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Commercial Bank's Credit, Government Expenditure and Agricultural Output in Nigeria: An Error Correction Model

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Abstract. The production of the agriculture sector is central to achieving sustainable economic growth and adequate food throughout the world. In Nigeria, agriculture used to be the mainstay of the economy in the 1960s producing about 90 percent of the government income and providing up to 70 percent job opportunities to the unemployed youths. Owing to diminishing budgetary allocation, these opportunities and potentials are eventually going to extinction. The paper also states that the different financial incentives channelled to the agricultural sector did not translate into substantial and sustainable agricultural production growth in Nigeria. Against this context, the study re-investigates 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. Increased budgetary allocation to the agriculture sector is also recommended and a larger proportion of the allocation should be committed to infrastructural improvement of the agricultural sector by the mechanisation of the agricultural system in Nigeria.

Keywords: Agriculture sector, Banks' credit, Government expenditure, Interest rates

1. Introduction

In the literature, while the debate was very contentious, the importance of the agricultural sector for economic growth and sustainable development is well explored. However, the agricultural sector is probably the most important sector of the economy, considering its enviable role to other sectors in Nigeria in the last three decades. The claim that stagnation in agriculture is the key reason for low economic output has been corroborated by Ahungwa, Haruna and Abdusalam (2014), while growing agricultural productivity has been the most significant contributor to successful industrialization. Therefore, Nigeria's sustainable economic growth and prosperity rely to a large extent on the development of a vibrant agricultural sector that supports the food and raw materials required by the growing industrial sector, as well as the creation of job opportunities for the growing population.

As a matter of fact, before the discovery of oil in industrial quantities in the early 1970s, agriculture used to be the mainstay of the Nigerian economy. The oil discovery in Nigeria, however, added greatly to the agricultural sector's misfortune as it suffered immense boycotts during the 1970s oil boom period. In fact, the contribution of agricultural production to the Gross Domestic Product (GDP) decreased from 53.2% in 1965/69 to 37.0% in 2012 (Ahungwa, Haruna and Abdusalam, 2014) and further decreased to 21.2% in 2018 (www.statistica.com/nigeria-gdp-distribution). Accessible estimates from the National Bureau of Statistics (2018) also indicate that Nigeria's agricultural contribution to GDP was 20.8% between 2012 and 2017. Agriculture made an 18.78 percent contribution to nominal GDP in the second quarter of 2018. However, this statistic is smaller than the rates for the second quarter of 2017 and higher than for the first quarter of 2018.

Indeed, as Tella (2014) has noted, financing is one of the main challenges to the contribution of the agricultural sector. Policy concerns for agricultural production have been hindered by the lack of credit supply and decreasing government expenditure on agriculture, as agricultural credit is an integral part of the process of agricultural modernization and the

commercialization of the rural economy. The quickest way to boost agricultural production is to introduce easy and cheap credit. Therefore, fulfilling the farming community's credit requirements has become the prime policy of all successive governments (Enilolobo and Ode-Omenka, 2018). Although numerous programs have been launched and implemented by successive governments to address the inability of agricultural output to keep pace with the country's demand for agricultural products due to credit shortages, farmers have limited access to the much-needed agricultural investment credit (Ahungwa, Haruna and Abdusalam, 2014).

Agricultural financing, however, is multi-faceted and multi-dimensional, which can be in the form of personal savings, borrowing from friends and relatives, cooperative societies, credit from commercial banks, and, to mention a few, government expenditure. Agunuwa, Inaya, and Proso (2015) reported that between 2001 and 2005, agriculture was allocated an average of less than 2 percent of total federal expenditure. Moreover, between 2007 and 2011, the share of agriculture in the total national budget averaged about 3.5 percent, while between 2012 and 2014, an abysmally low level of 1.7 percent and 1.3 percent of the total budgetary provision was allocated to agriculture (Agunuwa, Inaya, and Proso, 2015). This expenditure pattern is, however, in contrast with the sector's strategic importance in the Nigerian economy and at variance to the Maputo Declaration on Africa Agriculture Development Programme (CAADP) of 2003 in Mozambique as well as the government's commitment to diversifying the economic base of the country away from the oil sector.

Essentially, the nose diving trend of public expenditure on agriculture is illustrative of the abysmal performance of the agricultural sector in terms of its contribution to GDP. Considering the strategic and dynamic role the agricultural sector play in most developing economies, it is imperative to re-examine the effectiveness of various finance options on agricultural productivity in Nigeria with a view to boosting agricultural production in the country. In the light of this, this paper examines the impact of commercial banks' credit to agriculture and government expenditure on agriculture and agricultural output in Nigeria between 1980 and 2018. The rest of the paper is as follows: Section 2 presents the review of the related literature as well as the stylized facts on agriculture sector performance and government expenditure in Nigeria. Section 3 envelopes the methodology while section 4 discusses the results of findings. Section 5 concludes the paper.

2. Review of Related Literature

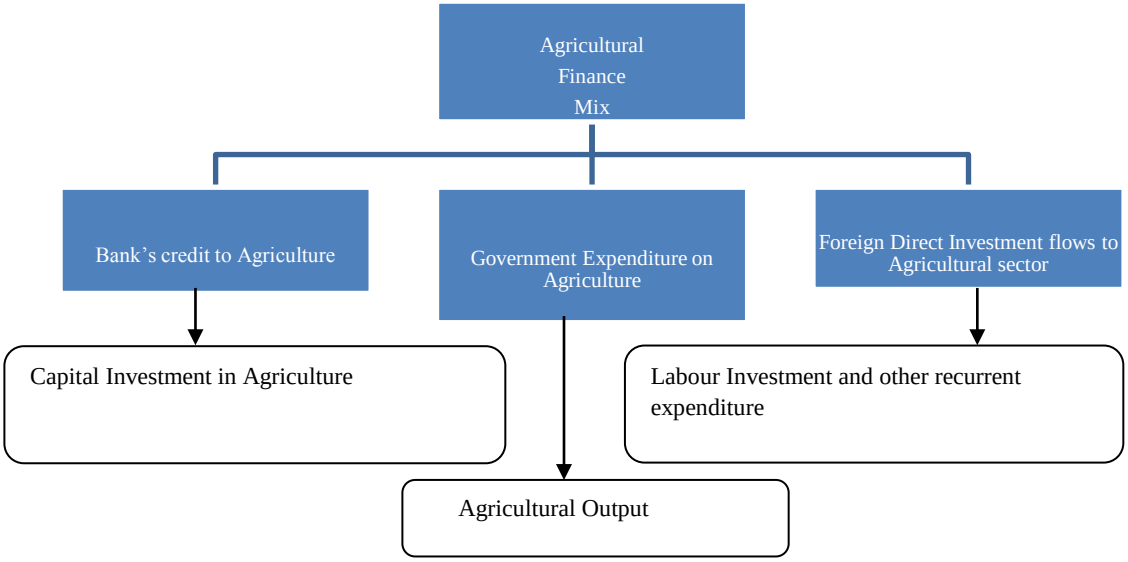
2.1 The Conceptual Framework of Agricultural Finance

In general, agricultural financing deals with the review and study of the financial factors relevant to agricultural sector and other agricultural activities. Monetary issues surrounding agricultural production and distribution are included in the financial aspects. William and Nelson (1960) described agricultural finance as "an economic analysis of farmers' credit borrowing, the organisation and operation of agricultural financing agencies, and the interest of society in agricultural credit" Shubba and Raghuram, (2005) described agricultural finance as "a division of agricultural economics that deals with individual farm units and financial capital."

Through both micro and macro viewpoints, agricultural finance can be presented. Macro financing works with multiple means of collecting funds within the market for agriculture as a whole; the loan mechanism, laws, legislation, supervision and control of the various agricultural credit institutions are also involved. Microfinance, on the other hand, relates to the financial management of the individual farm business units and deals with the issues relating to the overall credit needs of the agricultural sector, the terms and conditions in which the credit is available, and the manner in which the total credit is used for agricultural production.

The conceptual framework of agricultural finance and output is depicted in figure 1 below:

Figure 1: Conceptual Framework of Agricultural finance and Output



(Adapted from Enilolobo and Ode-Omenka (2018) and modified by the Authors)

From Figure 1 above, it is apparent that bank loans for agriculture and government spending on agriculture significantly enhance the flow of funds to the agricultural sector through agricultural capital investment and agricultural labour investment. Agricultural capital investment refers to the use of funds for the procurement of farm products and capital goods that add to farm production, whereas agricultural labour investment refers to the use of funds for the paying of wages and salaries to farm employees. Capital investment and labour investment affect the productivity of the agricultural sector as capital products purchased for workers in the agricultural industries together add to the sector's development effort (Enilolobo and Ode-Omenka, 2018).

Agricultural financing has witnessed tremendous set back in Nigeria in recent times particularly as it concerned credit supply from financial institutions. This is ostensibly due to the fact that agricultural lending is considered to be more risky, having low returns on investment and unprofitable relative to other sectors (Enyim, Ewno and Okoro, 2013). As a matter of fact, most financial institutions have lost utmost interest in agricultural finance (Obilor 2013) and thus, leaving the peasant farmers which form the bulk of the employment component of the sector to rely on the informal source of credit supply like cooperatives associations, family, friends and money lenders (Akinleye, Akanni and Oladoja, 2003).

One major flaw of this arrangement according to Nwankwo (2013) is that the informal sources cannot meet the credit needs of the farmers adequately.

Consequently, a number of institutions have been set up by the government to expand the credit flow to the industry, including the Agricultural Credit Guarantee Scheme Fund (ACGSF) and the Agricultural Credit Support Scheme (ACSS), the Nigerian Agricultural Cooperative and Rural Development Bank (NACRDB), the Nigerian Development Agency for Small and Medium Enterprises (SMEDAN), and the Special Presidential Cassava and Rice Initiatives. Others include, but are not limited to, the Rail, Roads and Rural Infrastructure Directorate (DFRRI), the National Economic Empowerment and Growth Plan (NEEDS), FADAMA, an Hausa term for irrigable property, selective credit management, agricultural subsidies and the 2014 Youth Employment in Agriculture Program (YEAP), which contributed to the implementation of the Agricultural Transition Agenda (ATA), which became the Youth Employment in Agriculture Program (YEAP) in 2014 (Ogboru, Abdulmalik and Park, 2018). Nevertheless, amid these laudable government intervention measures, the issue of insufficient credit supply to the agricultural sector has become insurmountable. This is partially due to the high expense of obtaining these funds with respect to the false interest rates and other restrictions added to the funds. Besides, budgetary allocation to these agencies was vastly inadequate for

fulfilling the credit needs of farmers and other operators in the agricultural sector.

2.2 Agricultural Output and Government Expenditure in Nigeria

The agricultural sector of Nigeria, the largest in Sub Sahara Africa (SSA), accounts for two-thirds of the agricultural value added of West Africa and approximately one-third of that of the SSA as a whole. Nigeria performs the highest in West Africa in terms of agricultural value added per worker, and also outperforms other SSA countries. However, as a proportion of agricultural GDP, Nigeria's government spending on agriculture is among the least in the SSA, totaling just 1.5 percent between 2000 and 2017.

Agriculture plays a significant role in the national economy, considering the fact that Nigeria is abundant in oil. In Nigeria, the agricultural sector has expanded steadily over the past one and a half decades and increased nearly threefold between 2002 and 2012, increasing at an annual average growth rate of 5.9 percent. The industry accounted for 22.4% of the gross domestic product (GDP) in 2012 and contributed 44.5% of overall jobs in 2004. Its share of total GDP, however, has fluctuated over the past decade, showing a decrease on average, particularly after 2002, suggesting that other sectors are growing faster than agriculture. The contribution of agriculture to GDP between 2015 and 2018 averaged 20 percent, according to official statistics from the National Statistics Bureau (2018). In fact, between 2017 and 2018, agriculture accounted for 19.28 per cent and 17.42 per cent of nominal GDP, respectively.

Regardless of the yardstick to measure, the amount of public spending on agriculture remains low. Around 2008 and 2012, agricultural investment as a share of overall federal expenditures averaged 4.6 percent. The Maputo Declaration on the Africa Agriculture Development Program (CAADP) was reiterated in 2003 at the African Union (AU) Summit in Mozambique as an integral part of the New Alliance for African Development (NEPAD), which mandates African countries to devote at least 10% of their annual budgets to agriculture and achieve 6% of their annual GDP growth. Between 1980 and 2011, less than 4 percent of total federal expenditure in Nigeria was dedicated to agriculture, considerably lower than investment in other primary sectors such as education, health and water. The proportion of the federal budget allocated to the agriculture sector was 1.8% in 2011, 1.6% in 2012, 1.7% in 2013, 1.4% in 2014, 0.9% in 2015, 1.2% in 2016 and 1.4% in 2017. While there is a strong link in many countries between government agricultural expenditure and agricultural GDP, Nigeria is one of the few outliers in terms of budgetary allocation. The proposal for allocation by the Food and Agriculture Organisation (FAO) is 25 percent after accounting for the relationship between agricultural investment and national income (Okezie, Nwosu, and Njoku 2013). Compared to other primary sectors, the budgetary allocation for agriculture is abysmally poor, considering the considerable ability of the sector to alleviate the effects of insecurity, hunger and unemployment, with the ultimate goal of promoting sustainable economic growth and development.

2.3 Empirical Evidence

The literature provides well established empirical evidence of the effect of agricultural financing on agricultural production, especially in developed countries. For example, the effect of government spending on the agricultural sector on economic growth in Nigeria has been evaluated by Itodo, Apeh and Adeshina (2012). The results show that government expenditure on agriculture has been uneven and that the agricultural sector's contribution to GDP is consistent with the budgetary allocation to the sector.

Ogbanje, Yahaya and Kolawole (2012) analyzed, using secondary data from the Central Bank of Nigeria, the impact of commercial bank loans on the agricultural sector in Nigeria from 1981 to 2007. Development was driven by agricultural GDP in the agricultural sector. Adopting the Ordinary Least Square approach, the results of the findings showed that loans from commercial banks contributed substantially to agricultural production in Nigeria at a substantial level of 1 percent.

Kareem, Bakare, Raheem, Olagumela, Alawode and Ademoyewa (2013) analyze the variables affecting Nigerian agricultural development as well as the causality of agricultural yields and other macroeconomic variables. Regression analysis, descriptive statistics, and the granger causality measures are adopted in the research. The outcome indicates that in Nigeria, foreign direct investment, commercial bank loans, interest rates and the volume of food imports have a positive effect on agricultural development.

Obilor (2013) discusses the effect on agricultural production of the Agricultural Credit Scheme Fund, agricultural commodity rates, the distribution of government funds and the credit of commercial banks

to the agricultural sector. The results of the findings show that the Fund for the Agricultural Credit Guarantee Program and the government allocation to agriculture have a major positive impact on agricultural production in Nigeria.

Nwankwo (2013) uses the Ordinary Least Square methodology and quantitative analysis design to investigate agricultural funding in Nigeria and its consequences for the development of the Nigerian economy. The study shows that the relationship between agricultural funding and economic growth and development in Nigeria is significant.

Enyim, Ewno and Okoro (2013) address the credit and efficiency of the Nigerian agricultural sector in the banking sector. The research applied econometric measures such as unit base, co-integration and granger causality test and its inferred error correction model. The outcome of the study indicates that the credit of commercial banks to the agricultural sector has a good long-term association with Nigeria's agricultural productivity.

Okulegu (2013) explores the effect of government spending on agriculture on the elimination of poverty in Nigeria (as an engine of economic growth) from 1980 to 2009. The thesis found that agricultural funding had a substantial impact on poverty reduction in Nigeria by following the Ordinary Least Square (OLS) methodology within the context of the multiple regression model. In fact, the study showed that an increase of one percent in the Agricultural Credit Guarantee Scheme Fund (AGCSF) would minimize the poverty rate by 0.06 percent.

Udih (2014) studies the credit and agricultural sector growth of banks. The research uses main and secondary data collected in the Delta State from five banks and ten agricultural firms. For the analysis, a basic random sampling methodology was implemented. To evaluate the conclusions, the data where evaluated using percentages, mean, and standard deviation and pearson product moment correlation. The research results show that the loans and advances made by banks to agricultural entrepreneurs stimulate agricultural production and productivity.

Uremadu, Ariwa and Duru Uremadu (2018) used time series data from 1981 to 2014 to analyze the impact of government agricultural spending on agricultural production in Nigeria. The results of their findings revealed that agricultural production easily responded to adjustments in overall government agricultural spending, actual exchange rates, and agricultural credit to the banking system, average annual rainfall and population growth rates.

The relationship between government spending on agriculture and economic development in Nigeria from 1985 to 2015 is investigated by Idoko and Jatto (2018). The multiple outcomes of the study showed that there is a strong and important link between agricultural government spending and economic development in Nigeria. The outcome of the Johansen co-integration test also concludes that a long-run relationship between the variables occurs at the 5 percent significance stage.

Enilolobo and Ode-Omenka (2018) investigate the effect of credits over the period from 1978 to 2016 on agricultural production in Nigeria. The Johansen co-integration test and the Regression Models of Multivariate Ordinary Least Squares were calculated. The results of the study showed that there is a strong and meaningful link between Nigeria's deposit money bank loans to the agricultural sector and the development of the agricultural sector.

To this end, evidence from the available literature provides a consistent picture of divergent views in terms of the size and magnitude of impact of the banks' credit and government expenditure on agricultural output. Besides, the sample size of most of the studies reviewed is quite small. Hence, this study seeks further clarifications on the combined effects of government expenditure on agriculture and banks' credit on agricultural output in Nigeria.

3. Research Methodology and Materials

3.1 Model Specification

The research follows the works of Agunuwa, Inaya and Proso (2015) and Uremadu, Ariwa and Duru Uremadu (2018) in analyzing the relationship between the credit of commercial banks, government spending on agriculture and agricultural production in Nigeria. Therefore, this study's empirical model is defined as:

$AGO = b_0 + b_1CBCA + b_2GEA + b_3INTR + u_t$ ---------- (1)

$b_1 > 0, b_2 < 0, b_3 > 0$ ---------- (2)

Where: AGO means Agricultural Output (measured as the share of agricultural sector to GDP); CBCA means Commercial banks' credit to the agricultural sector; INTR means Interest rate on Commercial banks' credit to agricultural sector; GEA means Government expenditure on the agriculture; U_t means error term

The inclusion of loans to the agricultural sector by commercial banks underlines the importance and interest of the private sector in the agricultural sector. In addition, apart from strengthening the market valuation of agricultural funds, the accessibility of farmers to these funds is rooted in the prevailing interest rates.

3.2 Estimation Techniques

Most time-series data have unit roots, and it can be spurious and policy deceptive to draw scientific conclusions from these trended series (Johansen, 1991). A variety of preliminary experiments on the chosen variables, such as the unit root tests, are one way to correct this flaw in the literature (Gujarati, 2003). A time series of order zero 1(0) is stationary stage, while the combined time series of order one, 1(1), is stationary at the first gap. It should be remembered that the unit root test results would direct the choice of the techniques of estimation to be followed. If the order of integration of the series is I (0), ordinary least square method may be applied. Otherwise the autoregressive distributed lag (ADRL) to co-integration estimation is employed to test the relationship among the series (Gujarati, 2003).

4. Results of Findings

This section presents the results of findings of the empirical analysis conducted in the study. Specifically, the results of the descriptive analysis, Unit root tests, Co-integration test and Error correction model results are highlighted in this section.

4.1 Descriptive Analysis

Table 1: Results of Descriptive Analysis

	AGO	CBCA	GEA	INTR
Mean	114186.5	65951.28	113968.6	16.49222
Median	121980.0	29392.00	27368.11	16.40000
Maximum	260015.4	324567.4	552462.5	29.80000
Minimum	1809.000	462.2000	162.1500	7.500000
Std. Dev.	74462.92	90119.23	173400.0	5.277218
Skewness	-0.024285	1.636421	1.599675	0.343549
Kurtosis	2.265747	4.661936	4.112299	3.105802
Jarque-Bera	0.812229	20.21028	17.20958	0.724945
Probability	0.666234	0.000041	0.000183	0.695953
Observations	39	39	39	39

The descriptive analysis of agricultural output, commercial banks' credit to agricultural sector, government expenditure and interest rate is presented in Table 1. The results indicate that there is a considerable level of consistency in the series since the mean and the median values fall within the minimum and the maximum values. In addition, since most of the values of kurtosis exceed 3, this suggests that the series exhibit a leptokurtic distribution with the exception of agricultural output. The Jarque-bera statistics is indicative of the rejection of the null hypothesis of a normal distribution for commercial banks' loan for agricultural sector and government expenditure on agriculture.

4.2 Unit Root Test

Table 2: Result of Augmented-Dickey Fuller Unit Root Test

Variables	Level Data	First Difference	1% CV	5% CV	Order of Integration
AGO	-0.30	-4.29 *	-3.64	-2.95	I (1)
CBCA	2.37	-4.16 *	-3.64	-2.95	I (1)
INTR	-2.24	-5.37 *	-3.64	-2.95	I (1)
GEA	0.79	-3.25 **	-3.64	-2.95	I (1)

*1% level of significance; **5% level of significance, CV means critical values

Table 2 shows the results of unit root tests using the Augmented Dickey Fuller (ADF) test. It is evident from the results that all the variables were non stationary at levels. However, they became stationary at the first difference which indicate that the series are integrable of order one I (1). Interest rate, commercial banks' credits to the

agricultural sector and agricultural productivity were stationary at 1% level, the government spending on agriculture was stationary at the 5% level.

4.3 Co-integration Test

Having established the level of stationarity of the series to be I (1), the autoregressive distributed lag (ARDL) bound testing approach to co-integration is employed to test the relationship among the variables. In this regard, two steps procedure are utilised in a stepwise manner. The order of lags on the first differenced variables is obtained from the unrestricted VAR models by using the Schwartz-Bayesian Criterion (SBC). Table 3 depicts the lag-length selection of the 1st differenced of the variables. It shows that according to SC the maximum lag-length for the estimation of equation is 1. After determining the lag-length, we proceed to the co-integration test and based on the fact that our model is unrestricted, the trend term in the models is omitted.

Table 3: Lag length selection of the first differenced of the variables

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-1345.57	NA	3.53e+29	79.38	79.56	79.44
1	-1238.26	183.05	1.65e+27	74.01	74.91*	74.32
2	-1215.63	33.28*	1.17e+27*	73.62*	75.24	74.17*

*Indicates lag order selected by the criterion.

In order to ascertain the long run relationship among the variables, the results of the bound test co-integration is presents in Table 4. After deciding on lag-length, the issue on the selection of critical values becomes imperative. Narayan (2005) argues that critical values of Pesaran, *et al*. (2001) that is generated for larger sample size should not be used for smaller sample size. However, Narayan (2005) presents critical values of the F test for smaller sample sizes with 30-80 observations. The result of findings reveals that there exists a long-run significant relationship between government expenditure on agriculture and agricultural output as well as between interest rates and agricultural output in Nigeria. This result is however consistent with the findings of Ogbanje, Yahaya and Kolawole (2012), Uremadu, Ariwa and Duru Uremadu (2018) and Idoko and Jatto (2018).

Table 4: Results of ARDL Co-integration Test

Model for Estimation	F-Statistics	Decision rule
F_{AGO} ($AGO_t/GEA_t/CBCA_t/INTR_t$)	2.542	No cointegration
F_{GEA}(GEA_t /$AGO_t/CBCA_t/INTR_t$)	3.972	Cointegration
F_{CBCA}($CBCA_t/AGO_t/GEA_t/INTR_t$)	1.237	No cointegration
F_{INTR}($INTR_t/AGO_t/GEA_t/CBCA_t$)	6.534	Cointegration

critical values: @ 10% = 2.72; I(0), 3.27; I(1); @ 5% = 3.23; I(0), 4.35; I(1).

4.4 Long Run Impacts of INTR, GEA and CBCA

The coefficient of long-run impacts is presented in Table 5. From the analysis, the coefficient estimates indicates that interest rate and government expenditure on agriculture exerted positive impact on the agricultural output in Nigeria in the long run at 5 percent level. On the other hand, commercial banks credits to agriculture exerted insignificant impact on agricultural output in Nigeria.

Table 5: ARDL Results for Long Run Relationships

Variable	Coefficients	Std-Error	t- Statistics	P – values
INTR	0.119720	0.024712	4.844571**	0.0000
LOG(GEA)	0.453340	0.226370	2.002652**	0.0543
LOG(CBCA)	-0.149159	0.343606	-0.434098	0.6673
C	6.392937	1.299937	4.917880**	0.0000

(**) indicating 5% significant level

The implication of this result agriculture output in Nigeria has been significantly enhanced by government expenditure and interest rate in the country. This is a clear indication of inadequacy of commercial bank's credits to agricultural sector in Nigeria. Besides, accessibility to these funds requires stringent conditionalties in terms of collateral and the interest payable on such loans. This result is quite in agreement to the work of Uremadu, Ariwa and Duru Uremadu (2018).

4.5 Error Correction Model Results

Table 6 presents the error correction term (ECT) within the framework of autoregressive distributed lag (ARDL). These estimates are optimal as they were based on the selected optimal values of Schwarz Information Criterion (SIC).

Table 6: ARDL Results for Short Run Relationships

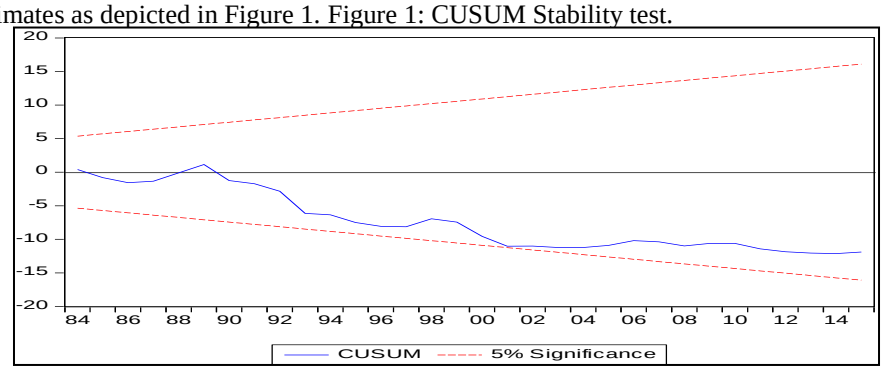
Variable	Coefficients	Std-Error	t- Statistics	P – values
D(INTR)	0.061123	0.018651	3.277248**	0.0027*
DLOG(GEA)	0.231453	0.097871	2.364875**	0.0247**
DLOG(CBCA)	-0.076153	0.164628	-0.462577	0.6470
ECT(-1)	-0.510551	0.132136	-3.863820**	0.0006*

(*) denotes 1% level of significance ; (**) denotes 5% level of significance

From the results, the error correction coefficient is properly signed with -0.510 and statistically significant at both 1% and 5% level of significance of probability values and t-statistics. These estimates confirm the long-run equilibrium conditions evident among the variables of interest and further indicate that 51% of the discrepancy from long run equilibrium in the previous year is adjusted for by the current year. Granger (1986) submitted that the existence of a significant error term is evidence of causality in at least one direction. In a similar vein, Bannerjee and Mestre (1998) noted that a highly significant error correction term is further proof of a stable long run relationship. Hence, it is evident that the causality between agricultural output, interest rates, commercial banks' credit to agriculture and government expenditure on agricultural sector was in at least one direction which is in consonance with the works of Granger (1998) and Bannerjee and Mestre (1998).

4.6 Stability test

In order to ascertain the reliability level of estimates obtained, a stability test of CUSUM is conducted on the error correction estimates as depicted in Figure 1. Figure 1: CUSUM Stability test.



The test is considered more apt than the Chow test as it depicts how the estimates depart or converge to their consistent level. As depicted in figure 1 above, the estimates lie within the confidence interval at the 5 percent level of significance; thus our estimated model is stable.

5. Concluding Remarks

There's no doubt, obviously, that finance is an important catalyst for agricultural production. The analytical study indicates that there is a significant long-term association between government spending on agriculture and agricultural production in Nigeria. In addition, agricultural credits from commercial banks had a strong negative but negligible effect on agricultural production in Nigeria. This illustrates the fact that bank loans to the agricultural sector in Nigeria are poorly insufficient and, in most situations, because of the tight conditions attached to them, these loans are not readily available to farmers.

In reality, Nigeria's agricultural growth and transition could be a mirage if the government's lack of attitude in terms of low budget allocation to the sector is not reversed. In a developing economy such as Nigeria, major agricultural investment powered by ample financial incentives is strongly required as this will have a long-term gestational impact on agricultural productivity. Besides this, in view of the deteriorating

fortunes of the oil industry, there is a strong need to revolutionize the agricultural sector in Nigeria.

In view of this, the report proposes expanded budget allocation to the agriculture sector as well as consistent functional policies to ensure easy access to credit from commercial banks. In addition, a considerable proportion of government expenditure on agriculture should be allocated to agricultural investment, especially in the field of mechanization of the agricultural sector, as this will promote youth jobs and food sufficiency, thus reducing social poverty and, by implication, stimulating sustainable economic growth and development in Nigeria.

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