

Institutional Funding and the Growth of Agricultural Sector in Nigeria

Iwedi Marshal (PhD), Okey-Nwala Precious Onyinye (PhD) & Ibebi Charles

Department of Banking and Finance
Rivers State University,
Port Harcourt, Nigeria
iwedimarshal@yahoo.com

Nwosi Anele Andrew

Department of Banking and Finance
Captain Elechi Amadi Polytechnic
Rumuola Port Harcourt

Abstract

This study empirically x-rays the four basic institutional funding indicators as predictor of growth of agricultural sector in Nigeria. Time series data for the period of thirty nine (1980-2018) sourced from the central bank of Nigeria statistical bulletin were used. Unit root of augmented dickey fuller 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 relative statistics of the estimated model shows evidence of strong, positive and significant association between agricultural credit Guarantee Scheme and growth of agricultural sector in Nigeria. Microfinance bank credit to Agric Sector, coefficient shows a negative and also significant influence on growth of agricultural sector. Commercial bank credit to agric sector has positive and insignificant relationship with the growth of agricultural sector at 5% significant level while government expenditure on agric sector has negative and insignificant relationship with the growth of agricultural sector at 5% significant level. The study recommends that Government should make more funds available for farmers through the agricultural credit guarantee scheme. Since there is strong positive and significant relationship between Agricultural Credits Guarantee Scheme and growth of agricultural sector. Government should adequately implement policies on agricultural development and ensure that funds meant for agricultural sector are spent on the purpose it appropriated. Commercial Bank should as matter of urgency increase the funds loaned to agricultural sector as stipulated by the CBN. Microfinance Bank should monitor the use of loans given to farmers to avoid diversion.

Keyword: *Institutions, Finance, Government Expenditure, Agricultural Sector Growth, Nigeria*

1. Introduction

Finance plays a critical role in the agricultural development process, as such having access to credit facilities for farming purposes is an incentive for increasing the agricultural sector's performance in Nigeria. Ample of studies have identified lack of finance as one of the challenges of agricultural development in Nigeria (Obasi, 2015; Ayeomoni & Aladejana, 2016 and Medugu, Musa & Abalis, 2019). Beside concerted efforts by farmers to produce, lack of fund continues to pose problem to prompt delivery of goods to the consumer for sale (Oni, 2013).

However, the importance of agriculture to an economy cannot be over emphasized. Agriculture is the major and most certain path to economic growth, poverty reduction and sustainability. Agriculture is the mainstay of mankind, single largest employer of labor (70 percent according to NBS 2009); account for 30.5 percent of non-oil foreign exchange earnings (CBN 2019) and contributes 21.2 percent of gross domestic product in 2018. This sector is capable of lifting 86.9 million Nigerians under poverty out of poverty lines.

Since availability of finance is central to improving and growing the sector, the Nigeria Government has place some priority in the sector by directing public and private institutions in Nigeria to devote a certain percentage of their capital as loan to fund this all important sector. To encourage private institutions to meet this target, the Government through the CBN introduce Agricultural schemes and banks to enhance credit flow to rural areas, such banks and schemes include, Nigerian Agricultural and Cooperative Bank (NACB) established in 1972, the Rural banking scheme (RBS) and the Agricultural Credit Guarantee Scheme (ACGS) established in 1977. While the NACB was established to deliver credit to the agricultural sector, the RBS was introduced to enhance banking habit among rural dwellers. ACGS was designed to encourage banks to increase lending to the agricultural sector by providing guarantee against the risk of default, similarly, Commercial Agricultural Credit Scheme (CACS) was also introduced in 2009 to provide similar services like that of ACGS, however, to a large-scale Commercial Agriculture in Nigeria. Other strategies include the Agricultural Transformation Agenda (ATA) implemented in 2010, aimed at rebuilding the sector and the Agricultural Promotion Policy (APP) aimed at building an agribusiness ecosystem. All these policies and efforts by government were put in place to develop and grow agriculture in order to reduce over dependence on oil and hence diversification of the economy (Daneji, 2011).

However, despite the attention and incentives, the performance of the agricultural sector in terms of its productivity and contribution to the nation total GDP is still very low and at a declining rate. From the foregoing could it be concluded that institutional funding can significantly improve the very low performance of the agricultural sector in terms of its productivity and contribution to the nation total GDP? This is an empirical question previous studies have failed to answers. This study differs from the previous studies by specifically focusing on institutional funding and growth of agricultural sector in Nigeria.

2. Literature Review

The review of literature is done in two sub-sections via: theoretical foundation and empirical review.

2.1 Theory of Financial Intermediation

The theory of financial intermediation states that financial intermediaries exist because they can reduce information and transaction costs that arise from the information asymmetry that is between the borrower and lender. Diamond (1984) cited in the work of Iwedi (2016) indicated that financial intermediaries are delegated the costly task of monitoring loan contracts of which they reduce the cost through diversification. Further Iwedi (2016) indicated that adverse selection, moral hazard and credit rationing as the main themes of contemporary banking theory. The disparity between the gross costs of borrowing and the net return on lending defines the intermediary costs which include information costs, transaction costs, administration, default costs and operational costs (Iwedi, Okey-Nwala, Kenn-Ndubuisi & Adamgbo, 2016). According to Iwedi and Igbaniho (2015) financial intermediaries also assist in the efficient

functioning of sectors and any factors that affect the amount of credit channeled through financial intermediaries can have significant macroeconomic effects (Ektepete and Iwedi, 2017).

2.2 Credit Channel Theory

The credit channel theory mechanism of monetary policy describes how a central bank's policy changes the amount of credit that banks issue to firms and consumers for purchases which in turn affect the real sector (Iwedi, 2019). Karimiyan, Ziaei, Choo & Farajnezhad (2016) describe credit channel mechanism as how an economy is affected by a central bank's monetary policy on the volume of credit provided to firms and consumers for their activities. This theory has been sub-divided into two, the Bank lending channel and Bank balance sheet channel.

2.3 Empirical Review

Agricultural financing and economic growth nexus has witnessed tremendous research attention in empirical literature. On the general note, Anthony (2010) examined the impact of agricultural credit on economic growth in Nigeria. The findings show that agricultural variables have impact on economic growth and their contribution to export growth has been encouraging. Adofu, Abula & Agama (2012) examined the effect of government budgetary allocation to the agricultural sector on the output of the agricultural sector. Employing the OLS regression technique, the results revealed that budgetary allocation to agricultural sector has significant effect on agricultural production in Nigeria and that the relationship between them is strong, positive and significant.

Agunuwa, Inaya & Proscio (2013), investigated the impact of commercial banks' credit on agricultural productivity in Nigeria from 1980 – 2013. Stationary test was conducted using augmented Dickey Fuller (ADF) unit root test to find out whether the time series data have a unit root. The result showed that all the variables were not stationary at level (originally), but became stationary at 1st difference, that showed that the variables were integrated at order one I(1). Ordinary least square (OLS) was used to estimate the relationship between the variables in the model, the result showed that alternative hypothesis which stated that "commercial banks' credit has positive impact on agricultural productivity" between the period was validated and the null rejected. The second hypothesis (null) which states that government spending on agriculture has no severe effect on agricultural productivity in Nigeria was rejected and the alternative accepted. This is in accordance with a priori expectation.

Friday, Chris and Fredrick (2013) employed Vector Autoregressive (VAR) approach to examine the impact of credit supply, and various commercial bank loan schemes on agricultural sector production in Nigeria. The study covered the period 1981 to 2013; the result revealed that ACGSF performed poorly in explaining agriculture sector performance, while commercial bank loans to agriculture had significant impact on agricultural production in Nigeria. Sunny (2013), however, empirically evaluated the impact of commercial banks' credit to agriculture on agricultural development in Nigeria from 1984 to 2007. Using secondary data and Ordinary Least Square method for estimating the relationships between the dependent and the independent variables, the result showed that commercial bank credit to the agricultural sector and prices of agricultural product for this period have no significant positive effect on agricultural productivity in Nigeria, but Agricultural credit scheme by purpose and government fund allocation to agriculture have.

Iwedi, Igbaniho & Onuegbu (2015) examined the impact of bank domestic credits on the economic growth of Nigeria using annual data for 1980-2013. In the study, credit to private

sector, credit to government sector and contingent liability were used as proxy for bank domestic credit while gross domestic product proxy for economic growth. Relative statistics of the estimated model showed that credit to private sector and credit to government sector positively and significantly correlate with GDP in the short run. Analysis revealed the existence of poor long run relationship between bank domestic credit indicators and gross domestic product in Nigeria. Nnamocha & Eke (2015) investigated the effect of bank credit on agricultural output in Nigeria via error correction model (ECM) using yearly data (1970-2013). Empirical results from the study showed that in the long-run bank credit and industrial output contributed a lot to agricultural output in Nigeria while only industrial output influenced agricultural output in the short-run.

Iwedi, Okey-Nwala and Wachuku (2015) examine the direction of causality between banking sector credit and economic growth in Nigeria over the period 1980-2013. The causal links between the pairs of variable of interest were established using pairwise Grangers causality test. The granger causality test results reveal that there exist unidirectional causality flowing from Gross domestic product to CPS and CGS. Bi-directional causality runs between Contingent Liability and GDP. These suggest that growth in the volume of contingent liabilities could boost investment in the economy and exert a positive impact on level of productivity hence having a contagion effect on the output level of goods and services in the economy. In the opposite direction, growth in GDP can also boost the total amount of new funds needed through the window of investment, productivity, inventions, innovation and diversification, thereby giving birth to the issue of new credits to fund new businesses and the expansion of already existing once in the economy. Iwedi (2015) examine the anatomy of the banking system credit and SMEs growth in Nigeria from 1980-2014 using the econometric tool of the Johansen and Juselius co-integration test and the Engle granger causality test. The co integration approach was applied after determining stationarity of the variables using the ADF statistic, as well as the causality test using the Engle and Granger approach. From the result it was reveal that long run equilibrium exist among the variables studied in the model. This implies that banking system credit to SMEs will bring about more growth in this sector. However, the study concludes that banking system credit to SMEs will accelerate the SMEs growth in particular and the growth of the Nigeria economy in general, knowing full well, that SMEs with its potential can absorb the increasing level of unemployment experienced in the country and has the capability of turning a greater number of Nigerians from their poor state if the sector is accorded it rightful place.

Ayeomoni & Aladejana, (2016) examine the relationship between agricultural credit and economic growth in Nigeria. The study employed time series data from Central Bank of Nigeria, Statistical Bulletin and National Bureau of Statistics which spanned from 1986-2014. This study carried out Auto-Regressive Distributed Lag (ARDL) approach to investigate the variables. The findings showed that short and long run relationship existed between agricultural credit and economic growth in both short and long run respectively. Similarly, Udoka, Mbat & Duke (2016), examined the effect of commercial banks' credit on agricultural output in Nigeria covering the period 1970 to 2014. The study employed data sourced from Central Bank of Nigeria Statistical bulletin. Ordinary Least Square technique was employed to estimate the parameter which shows the relationships between the explanatory variables and the agricultural production in Nigeria. The result showed that there was positive and significant relationship between commercial banks' credit to the agricultural sector and agricultural production in Nigeria.

Similarly, using Ordinary Least Square method Kareem, Osisanya & Isiaq (2017), examined the effect of commercial banks financing on agricultural sector output in Nigeria, covering the period 1981 to 2014. The result showed that 99.6% of the variation in real agricultural gross domestic product is explained by commercial banks loan to agriculture. Olorunsola, Adeyemi, Valli, Kufre & Ochoche (2017) investigates the relationship between credit to agriculture and agricultural output in Nigeria by means of nonlinear autoregressive distributed lag (NARDL) model using a time series data. Results show no evidence of asymmetry in the impact of credit to output growth in the agricultural sector (positive and negative changes) in the short-run, but different equilibrium relationships exist in the long run. The dynamic adjustments show that the cumulative agricultural output growth is mostly attracted by the impact of the positive changes in credit to agriculture with a lag of four quarters of the prediction horizon.

Medugu, Musa & Abalis (2019) empirically examined 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, also ECM model result showed that the model returns to short run equilibrium after an exogenous shock, with speed of adjustment of negative one (-1), this implies 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.

3. Data, Estimation and Model

This study used annual data for the period 1980 to 2019. All the data were obtained from the CBN Statistical Bulletins of various editions. Econometric procedures were adopted in the course of this research work, Ordinary least square method (OLS) was employed for estimation of the relationships between the dependent variable and the explanatory variables. Unit root tests using Augmented Dickey Fuller to test for stationarity of the time series to avoid spurious regression. To determine whether there exists long run equilibrium relationship among the variables, co integration test was performed and also ECM model was estimated to capture short run relationships.

3.1 Model Specification

$$ASG_t = f(CBC_t, GEX_t, ACS_t, MBC_t) \text{ - functional relationship} \quad (1)$$

Equation 2 presents the estimable version of equation (1)

$$ASG_t = \alpha_0 + \beta_1 CBC_t + \beta_2 GEX_t + \beta_3 ACS_t + \beta_4 MBC_t + \mu \quad (2)$$

$$= \alpha_0 + \sum_{i=0}^n \beta_i + E_{it}, \beta_i \geq 0 \quad (3)$$

Where

- ASG = Agricultural Sector Growth
- CBC = Commercial Bank Credit to Agric Sector
- GEX = Government Expenditure on Agric Sector
- ACS = Agricultural Credit Guarantee Scheme
- MBC = Microfinance Bank Credit to Agric Sector

α_0 = Constant / Intercept

β_1 - β_4 = Coefficients of independent variables

μ_{it} = Error Term

4. Results and Discussions

Table 1 Descriptive Statistic Result

	ASG	ACS	CBC	GEX	MBC
Mean	7815.281	3088040.	1353839.	15744.22	3421.839
Median	4772.305	300413.3	102389.5	7064.930	603.5150
Maximum	17958.58	12997004	8054708.	65400.00	16890.20
Minimum	2298.700	25154.90	462.2000	29.20000	0.000000
Std. Dev.	5355.942	3960807.	2276193.	18748.86	5096.382
Skewness	0.604578	0.992289	1.602207	0.951356	1.534542
Kurtosis	1.821702	2.617294	4.207689	2.715522	4.123868
Jarque-Bera	4.750740	6.808359	19.54464	6.014514	17.80393
Probability	0.092980	0.033234	0.000057	0.049427	0.000136
Sum	312611.3	1.24E+08	54153543	614024.5	136873.5
Sum Sq. Dev.	1.12E+09	6.12E+14	2.02E+14	1.34E+10	1.01E+09
Observations	40	40	40	39	40

Source: E-view 10.0 Output

Key:

ASG = Agricultural Sector Growth

ACS = Agricultural Credit Guarantee Scheme

CBC = Commercial Bank Credit to Agric Sector

GEX = Government Expenditure on Agric Sector

MBC = Microfinance Bank Credit to Agric Sector

The gap between the maximum and minimum values is widest in term of commercial bank credit to agricultural sector (CBC). With a mean average of 8.29% it is observed that growth in GDP witnessed the widest swing with a standard deviation of 10.24%. The skewness which is a measure of asymmetry of the distribution of the series around its mean is seen to be positive for the entire variable under investigation which is an indication that the distributions have a long right tails. The kurtosis measures the peakedness or flatness of the distribution, the results reported a kurtosis of 1.82 for ASG, 2.62 for ACS, 4.21 for CBC, 2.72 for GEX and 4.12 for MBC. As a decision rule, the kurtosis of the normal distribution is 3. If the kurtosis exceeds 3, the distribution is peak (leptokurtic) relative to the normal while if the kurtosis is less than 3, the distribution is flat (Platykurtic) relative to the normal. The series CBC and MBC records a kurtosis of more than 3, hence their distribution is leptokurtic (peak) in nature while the ASG, ACS and GEX posted a kurtosis of less than 3 and their distributions can be described as flat (Platykurtic). This evidence is further confirmed by the Jarque-Bera for each of the series and her associated probabilities. Under the null hypothesis of a normal distribution, the reported probability indicates that we can accept the hypothesis of normal distribution at 5% level of significance.

Table 2: ADF Unit Root Test Results (1980-2018)

Variables	ADF Stat at 1 st Difference	Critical Value @ 5%	Order of Integration
AGS	-6.897033	-2.768908	I(1)
ACS	-6.999478	-2.925489	I(1)
CBC	-6.707560	-2.789567	I(1)
GEX	-4.843094	-2.809564	I(1)
MBC	-7.590428	-2.768905	I(1)

Source: E-view 10.0 Output

The Augmented Dickey Fuller (ADF) procedure was applied in testing for existence of stationarity of time series data and the order of integration of both variables. When the ADF statistic is less than test critical values at say 5 percent, the time series data under unit root test is assumed to be stationary at all the level. Table 2 above shows that the time series data under Augmented Dickey Fuller ADF procedure, achieved stationarity at first difference I(1). Hence, when time series data of the variables are integrated of the same order I (1), the data series tend to cointegrate (Engle and Granger, 1985). Engle and Granger documents that when two time series data are integrated of the same order I(1) and some linear combination of them is stationary, then the five series are cointegrated. The consequences of such cointegration are that; cointegrated series share a stochastic component and a long term equilibrium relationship and that the deviations from this equilibrium relationship as a result of shocks will be corrected over time.

Table 3 Ordinary Least Square Result

Dependent Variable: AGS

Method: Least Squares

Date: 04/03/20 Time: 10:04

Sample (adjusted): 1980 2018

Included observations: 39 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ACS	912.3855	141.6871	6.439441	0.0000
CBC	0.524404	0.330267	1.587816	0.1216
GEX	-12.84606	28.80217	-0.446010	0.6584
MBC	-445.3047	132.6087	-3.358035	0.0019
C	-2929042.	621279.9	-4.714529	0.0000
R-squared	0.876840	Mean dependent var		3011837.
Adjusted R-squared	0.862351	S.D. dependent var		3982768.
S.E. of regression	1477651.	Akaike info criterion		31.36901
Sum squared resid	7.42E+13	Schwarz criterion		31.58229
Log likelihood	-606.6958	Hannan-Quinn criter.		31.44554
F-statistic	60.51601	Durbin-Watson stat		1.312864
Prob(F-statistic)	0.000000			

Source: E-view 10.0 Output

Key:

- ASG** = Agricultural Sector Growth
ACS = Agricultural Credit Guarantee Scheme
CBC = Commercial Bank Credit to Agric Sector
GEX = Government Expenditure on Agric Sector
MBC = Microfinance Bank Credit to Agric Sector

Table 3 shows the comprehensive effect of institutional funding on growth of agricultural sector in Nigeria. The outcome of the regression analysis shows that Agricultural Credit Guarantee Scheme (ACS) has a short term positive and significant effect on growth of agricultural sector while Microfinance Bank Credit to Agric Sector (MBC), coefficient shows a negative and also significant influence on growth of agricultural sector. The result further indicates that a unit change in Agricultural Credit Guarantee Scheme (ACS) at the short term will give rise to a 912.3855 increase in ASG while a unit change in Microfinance Bank Credit to Agric Sector (MBC), could trigger a 445.3047 decrease in ASG. This implies that the credits as extended by this institution are either diverted or use in other frivolities. Commercial Bank Credit to Agric Sector (CBC) has positive and insignificant relationship with the growth of agricultural sector at 5% significant level. This suggests those commercial banks are not doing the needful as stipulated by the CBN in loaning out some portion of loan portfolio to the agricultural sector. Government Expenditure on Agric Sector (GEX) has negative and insignificant relationship with the growth of agricultural sector at 5% significant level. The coefficient of determination (R^2) = 0.876840 means 88% of the total variation in agricultural sector growth in Nigeria is explained by explanatory variables. Only about 12% of the variation in growth of agricultural sector in Nigeria is explained by other variables outside the model. The F-statistic of 876840 is high with probability value of 0.0000000 which means the model is statistically significant. The DW statistic value of 1.312 indicates a problem of positive serial correlation, this could be as a result of an important explanatory variable that have not been included in the model. The estimated equation shows that if Agricultural Credit Guarantee Scheme increased by one Naira, it will increase the growth of agricultural sector by 912 Naira, conversely a one Naira increase in Micro Finance Bank Credit to Agricultural Sector will decrease the growth of Agricultural sector by 445 Naira. This shows that Agricultural Credit Guarantee Scheme performs better in boosting growth of Agricultural sector than Government Expenditure on Agriculture, Commercial Bank Credit to Agriculture and Microfinance Bank Credit to Agriculture sector in Nigeria.

Table 4 Unrestricted Co-integration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.676356	116.0395	69.81889	0.0000
At most 1 *	0.630839	74.29947	47.85613	0.0000
At most 2 *	0.453186	37.42816	29.79707	0.0055
At most 3	0.303411	15.09327	15.49471	0.0574
At most 4	0.045308	1.715553	3.841466	0.1903

Trace test indicates 3 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

Table 5 Unrestricted Co-integration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
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None *	0.676356	41.74008	33.87687	0.0047
At most 1 *	0.630839	36.87131	27.58434	0.0024
At most 2 *	0.453186	22.33489	21.13162	0.0337
At most 3	0.303411	13.37772	14.26460	0.0687
At most 4	0.045308	1.715553	3.841466	0.1903

Trace test indicates 3 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

Having established that the data are of the order $I(1)$, we now apply the Johansen co-integration technique to verify the existence of long-run cointegrating or whether the variables share mutual stochastic trend and are linked in a common long run equilibrium. The Johansen co-integration procedure is based on trace statistics or likelihood ratio and the critical value. The result is presented in table 4, the first hypothesis of no long run relationship is rejected since the trace statistic of 116.03 is greater than the critical value of 69.82 at 5% confidence level. The second null hypothesis of no long run equilibrium is also rejected because the trace statistic of 74.29 is greater than the critical value of 47.85. Also, the third hypothesis of no cointegrating vector is rejected based on the trace statistics of 37.42 as against the critical value of 29.79. The null hypothesis of at most 3 and 4 cointegrating vectors are accepted following the same decision rule. From the table it is clear that the test indicate at most 3 co-integrating vector. Therefore, the result implies that there is a long run relationship equilibrium relationship between institutional funding and growth of agricultural sector in Nigeria.

Table 6 Pairwise Granger Causality Tests

Null Hypothesis:	Obs	F-Statistic	Prob.
ACS does not Granger Cause ASG	38	2.00387067757044	0.150887212360104
ASG does not Granger Cause ACS		0.90709397133637	0.413524800814313
CBC does not Granger Cause ASG	38	1.40070369711169	0.260692396647027
ASG does not Granger Cause CBC		3.73061953136426	0.034620518440694
GEX does not Granger Cause ASG	38	0.27860253239578	0.758657601060694
ASG does not Granger Cause GEX		11.5576294559167	0.000166743925883
MBC does not Granger Cause ASG	38	0.70807572244750	0.499921701780558
ASG does not Granger Cause MBC		3.71639121600359	0.035024757056133

Source: E-view 10.0 Output

Key:

- ASG** = Agricultural Sector Growth
- ACS** = Agricultural Credit Guarantee Scheme
- CBC** = Commercial Bank Credit to Agric Sector
- GEX** = Government Expenditure on Agric Sector
- MBC** = Microfinance Bank Credit to Agric Sector

From table 6, the result shows that at 5% level of significance, Agricultural Credit Guarantee Scheme (ACS), Commercial Bank Credit to Agric Sector (CBC), Government Expenditure (GEX) and Microfinance Bank Credit to Agric Sector (MBC) does not granger cause growth of agricultural sector (ASG), but causality runs unidirectional from Agricultural Sector Growth (ASG) to Commercial Bank Credit to Agric Sector (CBC), Government Expenditure (GEX) and Microfinance Bank Credit to Agric Sector (MBC) respectively. This implies that growth in the agricultural sector can trigger up an active sector and economy, boost the desire for more investment in the sector, raise the productive capacity of the sector, influence and define the pattern/volume of credit especially to the agric sector of the economy. This will in turn increase the quantum of institutional finance, support and intervention that will be advanced to the agriculture sector of the economy.

5. Conclusion

This study x-rays four basic institutional funding indicators as predictor of growth of agricultural sector in Nigeria. Institutional finance is one of the major sources of fund required by the agricultural sector, therefore affordability and availability of such fund will make it easier for the farmers to obtain required inputs at the right time, which will encourage them to produce at a large scale, instead of subsistence which is a common feature of agriculture in Nigeria. A review of literature on the subject was done. Despite a number of studies have been carried out on the subject matter over the years, however, there seems to be understudied. This study adjusted the data make-up to include 2018 data and also employed a more interesting and robust econometric procedure to carry out this investigation. The findings lead to various concluding remarks as follows:

- i. There is evidence of strong, positive and significant association between Agricultural Credit Guarantee Scheme (ACS) and growth of agricultural sector in Nigeria
- ii. Microfinance Bank Credit to Agric Sector (MBC), coefficient shows a negative and also significant influence on growth of agricultural sector.
- iii. Commercial Bank Credit to Agric Sector (CBC) has positive and insignificant relationship with the growth of agricultural sector at 5% significant level.
- iv. Government Expenditure on Agric Sector (GEX) has negative and insignificant relationship with the growth of agricultural sector at 5% significant level.
- v. There is a long run relationship equilibrium relationship between institutional funding and growth of agricultural sector in Nigeria.
- vi. At 5% level of significance, Agricultural Credit Guarantee Scheme (ACS), Commercial Bank Credit to Agric Sector (CBC), Government Expenditure (GEX) and Microfinance Bank Credit to Agric Sector (MBC) does not granger cause growth of agricultural sector (ASG), but causality runs unidirectional from Agricultural Sector Growth (ASG) to Commercial Bank Credit to Agric Sector (CBC), Government Expenditure (GEX) and Microfinance Bank Credit to Agric Sector (MBC) respectively

The study recommends that Government should make more funds available for farmers through the agricultural credit guarantee scheme. Since there is strong positive and significant relationship between Agricultural Credits Guarantee Scheme and growth of agricultural sector. Government should adequately implement policies on agricultural development and ensure that funds meant for agricultural sector are spent on the purpose it appropriated. Commercial Bank should as matter of urgency increase the funds loaned to agricultural sector as stipulated by the CBN. Microfinance Bank should monitor the use of loans given to farmers to avoid diversion.

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