



## ABSTRACT

*This study empirically examine the impact or roles played by financial institutions in promoting economic and Agricultural development in Nigeria between 1980 and 2019. Secondary time series data on the variables were used for the period of 39 years. Unit root test both ADF & PP were used to check for the stationarity of the data though only ADF was reported in the*

# EMPIRICAL ASSESSMENT OF THE ROLES OF FINANCIAL INSTITUTIONS ON AGRICULTURAL AND ECONOMIC DEVELOPMENT IN NIGERIA. (1980-2019)

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## Introduction

It is generally agreed that agriculture is an engine for economic growth and development. No economy in the world that developed without developing its agricultural sector at first.

Agriculture involves the cultivation of land, raising and rearing of animals and raw materials for industries. It involves cropping livestock, forestry, and fishing, processing and marketing of these agricultural products. Agriculture is seen as crucial to economic development through strengthened economic framework, creation of employment, enhancement of farmers' living



standard, provision of raw materials to manufacturers, revenue vehicle for government and contribution to gross domestic production of the country (Adegoye and Ditta, 1985; Anyanwu, 1997; Anyanwu, Oyefusi, Oaikhenan and Dimowo, 1997). Since agriculture is capital intensive, credit to agricultural sector is pivotal in adoption of new improved method of farming, and in transition from subsistence level to commercial and highly mechanized agriculture (Olomola, 2007). The agricultural sector reported second highest contribution of 24.18 per cent to Nigeria's GDP in 2018 following oil and gas sector that accounts for the highest contribution to the GDP. Historically since Nigeria gained its political independence in 1960, agriculture was dominant sector of the economy. It contributed over 65% of the country's Gross Domestic Product (GDP) and provided the bulk of the foreign exchange earnings through the foreign exports of the cash crops. The sector catered adequately for nearly all food requirement and raw materials for industry in the country (Anifowose and Ladanu 2015).

Despite the priority given to agriculture in Nigeria, the sector is still encountering some challenges and difficulties. The major problem in

*main work. Unit root test result reveals that, all the variables were found to stationary at level I(0). OLS regression analysis was used to estimate the main model. OLS result show that all the explanatory variables impacted positively on the real GDP. We therefore conclude that financial institutions has or plays a positive and significant role on Agricultural & economic development in Nigeria. We therefore offer some recommendations. We recommend the federal government through central bank of Nigeria to encourage commercial banks to give out more loans and credit facilities to the small, medium and large scale farmers in order to expand the size of their production. Similarly the real interest rate on agricultural loans should be lowered by the monetary authorities, this encourages many farmers to go for loans in order to engage in agricultural activities.*

**Keywords:** Agriculture, OLS, ADF, financial institutions



financing agriculture in Nigeria is that of the channel used in extending loans. Tomori (1979) maintains that one of the obstacle to the development of agriculture in Nigeria relate to the inadequate of credit. According to him, lack of credit facilities is one factor that makes it difficult for farmers to innovate, he further to stress that innovation which a farmer might wish to carry out is a function of his financial resources and for any innovation to take place, financial resources through rural credit among other factors must be adequate. Oluwasanmi (1985) contends that underdeveloped economics especially Nigeria are agriculture oriented with low levels of productivity, income, saving and investment. He is of the opinion that, by raising agricultural output and productivity, the agricultural sector can make a positive net contribution to the industrialization process. The major problems confronting agriculture in Nigeria as reviewed by the third National development plan are as follows; Shortage of qualified man power in different areas, Inadequate supply of agriculture inputs, Inadequate extension services, The poor condition of feeder roads and other transport facilities. The aim of any banking sector is financial intermediation which involves the processes through which funds and financial resources are channeled from the surplus sector to the deficit sector.

Despite the use of various instruments such as moral suasion by the Central Bank of Nigeria and even the formulation of various agencies and programs by the governments such as the Agricultural Credit Guarantee Scheme (ACGS), the amount of loans advanced to the agricultural sector is still a far cry from what is needed to fast track the needed growth in the sector. Also, the urban locations of many banks make it difficult for farmers to have access to credit. Though in recent times the Nigerian banking sector is trying in the area of agricultural financing, however much more still needs to be done. It is glaringly clear that, from the year 2015 there were so much efforts made by the federal government of Nigeria in order to develop agricultural sector and to achieve self-sufficiency in food supply. This makes government to close all its land borders which are major channels for food importation in to the country. Several programs and policies were introduced, however scarcity in terms of agricultural products is at increasing phase. World bank, Central Bank of Nigeria, commercial banks, specialized banks and other NGOs were injecting multi-billions of Naira in to Nigeria's agricultural sector, however the growth phase is at a very slow rate. There the main aim of this



study is to assess the impact or roles of financial and other related institutions on agricultural development in Nigeria and by extension the economic growth and development.

### **EMPERICAL LITERATURE REVIEW**

A lot of Economics writes up have been done on the development of agriculture as sector examining the site of public sector and the private sector. Development aims at achieving the enlightened aspiration of people such that a positive change in their socio-political and economic concerns is brought about along with development in their being.

Agriculture development equally aims at changing the status quo from less productive approaches to a reasonable level of growth, depending on social order and resource endowment among other factors. Successive administrations in Nigeria have embarked on several agricultural policies with varying degrees of successes and failures from 1960 to date.

The period between 1960 and 1969 was characterized by minimum direct government intervention and decentralized approach to agriculture. The federal government intervention and decentralized approach to agriculture. The federal governments only, play a support role while the regional and state governments were left to take major initiatives.

Nwankwo (1986) attributed this development to the fact that agriculture which include livestock, forestry, and fishing is the sector from which the nation expects so much in terms of the provisions of employment opportunities, self-reliance in basic food production, foreign exchange earnings and industrial raw materials there is belief that various administrations both military and civilian alike have not done enough to feed the people. Also the banking industry discriminated against the agricultural sector by denying them the needed funds to transform the sector.

Before the discovery of oil sector in 1956 in agriculture was the stay of the Nigerian economy, but now it is living in past glories. Both Ola Vincente (1981) and Asabia (1981) confirms this position that agriculture constituted a very important sector of Nigerian Economy and was the dominant sector before the oil boom of the 1970"s.

The reason for the several in trend according to Nwankwo, agricultural sector is some major potentials which are not being fully exploited in the large and expanding domestic and foreign markets for agricultural products,



abundance of land and human resources and availability of improved technology, suffers major constraints in the storage of qualified manager. These are in key area of supply of physical infrastructure such as federal roads water shortage and marketing facilities, adequate agricultural credit and depilating land tenure system.

Despite the fact that before 1960"s agriculture was the main traditional sector, able the produce domestic consumption and cash crop for exports. It was organized around small family holdings and crude implements like hoes, matches etc. To increase agricultural productivity, therefore both for domestic financially, the agricultural financing is inevitable to achieve self-sufficiency in agricultural production.

Agriculture experts, however, believe that government and financial institutions efforts to save the agricultural sector may be better late than never. It has now dawned on government that the only way the economy can survive is to diversify it from one entirely dependent on crude oil to one with multiple streams of income from other sectors.

According to Okereke (1989) identified a number of problems impeding the sectors movement to desired prominence in the economy. These include low technological input, poor receptivity of new ideas by farmers still attached to the cutlass and hoe syndrome. Added to these, the vagaries of nature and the disastrous manifestation of drought, erosion, epidemics collapse of dams show the picture why Nigeria's agriculture remains in doldrums becomes clear.

These raise the need for an urgent appraisal of existing method of risk management in Nigeria agriculture. This is why the creation of Nigerian agriculture insurance scheme is a step in the night direction.

Umuokoro (1987) in his analysis of risk and uncertainty in agriculture advocated for diversification, specialization, flexibility yield and proper polities etc. whereas, in agriculture risk can be insured and uncertainty can be insured because uncertainty are losses which may not occur.

The measure of diversification and its relative risk is why banks discriminate against agricultural sector in terms of credit. This can be attributed to the passant nature of agriculture in terms of credit. This can be attributed to the peasant nature of agriculture in Nigeria and the inability of various governments both past present to execute efficient agricultural policy and programmes.



Appraising the prospects of agriculture and agricultural related business, Ajakaiye (1986) contended that the agricultural sector of economy will turn out to be greatest that the beneficiary of the structural Adjustment Programme (SAP) the aspects concerning the devaluation of the naira and the disengagement of government from commodity price fixing. According to him, the inability of the agricultural sector to complete favorably for finance has been the combined efforts the over-valuation of the naira and strangle-hold of the commodity boards and other agricultural and price fixing agents. The Structural Adjustment Programme (SAP) has restructured the macro and micro economics environment in the favour of agricultural production.

Although he did not aware of resultant increase in the price of farmers' foreign inputs, he says that this increase will be more than off-set, the increase in income as demonstrated by the vastly increased profitability of production of exports since inception of SAP.

Lap and Smith (1992) tested this for United States and extended the study to United Kingdom (Smith and Lap 1993). The results obtained for us data were tentative. For example, no evidence was found to support or reject the hypothesis that variations in inflation affect relative price variability among agricultural commodities.

However, the results the hypothesis that the variability of relative price in agriculture is related to average rate of nominal price change among agricultural commodities.

Zinnias (1997) studied the relationship between agricultural prices and the general price level in Greece. He used econometric methods for non-stationary variables preceded by co-integration and unit root tests. Agricultural price deflator was regressed on GDP deflator and per capital of agricultural production. The results show that agricultural prices used in the short-run, while the adjustments speed to the long-run inflation neutrality is shown.

Furthermore, Loy and Weaver (1998) carried out a time series analysis of retail food price in Russian markets to determine the effects of anticipated and unanticipated inflation, as well as inflation, uncertainty on relative agricultural price volatility. The results indicate that distortions in relative's price were induced by the anticipated inflation or a measure of inflation uncertainty.



Jaramillo (1991) analyzed time series relationship between inflation and relative price variability, using V.S data. A significant positive association was obtained between inflation and relative price variability, allowing for an asymmetrical response of relative price to episodes of positive and negative inflation.

In spite of extensive studies done elsewhere on the relationship between inflation and price variability within the agricultural sector, adequate studies have not been done for Nigeria's inflationary process only a few studies analyzed the effects if inflation on the economy. Examples of such focused on the impact of inflation on the economy. Examples of such studies include C.B.N (1974) and Osakwe (1982). Both studies focused on the impact of inflation on output growth and macroeconomic variables that has continued of impact heavily, so much depends on type of exchange regime a country is pursuing at a time. Nigeria has come a long way in evolving and enduring exchange rate management policy, and have no doubt made appreciable progress in this regard.

Trzeciak (2003) reveal that agriculture like any other sector of the economy needs credit for increase output and development. He suggested that through government channelling of fund to the agricultural sector by it policy, agriculture could be more profitable. Radoiphe (2005) linked the loan commitment theorist and credit rationing theory using asymmetric information between lenders and borrowers under costly terms of lending arrangement and came to the conclusion that banks favour borrowers with well know productive function and long term credit history and that interest may be high if significance market imperfection prevail.

While Rahji and Fakayode (2009) held that agriculture play a compelling role in the nation's development that is remarkable being a dominant contributor to Nigeria's gross domestic product. They acknowledged that the performance of small and medium scale farmers maintained significant part of this contribution to GDP. Aliyu (2012) established that formal credit extended to farmers in Nigeria, positively and significantly influenced the capacity of the crop, livestock and fishery generated Nwosu, Oguoma, Ben and Henri (2010) recommended that government should ensure that banks' claims arising from delinquency and obligor's interest drawn back are liquidated without setbacks, as this will inspire financial institutions and farmers involved the scheme, and will also appeal to the interest of others



who are hesitant. He believes that the end result is the nation reaping the dividend of adequate credit into the agricultural sector and that is a sine qua non in agricultural development. Okojie, Monye, Eghafona, Osaghae and Ehiakhamen (2010) explains that the lack of banking participation and substantial collateral and little or no information as regarding the procedure for accessing credit fund is a stumbling block for small scale farmers and local women who need conventional loans and advances.

Ayegba and Ikani (2013) established again that “unregulated private money lenders”, the unconventional financial system extends greater part of credit to agricultural sector and is unhealthy for Nigerian economy to grow. They also established that the concentration of banks in urban area has left rural farmers without formal source of credit, while according to Odoemenem and Obinne (2010), output of the sector is hindered by non-availability of funding in terms of loans and advances from organized financial institutions. Ojo (2005) believes that the organized financial sector has failed to meet the primary intermediation objective to which they were licensed.

Saheed (2014) further saw agriculture as the bedrock for the development of other sector and added that almost 90 percent of farmers in the local areas practice subsistence farming due to insufficient funding to operate, increase their capacity or even practice industrialized farming. Olajide, Akinlabi and Tijan (2012) in their finding believe that there is a positive cause and effect relationship between GDP and the output of agricultural sector in Nigeria, and Ijaiya, Abdul and Abdullahi (2009) held that more than 80 percent of Nigeria rural population is engaged in one type of agriculture or the other between 1963 and 1964 and the agricultural sector had contributed to up to 65 percent of the nation's GDP. He stressed further that the contribution of agriculture most especially food crop have been in the decline this he attributed to lack of agricultural credit.

Enenche et al (2014) observe that through various poverty alleviation programmes and agricultural development policies have been put in place but the twin problem of poverty and absence of food security is still lingering. He stressed further that even in the urban centers imported rice and other food tends to dominate the market places despite our rich agro-ecological and other natural resources in abundance. Efobi and Osabuohien (2011) ascertain that aside crude oil production in Nigeria, Agricultural sector remains is the dominant source of export revenue to the



economy. They opined that there exists a high employment opportunity in agriculture, and government in their crusade to diversify economy should evaluate the informal sector such as agriculture. UNDP (2007) establish that it is possible to generate very high returns on investment in agriculture and rural development in Africa. Oji-Okoro (2011) believe that agriculture resources have a remarkable impact in the Nigeria economy in the past decades and is still a dominant sector as it provides employment opportunity for the employable population, eradicate impoverishment and contribute to the GDP of the economy.

Orok&Ayim (2017), examine the impact of Agricultural Credit Guarantee scheme fund (ACGSF) on Agricultural Sector Development in Nigeria. Specific objectives were to ascertain the relationship between the ACGSF and the output of the crop sector in Nigeria, to examine the relationship between ACGSF and the output of the livestock sector in Nigeria, and to determine the relationship between ACGSF and the output of the fishery sector in Nigeria measured by respective gross domestic product (GDP). Secondary data were sourced from Central Bank of Nigeria Publications and Statistical Bulletin. Multiple linear regression of ordinary least square (OLS) model was adopted to establish the relationship between dependent and independent variables. Findings revealed a positive and significant relationship between ACGSF and the agricultural sector development evaluated by the sustained rise in its contribution to GDP. The study also revealed that the scheme had given more funds and impacted more on the crop sector over the livestock and fishery sector. The study recommends among others that the scheme should be sustained and the government should invest more in Agricultural development, and measures should be put in place by the management of the scheme to reduce default in payment arising from borrowers.

### **Methodology and Design**

This section of the research work talks about how data were sourced and analysed throughout the work. The data used in this study were secondary in nature. Some of the data were sourced from Central bank of Nigeria statistical bulletin, World development indicators and National Bureau of Statistics (NBS). The data were time series data covering the period between 1980 and 2019. Data on Real gross domestic product, commercial



bank loan to agricultural sector, Real interest rates on agricultural loan and real exchange rate were obtained and used as a variables of a model. With respect to data analysis in the study, Unit root test (using famous **ADF** method) was conducted in order to check for the stationarity of the time series data.

Regression analysis based on famous Ordinary Least Square was used as a main method of data analysis to ascertain the impact of explanatory on dependent variable in the model. Other statistical checks were also conducted such as DW test for autocorrelation, multi collinearity, and normality tests.

**Model specification**

First the model was specified in a functional or mathematical form as follows;

$$RGDP = F( CBLAE, REIR, REXR)..... (1)$$

Where:

RGDP = Real Gross Domestic Product

CBLA = Commercial Bank Loan to Agricultural sector

RINTR= Real Interest Rate on Agricultural Loans

REXR= Real Exchange Rate.

Secondly the model can be econometrically specified in the form below;

$$RGDP: \beta_0 + \beta_1CBLA_t + \beta_2REIR_t + \beta_3REXR_t + \epsilon_t..... (2)$$

Where  $\beta$  and  $\epsilon$  stands for constant and error term of the model respectively, while  $\beta$  is a coefficient for all the individual explanatory variable in the model.

**Result presentation and discussion of findings**

**Table 1 Unit Root Tests Using Augmented Dickey-Fuller (ADF) methods**

<b>Variables</b>	<b>Level</b>	<b>5% critical value</b>	<b>Order of integration</b>
RGDP	-3.863831	-2.957110 (**)	I(0)
CBLAE	-3.693324	-2.954021(**)	I(0)
REIR	-4.355105	-2.957110(**)	I(0)



REXR            -5.157770            -2.957110(\*\*)            I(0)

**Note: \*\* indicates significance at 5%**

Table 4.1 above presents the stationarity test result. From the table result shows that all the variables have been found to be stationary at level and statistically significant at 5%. Hence we are free and safely to proceed to the OLS to analyse our main model.

**Table 4.2: Regression Output**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	17838.28	2743.245	6.502618	0.0000**
CBLA	0.460595	53.14761	3.589008	0.0397**
REXR	174.0317	31.52841	5.519838	0.0000**
RINTR	-9.615356	106.7217	3.090098	0.0688***
R-squared	0.861726			
Adjusted R-squared	0.837077			
F-statistic	10.90282			
Prob(F-statistic)	0.000000			
Durbin-Watson stat	1.767142			

**\*\*Significant@5% level, \*\*\*Significant @1% level respectively**

**Table 2** above present the OLS regression results. The **R-Squared (R<sup>2</sup>)** and **adjusted R-squared** were found to be 86% and 83% respectively which shows that about 86% of the variation in RGDP is being accounted for by the explanatory variables in the model, while only about 14% is been accounted for by error term in explaining the model.

The regression has an intercept of 17838.28. This represents autonomous contribution of Per-Capita income, for instance, from monetary variables, GDP, export and imports among others. But the positive sign of the autonomous factor indicates that it contributes to the increase in per-capita income.

Commercial Bank Loan to Agriculture (CBLA) the coefficient of CBLA is 0.460595, it has a positive relationship with RGDP showing that a unit increase in (CBLA) will brings an increase in real gross domestic product by 46.05%.



Real Exchange Rate (REXR) the coefficient of REXR is 174.0317, it has a positive relationship with RGDP showing that a unit increase in (REXR) will increase RGDP by 174.03%, but this does not reflect the real situation because increase in exchange rate distort the economy, for example increase in exchange rate causes price to rise which bring about inflation in the economy.

The coefficient RINTR is -9.6153561, it has a negative relationship with RGDP showing that a unit decrease in RINTR will increase RGDP by 9.61%, this positively correspond with the theory because we always expect rate of interest to fall so that more investment can trigger in the economy, reduction of interest rate increase the growth in the agricultural as more people will invest in the agricultural sector which will eventually leads to economic growth.

### **Conclusion**

This study was carried out in order to examine the impact or roles of financial institutions in promoting economic and agricultural development in Nigeria. Having obtained and analyzed the data on the variables used, and based on the empirical result obtained we can safely make or deduce the conclusion.

Based on the empirical evidences commercial bank loans to agricultural sector has a positive and significant impact or effect on the real GDP of Nigeria. Thus it leads to economic and agricultural development in Nigeria over the period of study. Similarly the real interest rate on agricultural loans impacted positively on the real GDP of Nigeria. The real exchange rate also is positively related to the real GDP. However it somehow contradict the real situation. But indirectly increase in real exchange rate lead to an inflationary pressure but increase productivity in the economy.

### **Recommendations.**

Based on the above findings and existing literature on the loans and agricultural productivity, and from the present research, it is obvious that the real Interest Rate and Banks Loans to agricultural sector have a significant impact on agricultural output in Nigeria. In view of the outcome of this research we can make some recommendations. We



recommend the federal government through central bank of Nigeria to encourage commercial banks to give out more loans and credit facilities to the small, medium and large scale farmers in order to expand the size of their production. Similarly the real interest rate on agricultural loans should be lowered by the monetary authorities, this encourages many farmers to go for loans in order to engage in agricultural activities. International bodies or organizations such as World Bank, IMF SASAKAWA Global etc. sometimes give out loans to finance agriculture; for such loans to be properly utilized, they have to be channeled in such a way that the impact of such loans can be felt by the peasant farmers.

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