The Effect of Commercial Banks Credit on Agricultural Sector's Contribution to Real Gross Domestic Product: Evidence from Nigeria 1986 to 2020

Dr. (Mrs) Victoria Obi-Nwosu, Amalachukwu Chijindu Ananwude, Chisom Njideka Ezeaku

Department of Banking and Finance, Nnamdi Azikiwe University, Anambra State, Awka, Nigeria

ABSTRACT

This study is an analysis of the effect of commercial banks' credit to agriculture on the agricultural sector's contribution to Nigerian real gross domestic product from 1986 to 2020. Specifically, this study ascertained the effect of commercial banks' credit to agriculture, inflation rate and interest rate on the agricultural sector's contribution to real gross domestic product. The Autoregressive Distributive Lag (ARDL) was the econometric tool of analysis employed using data sourced from the statistical bulletins of the Central Bank of Nigeria (CBN). The findings of this study in its totality unveiled statistically that commercial banks' credit to agriculture does not affect the sector's contribution to real gross domestic product. In the light of the findings, there is a critical need for commercial banks to increase loans to agricultural enterprises through a reduction in interest rate charge for agricultural purposes, which in turn permits for greater economic growth and development. The Central Bank of Nigeria can encourage this through a reduction in the monetary policy rate which inflicts the high interest rate charged by the commercial banks. The Central Bank of Nigeria can also appeal to the commercial banks to reduce their collateral requirements to encourage more farmers, especially the rural farmers to have access to finance for agricultural production.

KEYWORDS: banks credit; agricultural gross domestic product

1. INTRODUCTION

In the 1960s, the Nigerian agricultural sector occupied a coveted position among its cohorts in the world. The country took the lead in palm oil exports, second in cocoa exports, and ahead of the USA and Argentina in groundnut exports (Sulaimon, 2021). In the affirmation of this, Ayeomoni and Aladejana (2016) posit that agriculture contributed 90% of the nation's GDP and foreign exchange before oil boom was discovered in Nigeria in the early 1970s in commercial quantity and also provides subsistence for two third (2/3) of Nigerians who are low income earners in the economy. However, such is not the case at present as Nigeria depend virtually on revenue from crude oil sales. The financial performance of commercial banks has been considerably stable. The commercial banks' lending policies is a reflection of a number of external and internal factors that have plagued the institutions. This is because the financial

How to cite this paper: Dr. (Mrs) Victoria Obi-Nwosu | Amalachukwu Chijindu Ananwude | Chisom Njideka Ezeaku "The Effect of Commercial Banks Credit on Agricultural Sector's Contribution to Real Gross Domestic Product: Evidence from Nigeria 1986 to

2020" Published in International Journal of Trend in Scientific Research and Development (ijtsrd), ISSN: 2456-6470,



Volume-6 | Issue-2, February 2022, pp.458-465, URL: www.ijtsrd.com/papers/ijtsrd49229.pdf

Copyright © 2022 by author (s) and International Journal of Trend in Scientific Research and Development

Journal. This is an Open Access article distributed under the



terms of the Creative Commons Attribution License (CC BY 4.0) (http://creativecommons.org/licenses/by/4.0)

institutions prefer to give funds to other sectors where payback period is short and return rate is high and also because the agricultural sector is inadequately funded by the government due to low budgetary allocation to the agricultural sector over the years (Adeshina, Tomiwa & Eniola, 2020).

Conventionally, commercial banks as agent of economic growth should promote the formation and funding of viable agricultural projects through different agricultural related policies. However, there have been numerous instances of external interference, especially in loan sanctioning and recoveries as interferences have been documented to hamper the bank's operational efficiency. Furthermore, the government also dictates areas of investment, loan portfolio and interest rates to be charged. Coupled with the direct interferences are the government's unstable agricultural policies. The frequent changes in the political leadership and subsequent changes in agricultural policies have given rise to inconsistent policy objectives. For instance, changing polices on the importation of rice, wheat, vegetable oil, inputs and input subsides made investments in agriculture risky. Thus the bank's scope of operations has been constrained by not only political objectives but also hanging political regimes.

Commercial bank has been constrained by lack of funds, especially with the implementation of Treasury Single Account (TSA) which constrained the banks of public fund thus reducing their liquidity. The banks are currently experiencing immense difficulties in sourcing cheap funds to meet its primary objectives of delivery timely and affordable credit facilities to clients and farming population. Today, the commercial bank is limited to recycling recoveries and is unable to satisfy the demand for credit. The deterioration in the Naira has placed an increased burden on the banks to repay internationally sourced funds. Based on the Central Bank of Nigeria (CBN) record of monthly average exchange rate, 1 US Dollar equals 481.21 Nigerian Naira as of 31st March 2021. Similarly, the lending rate as of 17th August 2021 for agricultural purpose is put between the ranges of 24 percent to 30 percent. The depreciation of the local currency has placed the banks under considerable financial pressure. The problem rests with the fact that the exchange risk cannot be borne by tie farmer thus funds need to be found elsewhere. In the light of the above, effort will be made in this study to place greater emphasis on the effect of the commercial banks credit to agriculture on agricultural sector's contribution real gross domestic product in this period of uncertainty in interest rate and inflation rate.

This study is divided into five sections. Sections one reveals the introduction; section dealt with the review of related literature. The method of analysis was explained in section three; section four gave insight on basic findings, while section five concluded the study and offered some recommendations.

2. LITERATURE REVIEW

One of the most topical issues in Nigeria today is that of agricultural development and its sustainability. Agriculture is important because it provides food and employment for the populace, raw materials for industries, and market for industrial goods. The role of agriculture in human development cannot be overemphasized. This includes provision of the basic food requirements of human populations; it is the predominant occupation of the working population, especially in agrarian nations; an important way of life, culture and custom of the people (Olagunju &

Ajiboyen as quoted by Oyelade; 2019). Agricultural financing, however, is multi-faceted and multidimensional, which can be in the form of personal savings, borrowing from friends and relatives, cooperative societies, credit from commercial banks (Okuneye & Ajayi, 2021). Prior to 1980, in Nigeria as well as in many developing countries, successive governments have implemented various agricultural and rural development policies, all in an effort to address perceived shortfall in rural credit, stimulate employment and enhance agricultural rural productivity. Under these rural credit schemes, institutional resources, programme efforts and government agencies-based top-bottom interventions, implement mostly supply-led financial to development strategies.

Many theories have been advanced on the nexus between finance and economic growth. These include financial intermediation theory, financial liberalization theory and the classical theory of political economy and development among others. This study is anchored on the theory of political economy and development. This study also adopts the classical theory of political economy and development in an attempt to understand the relationship between agricultural finance and agricultural development. The famous scholars projecting this theory are Adam Smith, David Ricardo, and Thomas Malthus among others. The theory believes that the banking sector plays an important role in channelling finance and investment to the productive agents like agriculture and industry within the economy and therefore acts as a catalyst of economic growth and development. The main implication of this theory, therefore, is that banking policies such as credit schemes and financial programmes which embrace openness and competition will promote economic growth and development.

The review of empirical studies was restricted to studies that are not more than six (6) years from the time this study was conducted. Put differently, empirical studies more than six (6) years old were deliberately ignored. Sulaimon (2021) evaluated the thresholds of ACGSF on agricultural performance in Nigeria between 1981 and 2019. The performance of agriculture was captured using real agricultural Gross Domestic Product (GDP). Annual time series data were obtained from the Central Bank of Nigeria Statistical Bulletin and the World (CBN) Development Indicators (WDI) and analysed using threshold regression. Although insignificant, the results show U-shaped relationship between real agricultural GDP and ACGSF. In addition, ACGSF

has significant positive effects on real agricultural GDP at №1060389 and №5951809 thresholds.

Okuneye and Ajayi (2020) ascertained the effect of commercial banks' credit for agriculture and government agricultural spending on agricultural production in Nigeria between 1980 and 2018. The findings of the ARDL co-integration test revealed that there is a long-term co-movement between agricultural government spending, interest rates and agricultural production in Nigeria.

Adeshina, Tomiwa and Eniola (2020) assessed the impact of agricultural financing on economic performance in Nigeria. The study which utilizes data through secondary sources from the Central Bank of Nigeria statistical bulletin were analysed using the Unit root test, Bound Co-integration test and error correction modelling to empirically estimate the coefficient of parameter estimates. The statistical decision of the analysis was based on 5% (0.005) level of significance. From the result, it was deduced that in the long-run, Agricultural Credit Guarantee Scheme Fund (ACGSF) is the most influential agricultural financing variable (as compared to government expenditure on agriculture and commercial bank credit to agriculture) that contributed to economic performance as it revealed that ACGSF had strong positive impact on the growth rate of the Nigerian economy.

Nakazi and Nathan (2020) appraised the short run and long run impact of the commercial banks' credit on agricultural sector growth. Using quarterly time series data sourced from bank of Uganda and Uganda Bureau of Statistics (UBS) over the sample period of 2008Q3 -2018Q4, the study applied the Autoregressive Distributed Lag (ARDL) approach to examine that the short run and long term relationship between commercial banks' credit and Uganda's agricultural GDP performance. In the long run, they found that credit have significant positive impact on agricultural output. Credit to production was found to have a much higher impact on agriculture output compared to credit to processing and marketing. In the short run, they found bank credit not to have an instantaneous impact on agricultural output. The study provided evidence that commercial banks' agricultural credit contributes significantly to Uganda's agricultural sector GDP.

Medugu, Musa and Abalis (2019) determined the impact of commercial banks' credit on Agricultural output in Nigeria, covering the period 1980 to 2018. Annual time series data was employed, which was sourced from Central Bank (CBN) publications such as statistical bulletins and bullions, and National Bureau of Statistics (NBS) publications. Stationary test was conducted on variables to ascertain whether they have unit roots. It was discovered that they were all stationary at first difference. Co-integration test however, revealed that long run relationship exists among the variables. The ECM model result also showed that the model returns to short run equilibrium after an exogenous shock with speed of adjustment of negative one (-1) indicating that 100% of all the deviations in the past will adjust to equilibrium. Ordinary least square method was employed to estimate the relationships among the variables and the result showed positive and significant relationship exists between commercial banks' credit and agricultural output in Nigeria. The same relationship also was found to exist between expenditure made on agriculture by government and agricultural output in Nigeria. Interest rate was negatively related to agricultural output in Nigeria.

Emenuga (2019) investigated the effect of commercial bank on real sector development in Nigeria over a period of 37 years (1981-2017). Data on commercial bank credit to agricultural sector, interest rate, agricultural credit guarantee scheme and agricultural productivity were sourced from Central Bank of Nigeria statistical bulletin. ADF unit root test, Johansen Co-integration test and error correction model techniques where employed as analytical tools. The result showed that there exists a long-run relationship between the bank credit and agricultural development in Nigeria. The study found that the ECM is negative and statistically significant at 5% level of significance. The study also found that commercial banks' credit to agriculture and agricultural credit guarantee scheme are positively related to agricultural development, while interest rate was found to be negatively related to agricultural development in Nigeria.

Oyelade (2019) studied the impact of commercial bank credits on agricultural output in Nigeria over the period 1980 to 2015 by setting three specific objectives which are to examine the trend of commercial bank credit and agricultural output in Nigeria; to investigate the effect of commercial bank credit on agricultural output in Nigeria, and to investigate the effect of commercial bank credit on subsector of agriculture in Nigeria. The study concluded that commercial bank loan to agricultural sector, interest rate on commercial banks' credit to agriculture and deposit money bank's assets are statistically significant in determining agricultural output in Nigeria within the period considered.

Ekine and Onukwuru (2018) examined the effect of deposit money banks credit on agricultural sector performance in Nigeria from 1986 to 2016. The data

for the empirical analysis was sourced from secondary data sources various issues of the CBN statistical bulletin. The study used agricultural sector output (ASP) to proxy agricultural sector performance as the dependent variable, whereas deposit money banks' credit to agricultural sector was the major explanatory variable, while interest rate and government expenditure on agriculture are the check regressors as to enhance the explanatory power of the model. The study employed descriptive statistic, Ordinary Least Squares (OLS), unit root test, cointegration and ECM methods of analysis as the analytical tools. The results revealed that there is no co-integrating (or long run) relationship between deposit money banks' credit to agricultural sector and the performance of agricultural sector in Nigeria during the period of study; Deposit money banks' credit to agricultural sector had a positive and a significant impact on agricultural sector performance; interest rate had a negative insignificant relationship with agricultural sector performance. Also, the study revealed that government expenditure on agricultural sector had a positive insignificant relationship on Agricultural Sector performance.

Ogbuabor and Nwosu (2017) examined the impact of deposit money bank agricultural credit on agricultural productivity in Nigeria using an error correction model and annual time series data for the period 1981-2014. The results indicated that an equilibrium relationship exists between the variables. In addition, they found that deposit money bank's agricultural credit impacts positively and significantly on agricultural productivity in the long-run, but this impact is quite negligible in the short-run.

Udoka, Mbak and Duke (2016) explored the effect of commercial banks' credit on agricultural output in Nigeria. The ex-post facto research design was adopted for the study. Data for the study were collected from published articles and the Central Bank of Nigeria Statistical bulletin. To estimate the specified equation, the ordinary least squares regression technique was employed. Based on the results obtained, the following result arose; the estimated results showed that there was a positive and significant relationship between agricultural credit guarantee scheme fund and agricultural production in Nigeria. This means that an increase in agricultural credit guarantee scheme fund could lead to an increase in agricultural production in Nigeria; there was a positive and significant relationship between commercial banks credit to the agricultural sector and agricultural production in Nigeria. This result signified that an increase in commercial banks credit to agricultural sector led to an increase in agricultural

production in Nigeria. Again, there was a positive and significant relationship between government expenditure on agriculture and agricultural production in Nigeria and a negative relationship between interest rate and agricultural output.

Agunuwa, Inaya and Proso (2015) investigated the impact of commercial banks' credits on agricultural productivity in Nigeria. The aim was to determine the relationship between commercial banks credit and agricultural productivity in the Nigeria economy. The statistical tool of analysis was the Ordinary Least Squares (OLS) technique. The t-calculated of commercial banks credit has a value of 6.28 which was greater than the t-critical of 1.96. This is an indication of positive relationship between commercial banks' credit and agricultural productivity. The t-calculated of interest rate on commercial banks credit has a value of -9.38 as against 1.96 t-critical. This is an indication of a negative relationship between interest rate and agricultural productivity. While the t-calculated of government spending, as a complimentary variable, has a value of 3.42 as against the 1.96 of t-critical.

3. METHODOLOGY

The effect of the commercial banks credit to agriculture on agricultural sector's contribution real gross domestic product over a period of thirty five (35) years that is, from 1986 to 2020 was ascertained using an ex-post facto research design. The secondary data on commercial banks credit to agriculture, real gross domestic product, interest rate and inflation rate were obtained from the Central Bank of Nigeria (CBN) statistical bulletin of 2020. Agricultural Sector's Contribution to Real Gross Domestic Product (ASCRGDP) is the dependent variable, while Commercial Banks Credit to Agriculture (CBCA), Interest Rate (INTR), and Inflation (INFR) are the independent variables. The modified model of Medugu, Musa and Abalis (2019) was adapted in this research work. The original model of Medugu, Musa and Abalis (2019) is stated as:

AGX = f(CBCR, GEXPA, INR)

Where:

AGX = Agricultural sector contribution to real gross domestic product

1

3

CBCR = Commercial banks credit to agriculture **GEXPA** = Government expenditure on agriculture **INR** = Interest rate

With the modification of Equ. 1, Equ.2 was developed and stated functionally to accommodate our variables of interest as:

$$ASCRGDP = f(CBCA, INF, INT)$$

International Journal of Trend in Scientific Research and Development @ www.ijtsrd.com eISSN: 2456-6470

To ensure that the dependent and independent variables are in uniform numerical base to allow for easy interpretation of coefficient, the variables were logged as follows:

$LogASCRGDP_{t} = a_{0} + a_{1}LogCBCA_{t} + a_{2}LogINF_{t} + a_{3}LogINT_{t} + u_{t} - - - - - - 3$

Where:

ASCRGDP = Agricultural sector's contribution to real gross domestic product **CBCA** = Commercial banks credit to agriculture **INT** = Interest rate **INF** = Inflation rate a_0 = Constant coefficient, **u** = random error term **t** = Trend in time

4. ESTIMATED OUTPUT AND DISCUSSION

From Table 1, the mean of the variables are 31.2485, 82692.14, 19.43457 and for 76.19343 ASCRGDP, CBCA, INF and INT respectively. The median for the variables are 5.20, 3752770, and for ASCRGDP, CBCA, INF and INT respectively. The maximum and minimum values are 871.000 and --8.2000 for ASCRGDP, 467625.0 and 600.0000 for CBCA, 72.80000 and 5.400000 for INF, 2071.000 and 7.750000 for INT. The standard deviation are 146.802, 123578.5, 17.24453 and 347.1341 ASCRGDP, CBCA, INF and INT accordingly. The skweness value for all the variables is positive which implies that all the variables are positively skewed towards normality. From the Kurtosis value, all the variables are leptokurtic in nature. The significant p-value of Jarque-Bera at 5% shows that all the variables are normally distributed and free from any outlier that might affect the End in Scientific Re regression result.

| Table 1: Descriptive Properties | | | | | | |
|---------------------------------|------------|-----------|----------|-----------|--|--|
| | ASCRGDP | CBCA | INF | INT | | |
| Mean 🖉 🖉 | 31.2485 at | 82692.14 | 19.43457 | 76.19343 | | |
| Median 💋 🍯 | 5.20000end | 31000.00 | 12.00000 | 17.59000 | | |
| Maximum – | 871.000es | 467625.0 | 72.80000 | 20.71.000 | | |
| Minimum | -8.2000 ev | 600.0000 | 5.400000 | 7.750000 | | |
| Std. Dev. | 146.802 | 2123578.5 | 17.24453 | 347.1341 | | |
| Skewness 🗸 | 5.58041 | 1.865987 | 1.600093 | 5.657736 | | |
| Kurtosis | 32.4193 | 5.383375 | 4.586599 | 33.01684 | | |
| Jarque-Bera | 1443.83 | 28.59516 | 18.60614 | 1500.699 | | |
| Probability | 0.00000 | 0.000001 | 0.000091 | 0.000000 | | |
| Sum | 1093.70 | 2894225. | 680.2100 | 2666.770 | | |
| Sum Sq. Dev. | 732733.4 | 5.19E+11 | 10110.71 | 4097072. | | |
| Observations | 35 | 35 | 35 | 35 | | |

Source: Data output via E-views 10.0

Augmented Dickey-Fuller (ADF) and Phillips Perron (PP) test for stationarity in Tables 2 and 3 show that all the variables are stationary and have no stationarity defect that affects most time series data. Stationarity would not be achieve for all the variables at level form but was later confirmed at first difference.

| Table 2: ADF Test Result | | | | | | |
|--------------------------|--------------------|------------------------------|------------------------------|-----------------|--|--|
| Variables | ADF Test Statistic | Test Critical Value at 1% | Test Critical Value at 5% | Remark | | |
| ASCRGDP | -5.826977 (0.00)* | -3.639407 | -2.951125 | 1(0)/Stationary | | |
| CBCA | -6.496867 (0.00)* | -4.262735 | -3.552973 | 1(1)/Stationary | | |
| INF | -3.684672 (0.03)** | -4.262735 | -3.552973 | 1(0)/Stationary | | |
| INT | -5.753427 (0.00)* | -4.252879 | -3.548490 | 1(0)/Stationary | | |

Source: Data output E-views 10.0

International Journal of Trend in Scientific Research and Development @ www.ijtsrd.com eISSN: 2456-6470

| Variables | PP Test Statistic | Test Critical Value at 1% | Test Critical Value at 5% | Remark | | |
|-----------|-------------------|------------------------------|------------------------------|-----------------|--|--|
| ASCRGDP | -5.826973 (0.00)* | -3.639407 | -2.951125 | 1(0)/Stationary | | |
| CBCA | -6.497385 (0.00)* | -4.262735 | -3.552973 | 1(1)/Stationary | | |
| INF | -9.616803 (0.00)* | -2.636901 | -1.951332 | 1(1)/Stationary | | |
| INT | -5.610403 (0.00)* | -2.634731 | -1.951000 | 1(0)/Stationary | | |

Table 3: PP Test Result

Source: Data output E-views 10.0

As can be seen in Table 4, commercial banks credit to agriculture has positive but insignificant relationship with agricultural sector's contribution to real gross domestic product, while inflation and interest rate have insignificant negative relationship with agricultural sector's contribution to real gross domestic product. The coefficient of the constant 40.18815 shows that holding commercial banks credit to agriculture, inflation and interest rate constant, agricultural sector's contribution to real gross domestic product would be 4.19%. A unit increase in commercial banks credit to agriculture would results to 4.22% rise in agricultural sector's contribution to real gross domestic product by 0.59% and 0.01% respectively. The Adjusted R-squared shows that only -0.08% variation in agricultural sector's contribution to real gross domestic product was jointly attributed to changes in commercial banks credit to agriculture, inflation and interest rate. The p-value of the F-statistic is insignificant at 5% level, thus the changes in agricultural sector's contribution to real gross domestic product owing to fluctuation in commercial banks credit to agriculture, inflation and interest rate is insignificant. The Durbin Watson statistic of 2.0 is a suggestion that the variables in the model are not serially correlated that is, no autocorrelation problem.

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|--------------------------|-------------|----------|
| C | 40.18815 | 49.18201 | 0.817131 | 0.4201 |
| CBCA _ | 4.22E-05 | 0.000224 | 0.188328 | 0.8518 |
| INF 💋 🥳 | -0.590507 | <mark>o 1.6065</mark> 52 | -0.367561 | 0.7157 |
| INT 🚫 🍝 | -0.012489 | 0.075822 | -0.164720 | 0.8702 |
| R-squared | 0.008342 | Mean dependent var | | 31.24857 |
| Adjusted R-squared | -0.087624 | S.D. dependent var | | 146.8025 |
| S.E. of regression | 153.0992 | Akaike info criterion | | 13.00726 |
| Sum squared resid | 726620.7 | Schwarz criterion | | 13.18501 |
| Log likelihood | -223.6271 | Hannan-Quinn criter. | | 13.06862 |
| F-statistic | 0.086930 | Durbin-Watson stat | | 2.091447 |
| Prob (F-statistic) | 0.966681 | | | |

 Table 4: Commercial Banks' Credit to Agriculture and ASCRGDP

Source: Data output E-views 10.0

The ADF and PP stationarity result as depicted in Tables 2 - 3 allow for testing the long-run relationship between the variables in the models. The long-run relationship was performed using the Johansen co-integration methodology and results summarized in Table 5. The long-run test reveals that there is a long-run relationship between commercial banks credit to agriculture and agricultural sector's contribution to real gross domestic product. The trace test show four (4) co-integrating equations, while max-eigenvalue indicates one (1) co-integrating equation at 5% level of significance.

| Unrestricted Co-integration Rank Test (Trace) ASCRGDP, CBCA, INF and INT | | | | | | |
|--|--------------------|-----------------|---------------------|---------|--|--|
| Hypothesized Number of CE(s) | Eigen Value | Trace Statistic | 0.05 Critical Value | Prob.** | | |
| None * | 0.681160 | 72.49560 | 47.85613 | 0.0001 | | |
| At most 1 * | 0.391489 | 34.77447 | 29.79707 | 0.0123 | | |
| At most 2 * | 0.290314 | 18.38204 | 15.49471 | 0.0179 | | |
| At most 3 * | 0.192731 | 7.065261 | 3.841466 | 0.0079 | | |

International Journal of Trend in Scientific Research and Development @ www.ijtsrd.com eISSN: 2456-6470

| Unrestricted Co-integration Rank Test (Maximum Eigenvalue) ASCRGDP, CBCA, INF and INT | | | | | | |
|---|-------------|----------------------------|---------------------|---------|--|--|
| Hypothesized Number of CE(s) | Eigen Value | Maximum Eigen Statistic | 0.05 Critical Value | Prob.** | | |
| None * | 0.681160 | 37.72114 | 27.58434 | 0.0018 | | |
| At most 1 | 0.391489 | 16.39243 | 21.13162 | 0.2028 | | |
| At most 2 | 0.290314 | 11.31678 | 14.26460 | 0.1390 | | |
| At most 3 * | 0.192731 | 7.065261 | 3.841466 | 0.0079 | | |

Trace test and Max-eigenvalue test indicate 4 and 1 co-integrating eqn(s) at the 0.05 level; * denotes rejection of the hypothesis at the 0.05 level; **MacKinnon-Haug-Michelis (1999) p-values.

The effect of commercial banks credit to agriculture on agricultural sector's contribution to real gross domestic product tested using pair wise granger causality test and the result summarized in Table 6. The result discloses that there is a bidirectional relationship between commercial banks credit to agriculture on agricultural sector's contribution to real gross domestic product. Causality flows from agricultural sector's contribution to real gross domestic product to agriculture at a 5% level of significance. This shows that commercial banks credit to agriculture has no significant effect on agricultural sector's contribution to real gross domestic product, rather it is agricultural sector's contribution to real gross domestic product, rather it agricultural sector's contribution to real gross domestic product to agricultural sector's contribution to real gross domestic product, rather it agricultural sector's contribution to real gross domestic product to agricultural sector's contribution to real gross domestic product, rather it agricultural sector's contribution to real gross domestic product to agricultural sector's contribution to real gross domestic product, rather it agricultural sector's contribution to real gross domestic product that significantly affect commercial banks credit to agriculture.

Table 6: Granger Causality Test for ASCRGDP, CBCA, INF and INT

| Null Hypothesis: | Obs | F-Statistic | Prob. | Remarks |
|------------------------------------|--------|--------------------|---------------|--------------|
| CBCA does not Granger Cause RGDPGR | 34 | 0.41968 | 0.5219 | No Causality |
| RGDPGR does not Granger Cause CBCA | | 21.3347 | 0.0000 | Causality |
| INF does not Granger Cause RGDPGR | 34 | 0.20695 | 0.6523 | No Causality |
| RGDPGR does not Granger Cause INF | | 0.18608 | 0.6692 | No Causality |
| INT does not Granger Cause RGDPGR | 34 | 0.01796 | 0.8943 0.8907 | No Causality |
| RGDPGR does not Granger Cause INT | tional | J 0.01919 | 0.8943 0.8907 | No Causality |

Source: Data output E-views 10.0

We found the existence of a long-run relation between commercial banks credit to agriculture and agricultural sector's contribution to real gross domestic product but it is in contradiction with the conclusion of Ekine and Onukwuru (2018) that there are co-integrated in the long-run. The positive but insignificant relationship between commercial banks credit to agriculture and agricultural sector's contribution to real gross domestic product in shortrun (see Table 4) as well as in the long-run (see Table 5) is line with a priori expectation. This result is an indication that commercial banks credit to agriculture would have positive effect on the agricultural sector's contribution to real gross domestic product, which in turn improves overall growth and economic development through reduction in poverty, creation employment, among others. This findings is agreement with previous studies of Ayeomini and Aladejana (2016), Nakazi and Nathan (2020), Medugu, Musa and Abalis (2019) Emenuga (2019) and Udoka, Mbat and Dave (2016) that the financing of agriculture by commercial banks would enhance Nigeria's economic growth. Interest rate having a negative relationship with agricultural sector's contribution to real gross domestic product is a suggestion that the current interest rate (between the range of 24 percent to 30 percent) charged by

commercial banks for agricultural purpose result in low contribution of agriculture to real gross domestic product in Nigeria. The evidence from granger causality test is that commercial banks credit to agriculture has significant no effect on the sector's contribution to real gross domestic product of Nigeria which is an affirmation of the output of Oyelade (2019) and Ogbuabor and Nwosu (2017).

5. CONCLUSION AND RECOMMENDATIONS

The proper functioning of the banking system in pivotal for the growth of agriculture. The rural sector is generally seen as very central to Nigerian's development strategy, while agriculture continues to play a key role in rural growth. This study is an analysis of the effect of commercial banks credit to agriculture on agricultural sector's contribution to real gross domestic product from 1986 to 2020. Specifically, this study ascertained the effect of commercial banks credit to agriculture, inflation rate and interest on agricultural sector's contribution to real gross domestic product. The findings in totality unveiled statistically that commercial banks credit to agriculture do not influence the sector's contribution to real gross domestic product. In the light of the findings, there is the critical need for commercial banks to increase loans to agricultural enterprises through reduction in interest rate charge for agricultural purposes, which in turn permits for greater economic growth and development. The Central Bank of Nigeria can encourage this through reduction in the monetary policy rate which inflict the high rate of interest charged by the commercial banks. The Central Bank of Nigeria can also appeal to the commercial banks to lower their collateral requirements to encourage more farmer, especially the rural farmers to have access to finance for agricultural production.

REFERENCES

- Adeshina, K. F., Tomiwa, O. Y. & Eniola, O. M. (2020). Agricultural financing and economic performance in Nigeria. *Asian Journal of Agricultural Extension, Economics* & Sociology, 38(7), 61-74.
- [2] Agunuwa, K. V., Inaya, L. & Proso, T. (2015). Impact of commercial banks' credit on agricultural productivity in Nigeria (Time [10] Series Analysis 1980 - 2013). International Journal of Academic Research in Business and Social Sciences, 5(11), 337-350.
- [3] Ayeomoni, I.O and Aladejana, S.A. (2016): [11] Agricultural credit and economic growth nexus. Evidence from Nigeria. *International Journal* of Academic Research in Accounting, Finance and Management Sciences, 6(2), 146-158.
- [4] Ekine, D. I. & Onukwuru, F. M. (2018). Deposit money banks' credit and agricultural sector performance in Nigeria. *Greener Journal* of Agricultural Sciences, 8(3), 65-73.
- [5] Emenuga, P. E. (2019). Effect of commercial banks' credit on agricultural productivity in Nigeria. *AUDŒ*, *15*(3), 417-428.

- [6] Medugu, P. Z., Musa, I. & Abalis, E. P. (2019). Commercial banks" credit and agricultural output in Nigeria: 1980 -2018. *International Journal of Research and Innovation in Social Science*, 3(6), 244-256.
- [7] Nakazi, F. & Nathan, S. (2020). The effect of commercial banks' agricultural credit on agricultural growth in Uganda. African Journal of Economic Review, 8(1), 162-175.
- [8] Ogbuabor, J. E. & Nwosu, C. A. (2017). The impact of deposit money bank's agricultural credit on agricultural productivity in Nigeria: Evidence from an error correction model. *International Journal of Economics and Financial Issues*, 7(2), 513-517.
- [9] Okuneye, B. A. & Ajayi, F. D. (2019). Commercial bank's credit, government expenditure and agricultural output in Nigeria: An error correction model. *Kampala International University*, 7(1), 73-82.
 - Oyelade, A. O. (2019). Impact of commercial bank credit on agricultural output in Nigeria. *Review of innovation and competitiveness*, 5(1), 5-20.
 - Sulaimon, M. (2021). Agricultural credit guarantee scheme fund (ACGSF) and agricultural performance in Nigeria: A threshold regression analysis. Online at https://mpra.ub.uni-muenchen.de/105564/
- [12] Udoka, C. O., Mbat, O. D. & Duke. B. S. (2016). The effect of commercial banks' credit on agricultural production in Nigeria. *Journal of Finance and Accounting*, 4(1), 1-10.