is  $M_1$  plus savings and time deposits. If the apex Bank wants to curtail money supply by reducing the power of participants (commercial banks), it will increase interest rates, while in case of an expansionary monetary policy the reverse will be the case (Yunana & Amba, 2016). There is  $M_3$  covering  $M_2$  plus near money as defined by Gurley and Shaw. However the Central Bank of Nigeria adopts  $M_2$  definition which it refers to as total money aggregate (Akomolafe, Danladi, Babalola & Abah, 2015).

There is excess money supply when the amount of money in circulation is higher than the level of total output of the economy. When money supply exceeds the level the economy can efficiently absorb, it dislodges the stability of the price system, leading to inflation or higher prices of goods. Money Supply is the life wire of all economic activities and so has powerful effects on the economic life of any nation. An increase in Money Supply puts more money in the hands of producers and consumers and thereby stimulating increased investment and consumption. Consumers increase purchases and business firms respond to increased sales by ordering for more raw materials and other resources to achieve more production, the spread of business and capital goods. As the economy goes buoyant, Stock Market prices rise and firms issue more equity and debt instruments. As the Money Supply expands, prices begin to rise, especially if output growth reaches full capacity. Lenders insist on higher interest rates to offset expected decline in purchasing power over the life span of their loans. Opposite effects occur when the Money Supply falls or when there is decline in its growth rate, economic activities decline and disinflation (reduced inflation) or deflation (falling price) results (Umeora 2010).

### **Interest Rate**

Interest rate is the rate at which interest is paid by a borrower (debtor) for the use of money that they borrow from a lender (Babalola, Danladi, Akomolafe & Ajiboye, 2015). Interest rate policy in Nigeria is a major instrument of monetary policy with regards to the role it plays in the mobilization of financial resources aimed at promoting economic growth and development. Interest rate is the price paid for the use of money. It is the opportunity cost of borrowing money from a lender. It can also be seen as the return being paid to the provider of financial resources. It is an important economic price. This is because whether seen from the point of view of cost of capital or from the perspective of opportunity cost of funds, interest rate has fundamental implications for the economy either impacting on the cost of capital or influencing the availability of credit, by increasing savings (Davis & Emerenini, 2015).

Interest rate is an economic variable that depicts the cost of acquiring credit for investment in an economy. It is negatively related to investment, this means that high interest rate discourages investment while low interest rate encourages investment. It often changes as a result of inflation, productivity of capital and Federal Reserve policies and also affects both the future cash flow of firms and discount rate. According to Babajide, Lawal and Somoye (2016), a rise in interest rate decreases corporate profitability and likewise leads to an increase in the discount rate applied to equity investors; both of which affects the

stock prices adversely. Consequently, a rise in interest rate is expected to impact negatively on the performance of the organization and thus on stock market prices. Ogbulu (2010) finds a negative long-run relationship between interest rates and stock returns in Nigeria and also a uni-directional causality running from interest rates to stock returns.

### **Inflation Rate**

Inflation refers to the persistent and the continuous rise in the general level of prices of goods and services in an economy. There is no gainsaying the fact that different economies in different parts of the world experience inflation. For some economies, it could be mere fluctuations, while for some others; it is consistent and continuous rise in price (Jeremiah & Emmanuel, 2015).

The issue of inflation has been a matter of concern for economists overtime as it remains a fact that the real income of the citizens are affected during inflation unless with compensatory income via subsidy or outright increase in the workers' salaries. The latter is another economic problem which, when not accompanied by increased productivity, will lead to more inflationary tendencies in the economy because the value of money would have fallen when the increased incomes fail to bring about more productivity from the wage increases (Osuala, Osuala, & Onyeike, 2013). According to Fatukasi (2012), in Nigeria, notwithstanding the several efforts directed by the government to curb inflation, these efforts have not yielded positive or desired results as high price level continued to cause setbacks in the growth rate of the living standard of most Nigerians who are either on fixed income or are unemployed. He added that it has adverse effects on investment productivity, balance of payment and therefore reduced growth rate of the Gross Domestic Product (GDP).

High inflation means a decline in real income; investors react by selling off their assets (stocks inclusive) to enhance their purchasing power. On the contrary, low inflation motivates investors to acquire more assets. Another argument is that increase in the rate of inflation reduces stock prices because of the interaction of inflation with the tax system. Investors undervalue corporate stock during inflationary period because they fail to consider capital gain on corporate debt, and also they price stock to give an Earning Price Ratio that could be comparable to nominal rather than real interest rates (Osamwonyi & Evbayiro-Osagie, 2012). The several impulses of inflation in any economy have made it an issue of concern for policy makers.

### **Theoretical Framework**

This study is anchored on Solow's Theory. Robert Solow and Swan introduced the Solow's model in 1956. Their model is also known as Solow-Swan model or simply Solow model. In Solow's model, other things being equal, states that saving, investment and population growth rates are important determinants of economic development. Higher saving, investment rates, lead to accumulation of more capital per worker and hence more output per worker. On the other hand, high population growth has a negative effect on economic development simply because a higher fraction of saving in economies with high population growth has to go to keep the capital-labour ratio constant. In the absence of technological change and innovation, an increase in capital per worker would not be matched by a proportional increase in output per worker because of diminishing returns. Hence capital deepening would lower the rate of return on capital.

Solow's neoclassical growth model is an extension of the theory of Cobb Douglass, explaining that the output or gross domestic product (GDP) depends on the technology, number of employees, amount of physical capital, the amount of human capital, as well as the amount of natural resources. So it can be written by the following equation.

$$Y = A f(L, K, H, N)$$

where  $f$  is the function that shows how the inputs are combined to produce output.  $A$  is a variable that indicates the availability of production technology.  $L$  is the amount of labor.  $K$  is the amount of physical capital.  $H$  is the amount of human capital, and  $N$  is the number of natural resources.

The first factor that determines the output of a country is labor. Economists argue that population growth will affect life in society. The most impact is the change in the total labor force. Large population will

have a large labor force in producing goods and services. In addition, economists believe that growth is the engine of the world's population in technological progress and economic prosperity

The second factor is the physical capital. Physical capital is the completeness of the equipment and structures used to produce goods and services. Investment is one form of physical capital in the production function. Both domestic and foreign investment holds the contribution in accelerating the economic growth of a country.

Human capital is the third factor in the neoclassical growth model. Human capital acquired knowledge and skills of workers through education, training, and experience. Quality human capital will enhance the ability of a country to produce goods and services.

The fourth factor is the natural resources. Natural resources are inputs in the production activities provided by nature, such as land, rivers and mineral content in the earth. Many countries have good natural resources, bringing the country towards economic development

The fifth factor that determines the output of a country is the mastery of science and technology. Technological knowledge is an understanding of the best ways to produce goods and services. When there is a technological development, it will need less labor. So most of the workforce will be able to produce other goods and services, the result will be increased productivity

### **Empirical Review**

Wasiu, and Ndukwe, (2018) investigated the possible asymmetric effect of real exchange rate dynamics on agricultural output performance in Nigeria over the period of 1981 to 2016. The study employed a combination of stationary and nonstationary variables as was found out through the ADF unit root test. Based on the Bounds test for cointegration, a long-run relationship was absent between real exchange rate and agricultural output, irrespective of specifications. The result of model estimation showed that the significant drivers of agricultural output are real exchange rate (log-levels), real appreciation and depreciation (after some lags), industrial capacity utilization rate, and government expenditure on agriculture (after some lags). ACGSF loan exerted positive and insignificant influence on agricultural output.

Gatawa, and Mahmud (2019) analyzed short and long-run impacts of exchange rate fluctuations on agricultural exports volume in Nigeria. ARDL was used as the method of analysis; the independent variables include official exchange rate, agricultural loans and relative prices of agricultural exports while the dependent variable is agricultural export volume. GARCH was used to estimate the volatility of exchange rates, and other diagnostic tests. The short-run results revealed that official exchange rate and agricultural loans have significant positive impact on agricultural export volumes which has the effect of expanding the dependent variable while, relative prices of agricultural exports has significant negative impact on agricultural exports volume which also has the effect of contracting the dependent variable. The long-run results revealed similar findings with the exception of official exchange rate which has statistically significant negative impact on agricultural exports volume. i.e. contrary to normal expectations.

Dominic (2017) examined the impact of exchange rate on cocoa export in Nigeria. The Augmented Dickey Fuller Unit root, Johansen co-integration, ordinary least square, and diagnostic tests as well as error correction mechanism were adopted to analyzed the secondary time series data, between 1980 and 2013, generated from Food and Agricultural Organization (FAO), World Bank and the Central Bank of Nigeria (CBN). The ADF unit root test results showed that none of the variables was stationary at level I (0), whereas all the variables – cocoa export, agricultural export, exchange rate trade openness and world cocoa price became stationary after first difference or order one I(1). The Johansen co-integration test of the long run relationship revealed that both trace statistics and maximum eigen value had two co-integrating equations at 5% whereas the trace statistics alone had 1 co-integrating equation at 1%; implying the existence of long run relationship between cocoa export, agricultural export, exchange rate, trade openness and world price of cocoa. The positive sign of the error correction mechanism of 0.07 suggested that deviation from the long run equilibrium is adjusted over the following time period by 7%. The t-test showed direct relationship between cocoa export and Exchange rate cum agricultural export,

but inverse relationship with trade openness and world cocoa price. The diagnostic test revealed non existence of heteroskedasticity and serial correlation in the error term. The paper concluded that agricultural export, exchange rate, trade openness and world price of cocoa taken together affected cocoa export in Nigeria

Charles and Fortune (2019) examined the effect of exchange rate variation on Nigeria economy. The objective was to investigate how Naira exchange rate variations against key currencies affect the country's real gross domestic product. The ordinary least square method was used as data analysis techniques. The study used cointegration, unit root, and granger causality test and error correction estimate to study the dynamic effects of commodity currencies on financial market. The study found that naira exchange rate variation with the currencies can explain 65 percent variation on Nigerian real gross domestic products while the remaining 35 percent estimation can be traced to external variables not included in the model

### **Summary of Empirical Literature**

The empirical review of the effects of exchange on agricultural sector output in Nigeria has shown conflicting findings. A number of the findings suggest significant influence from exchange rate especially the moderating effect of nominal exchange rate (Abdul & Marwan 2013; Olawale, 2015; Muftaadeen, & Hussainatu, 2014; Paul, & Akindele, 2016). Despite agreeing that agricultural sector output responds to exchange rate, these studies are still at variance with the direction of the effects. For instance Onwanchukwu, (2015) and Ozei, Sezgin, & Topkaya, (2013), averred that all the exchange rate variables they employed has a negative effect on agricultural sector output in both the long and short run which implies that exchange rate will rather hamper agricultural sector output in Nigeria; as against the belief from studies like Onuorah and Osuji 2014; Olawunmi and Adedayo 2016) that exchange rate enhances agricultural sector output in Nigeria. A number of studies out rightly argued that exchange rate have no effect on agricultural sector output (Aroriode and Ogunbadejo, (2014); Ojede, Amin, and Daigyo, 2013; Pitia, and Lado, 2015) These studies indicate that real exchange rate had insignificant effect on agricultural sector output (Madito, and Khumalo, 2014) and Holden, and Sparman, (2013) noted that nominal and real exchange rate are not statistically significant tools for enhancing agricultural sector output

### **Gap in Literature**

The review pointed out a strong disagreement on the effects of exchange rate on agricultural sector output in Nigeria. This disagreement comes in the form of the direction of relationship as well as the level of significance of the relationship. These shortcomings have contributed to the knowledge gap in the literature

Another gap in literature is the coverage of exchange rate variables employed in the investigation of effects of exchange rate on agricultural sector output in Nigeria. The present study includes all the core exchange rate variables such as nominal exchange rate, money supply, interest rate and inflation rate, to determine the actual effect of exchange rate on agricultural sector output in Nigeria (1987-2019).

## **METHODOLOGY**

### **Research Design**

The study adopted the ex-post facto research design because Secondary data were sourced from the Central Bank of Nigeria Statistical Bulletin, CBN Annual Report and Statement of Accounts, National Bureau of Statistics. Independent variables are nominal exchange rate, money supply, interest rate and inflation rate while agricultural sector output is the dependent variable

### **Model Specification**

The model used for this investigation is the adaption and modification of the work of Uchenna and James (2016)

The model is stated thus:

$$AOT = f (EXR, M2, ITR)$$

**Where:**

AOT= Agricultural Sector Output  
 EXR= Exchange Rate  
 M<sub>2</sub>= Money Supply  
 ITR = Interest Rate

**The Model is modified as follows:**

AOT= f (NER, M<sub>2</sub>, ITR, IFR)

**The Econometric Equation Form of the Model is:**

$$AOT = \beta_0 + \beta_1 NER + \beta_2 M_2 + \beta_3 ITR + \beta_4 IFR + \mu - - - - - 1$$

**Where:**

AOT= Agricultural Sector Output  
 NER= Nominal Exchange Rate  
 M<sub>2</sub>= Broad Money Supply  
 ITR = Interest Rate.  
 IFR = Inflation Rate  
 μ = Stochastic Disturbance (Error Term)  
 f = Functional Relationship  
 β<sub>0</sub> = Intercept of Relationship in the Model Constant

**Method of Analyses**

The data was analyzed with econometric techniques involving Augmented Dickey Fuller tests for Unit Roots and the Ordinary Least Square (OLS), for test of hypotheses.

**RESULTS**

**Data Analysis**

**Table 1; Summary of Unit Root Test for Stationarity**

Variables	At Level 1(0)	At First Difference 1(1)	At Second Difference	Order of Integration	Probability
AOT	-4.668720			1(0)	0.0008
NER	-3.839292			1(0)	0.0070
M <sub>2</sub>	-5.000361			1(0)	0.0000
ITR	-4.657659			1(0)	0.0021
IFR	-5.128101			1(0)	0.0003

**E-View Software 9.0**

The variables were tested for stationarity. The test aimed to understand the state at which the variables can be held stable for regression analyses. This test becomes pertinent because time series variables are often prone to non-stationarity which is capable of distorting the reliability of regression results. The variables used in the analysis were subjected to Augmented Dickey Fuller (ADF) Tests, to determine whether they are stationary series or non-stationary series. The variables were tested for stationarity at “intercept only” and at “intercept and trend”. The null hypothesis that is tested in both unit root tests is the presence of unit root. The result on Table 3 revealed that at level, under the “intercept only”, nominal exchange rate, money supply, interest rate and inflation rate were stationary at 5% level [1(0)]. From the analyses of stationarity of the variables, it was seen that the variables were stationary at level. Thus, the most suitable tool of analyses is the ordinary least square (OLS)

**The Ordinary Least Square Regression**

Dependent Variable: AOT  
 Method: Least Squares  
 Date: 07/22/20 Time: 04:05  
 Sample: 1987 2019  
 Included observations: 32

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.332806	5.638155	2.034488	0.0518
NER	2.660510	9.234924	2.880923	0.0047
M <sub>2</sub>	1.832566	6.905754	2.343680	0.0032
ITR	-11.30104	9.365032	1.204520	0.7332
IRR	-10.32652	37842856	1.478332	0.6092
R-squared	0.748027	Mean dependent var		16568137
Adjusted R-squared	0.722253	S.D. dependent var		26065603
S.E. of regression	6263745.	Akaike info criterion		34.25837
Log likelihood	-527.0047	Hannan-Quinn criter.		34.31868
F-statistic	164.1679	Durbin-Watson stat		2.173199
Prob(F-statistic)	0.000000			

Source: E-View Software 9.0

From the results of the OLS, the constant parameter is positive at 3.332806. The implication is that when all the independent variables are held constant, Agricultural sector output as a dependent variable will grow by 3.332806 Units

**Nominal Exchange Rate:** the coefficient of nominal exchange rate (NER) is positive at 2.660510 with probability of 0.0045 and t-Statistic of 2.88 which means that nominal exchange rate has positive and significant effect on agricultural sector output. The implication is that a unit increase in nominal exchange rate (NER) will cause agricultural sector output to increase by 2.660510 units.

**Broad Money Supply:** The coefficient of broad money supply is positive at 1.832566 with probability value of 0.0032 and t-Statistic of 2.343680 which shows that broad money supply has positive and significant effect on agricultural sector output. The implication is that a unit increase in broad money supply will lead to an increase in agricultural sector output by 1.832566.

**Interest Rate:** the coefficient of interest rate (ITR) is negative at 11.30104 with probability value of 0.7332 and t-Statistic of 1.204520 which means that interest rate (ITR) has negative and insignificant effect on agricultural sector output. The implication is that a unit increase in interest rate will lead to decrease on agricultural sector output by 11.30104 units.

**Inflation Rate:** The coefficient of inflation rate is negative at 10.32652 with probability value of 0.6092 and t-Statistics of 1.478332 which means that inflation rate has negative and insignificant effect on agricultural sector output. The implication is that a unit increase inflation rate will lead to increase in agricultural sector output by 10.32652.

Finally, the Adjusted R-squared is 0.722253 which is approximately 70%. This means that 70% of total variation in agricultural sector output can be explained by the variables namely nominal exchange rate, money supply, interest rate, inflation rate while the remaining 30% is due to other stochastic variables. The Durbin-Watson statistics is (2.173199) this means the model is free from autocorrelation.

**CONCLUSION**

In line with the objectives and hypotheses of the study, the result of regression indicate that nominal exchange rate and money supply has positive and significant effect on agricultural sector output while interest rate and inflation rate has negative and insignificant effect on agricultural sector output within the period under review. The study therefore concludes that exchange rate have adverse effect on the



performance of agricultural sector output and have not helped to improve the rate of investment in agriculture in Nigeria.

## RECOMMENDATIONS

The study recommends that;

1. 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.
2. 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.
3. To boost agricultural export volume, policy makers should take measures in stabilizing exchange rate from present downward trend since appreciation of exchange rate stimulate (increase) agricultural export output.
4. Government should also reduce price of agricultural exports (mostly cash crop) indirectly through the provision of fiscal incentives examples, tax free on import of agricultural processing equipment and tax holidays for other agriculture related input thereby reduced the cost of production and price of the products

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