

Agricultural Credit Guarantee Scheme Fund and Agricultural Productivity in Nigeria

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Abstract

The study examined the effects of the Agricultural Credit Guarantee Scheme Fund on agricultural productivity in Nigeria. The specific objective was to examine the effect of the Agricultural Credit Guarantee Scheme Fund (cash crops) on agricultural output in Nigeria. The analytical methodology used in this study was ordinary least squares (OLS) estimation within the framework of a vector error-correction mechanism (VECM). Based on the results, the Agricultural Credit Guarantee Scheme Fund (cash crops) had a negative and insignificant effect on agricultural output in Nigeria. The study recommended that farmers form cooperatives to obtain inputs at reduced cost. Furthermore, government recurrent expenditure on agriculture should be increased to improve agricultural productivity, and both commercial banks and the federal government should mobilize more financial resources for the agricultural sector to enhance productivity, thereby guaranteeing maximum agricultural output in Nigeria.

Keywords: Agricultural Credit Guarantee Scheme Fund, productivity, Cocoa, Palm oil, Rubber, Interest rate

Introduction

Agriculture is one of the most important sectors of the Nigerian economy, this is because it contributes to the country's Gross Domestic Product (GDP), provides employment and export revenue earnings. The Nigerian economy was driven mainly by the agricultural sector in the 1960s, accounting for about 70 percent of the Gross Domestic Product of the country and 65-70 percent of the nation's exports (Olajide, et,al 2012). Also, the sector has contributed almost 65 percent of employment to the teeming population and accounted for over 90 percent of the total food consumption requirement, thereby contributing immensely to the nation's food security (Izuchukwu, 2011). Thus, the agricultural sector was estimated to be greatest benefactor to Nigeria's non-oil foreign earnings (Iganiga and Umemhilin, 2011). The country was known for the exportation of palm oil and cocoa ahead of the USA and other countries, accordingly, export crops was more of the foreign exchange earnings (Green, 2013). This was the time the country was seen to be the key agricultural commodity vaults of the world.

Recently, the productivity of the agricultural sector and its contributions to the Gross Domestic Product of the nation have reduced extremely resulting from the oil boom of the late 1970s which

led to the neglect and degeneration of agriculture into a shadow of its former self (Olajide, et.al., 2012). The oil and gas sector has over time taken over the economy, it is now regarded as the key in terms of exports and revenue to the government. This has also affected the agricultural sector. Notwithstanding, agriculture is still look upon in the world as the bedrock of stable and successful economy. Ndiru and Aminu (2014) assert that the engine room of economic growth in developing economy is agriculture, they maintain that a country with an efficient and vibrant agricultural sector would stand firm in feeding its growing population, create employment opportunities and provide raw materials for industrial use. Agriculture form one of the main sectors in most developing countries by providing food and employment for large number of the population thereby leading to the growth of the economy.

Many countries that lay more policy on agriculture (China, Brazil, India, United States of America among others) tend to have more industrial growth than those that concentrated only on industries (Ndiru & Aminu, 2014). Falusi (2015) argued that small holding farm families, rural household or farm households constitute the greater unit of the sector upon which the foundation of agriculture is build, these units of agricultural sector are seen not to be important as they cultivate less than five hectares of land personally but together there are the root of agriculture in Nigeria. Cash crops are agricultural products grown to be sold in the market or exported for profits. They include cocoa, palm oil, rubber among others. Stewart (2013) is of the opinion that agricultural sector shape the landscape and make available environmental gain like conservation, guarantee the sustainable management of renewable natural resources among others (Akinleye, Akanni & Oladoja, 2015).

The draw back in the enhancement and contribution of the sector to the Nigerian economy is as a result of poor credit policy administration, paucity of credit institutions etc. Credit financing is one of the major factors to achieving sustainable economic activity in any country. In terms of agriculture, it will result to increased agricultural productivity when farmers are able to access inputs like fertilizers, storage facilities, land, machineries, improved seedlings as well as irrigation facility for farming in the dry season. Also, credit accessibility encourages new entrants into agriculture. Udih (2014) is of the opinion that bank credit should be able to create a positive impact on the real sector of the economy when there is improved agricultural production of goods and services. He further maintains that agricultural project will not just increase food security, but will promote entrepreneurship activities of young entrepreneurs when the sector is well funded.

Theoretical framework

The study adopted high Payoff Input theory. The exponent of the High Payoff Input Theory (HPIT) is Schultz (1964). The theory postulates that the key to transforming a traditional agricultural sector into a productive source of economic growth is investment to make high payoff inputs available to farmers in poor countries. The theory has been accepted by several countries because it policies seems to have the ability to bring adequate agricultural growth, thereby providing a basis for overall economic development consistent with modern population and income growth

requirements. The theory holds that accelerating the process of agricultural development can be attained through public investment in education and scientific research. In line with the high payoff input theory, the Agricultural Credit Guarantee Scheme Fund provided by the federal government and Central bank of Nigeria will make sure that credit are available to farmers, as it will empower them to get the needed inputs for higher agricultural sector productivity.

Literature Review

Cash crops are agricultural products grown to be sold in the market or exported for profit. Cash crops such as cocoa, palm oil, rubber among others offer income and employment opportunities to the Nigerian economy. Also, farmers generate capital for management improvements and innovation, and cash crops accelerate the build-up of institutions that enable further research and commercialization. Cash crops may have a catalytic effect on agricultural innovation since they add value and productivity in rural areas. Farmers' income depend on the prices of main cash crops since they are affected by them. Cash crops helps to raise the living standard of farmers as well as create employment opportunities in agriculture and agro-based industries, strengthening and developing the government over the years.

Credit to the agricultural sector is very important in enhancing agricultural productivity. For this reason, the Agricultural Credit guarantee Scheme Fund (ACGSF) was established in 1977 by the Federal Government of Nigeria to enable farmer's access agricultural credit (Badiru, 2010). The scheme began operation in 1978 with a takeoff grant of 100million naira, which the Federal Government of Nigeria funded 60 per cent, while the remaining 40 per cent was funded by the Central Bank of Nigeria (CBN). The Agricultural Credit Guarantee Scheme Fund was to encourage the flow of credit to farmers and to protect participating banks against inherent risk in the production of cash crops, livestock among others. The scheme assures 75 per cent refund of the defaulted loan net of the amount recovered by the lending banks. The maximum cover against loan to individual farmers was N50,000 but was increased to N100,000 by decree No. 18 of 1988 as amended, it was pegged at 1million naira for cooperative society or corporate body.

Agricultural productivity is conceptualized as the total money value of agricultural produce gotten from the subsectors of the Agricultural Credit Guarantee Scheme Fund. This include: Agricultural Credit Guarantee Scheme Funds to the cash crop sub-sector. According to Anyanwu, Oyefusi, Oaikenan and Dimomo (2013) agriculture is defined as the cultivation of land and rearing of animals for man's consumption, feed for animals and raw materials for industries. The Nigerian agricultural sector is made up of large scale farmers who cultivate crops for commercial purposes, as well as peasant farmers who cultivate crops for subsistence purposes. Due to the dominance of the peasant farmers on the landscape, only little of Nigeria's agricultural output is produced with the use of modern and sophisticated production techniques (Central Bank of Nigeria, 2021).

Agriculture can be easily practiced in Nigeria due to the country's wide range of climate variations from the dense rain forest belt of the South to the Sudan Savannah of the North, with the different ecological belts, cash crops, livestock, and food crops are produced. The principal agricultural products produced in Nigeria includes: groundnut, cocoa, palm oil, cattle, sheep, poultry, sweet potatoes, millet, corn plantain, cassava, sorghum, beans, rice, yams, rubber, fruits and vegetables. Credit is the extension of money from the lender to the borrower. According to Spencer (2014), credit is a promise by one party to pay another for money borrowed or goods and services received. Credit cannot be separated from the banking sector since banks serve as a channel for money to be received in form of deposits from the surplus economic units and passed to the deficit economic units for productive purposes. Thus, banks are debtors to the depositors of money and creditors to the borrowers of money. Bank credit is the borrowing capacity extended to an individual, firm, government or organization by the banking system in the form of loans.

Empirical review

Various studies Agricultural Credit Guarantee Scheme Fund and agricultural productivity in Nigeria have been reported in literature. Osabohien *et al.* (2020) in their study evaluated access to credit and the performance of agriculture in Nigeria from the period of 1998 to 2018 using the Autoregressive Distributed Lag Technique. The result of the study revealed that Agricultural Credit Guarantee Scheme Fund and commercial banks credit extended to agriculture have significant positive impact on agricultural productivity both in the short run and long-run.

Osabohien, Adeleye and Alwis (2020) in their joint study examined the effect of agro-financing on food production in Nigeria from the period of 1981 to 2018 with the use of Johansen and canonical co-integration techniques. The result revealed that agro-financing has significant positive effect (proxy with Agricultural Credit Guarantee Scheme Fund) on food production. Osabohien *et al.* (2020) in their study examined the effect of access of households to loans on agricultural productivity in Nigeria with cross-sectional data and using the Propensity Score Matching Approach (PSM). The findings showed that households with loan access have greater productivity more than households with access to loans or credit.

Olowofeso, Adeboye, Adejo, Bassey and Abraham (2017) in their study examined the relationship between agricultural credit and agricultural output in Nigeria covering the period of 1992Q1 to 2015Q4 using the Nonlinear Autoregressive Distributed Lag technique. The result of the study revealed that they exist no asymmetrical effect of agricultural credit on agricultural output in the short run, however, equilibrium relationships are shown in the long run. Also, agricultural productivity is mainly attracted by the impact of the positive changes in credit to agricultural.

Eneche, Ohen and Umeze (2014) in their study of the effects of Agricultural Credit Guarantee Scheme Fund (ACGSF) on production efficiency of rural farmers in Benue State, Nigeria. They made use of inferential and descriptive statistics, and they highlighted that the beneficiaries of

ACGSF has been efficient in their production. They recommended that farmers should form cooperatives to enable them obtain inputs at reduced cost.

Akinkiola and Okunola (2017) in their study of the effect of Agricultural Credit Guarantee Scheme Fund (ACGSF) on Agricultural Productivity in Nigeria from the period of 1978 to 2014 using linear ARDL model, highlighted that they exist along-run equilibrium between the value of loans, number of loans and agricultural productivity. But in the long-run, the value of credit does not have any significant effect on agricultural productivity, however, the number of credit does. Reuben, Nyam and Rukwe (2020) in their study evaluated the impact of Agricultural Credit Guarantee Scheme Fund (ACGSF) on agricultural output in Nigeria from the period of 1998 to 2017 using ordinary least square method. They highlighted that ACGSF has significant positive effect on agricultural output.

Eyo, Nwaogu and Agenson (2020) in their study examined the effects of Agricultural Credit Guarantee Scheme Fund (ACGSF) on agricultural output in Nigeria using Ordinary Least Square Method. The result revealed that ACGSF has significant positive impact on output of agriculture. Orok and Ayim (2017) in their study evaluated the impact of Agricultural Credit Guarantee Scheme Fund on agricultural development in Nigeria from the period of 1990 to 2016 using Ordinary Least Square Method. The result showed that they exist a significant positive relationship between the scheme and the development of agriculture.

Okulegu (2010) investigated banking sector credit and the performance of the Agricultural sector in Nigeria. The time series econometric analysis and descriptive statistics were used to estimate the effects of banking sector agricultural credit on agricultural product performance in Nigeria. The study employed the econometric tests such as Error correction model and granger causality test, and unit root cointegration, in which Agricultural product performance was regressed on commercial bank credit to agriculture, agricultural credit guarantee fund scheme, and government expenditure on agriculture using annual time series data from 1981 to 2011, which was obtained from the Central Bank of Nigeria Statistical Bulletin. The result of the analysis revealed that the total money stated as Government Expenditure on agriculture in Nigeria was not statistically significant and not theoretical in line. Based on the above findings, the study recommends that a clear-cut credit policy which ensures a long-term financing of agriculture. Short-term, discriminating policies cause confusion and prevent farmers from investing in agriculture.

Methodology

The research design adopted in this study is ex post facto research design. Secondary sources of data was used as the main method of data collection. The relevant data for this study was obtained from the Central Bank of Nigeria (CBN) annual report and statement of accounts (various years), statistical bulletins. Other sources of data include the World Bank Datasheet and relevant

published articles. Based on this stance, the baseline model for this study is formulated and specified functionally as:

Therefore, $AOUTPUT = f(CC, PO, RB, INTR)$

Where:

AOUTPUT = Agricultural output

CC = Cocoa

PO = Palm oil

RB = Rubber

INTR = Interest rate

$AOUTPUT = \alpha_0 + \alpha_1 CC + \alpha_2 PO + \alpha_3 RB + \alpha_4 INTR + U_t$

Equation 1.1 can be expressed in its econometric linear and log form as:

$AOUTPUT = \alpha_0 + \alpha_1 \log CC + \alpha_2 \log PO + \alpha_3 \log RB + \alpha_4 INTR + U_t$ - - 1.1

Where:

AOUTPUT = the dependent variable

CC, PO, RB = the independent variables

INTR = the control variable

Results

Unit root test

The unit root tests were conducted to determine the stationarity and hence the order of integration of the variables. The test was conducted employing the Augmented Dickey-Fuller (ADF) test and the Philips Perren (PP) test. The outcomes of the unit root test are depicted in Tables 1 and 2. The results of the unit root tests as indicated in Tables 1 and 2 using both Augmented Dickey-Fuller (ADF) test and the Philips-Perron (PP) test, respectively showed that no variable was stationary at level. This is so because the calculated test statistics values at the level for each of the variables using both Augmented Dickey-Fuller (ADF) test and the Philips-Perron (PP) test in absolute terms were all less than the critical values at the five percent level of significance. Therefore, the null hypothesis of no unit root cannot be rejected at the level. However, when the variables were differenced once, they were found to be stationary. This is because at the first difference, the tests statistics values for both Augmented Dickey-Fuller (ADF) test and the Philips-Perron (PP) test in absolute terms were all greater than the critical value at the five percent level of significance. This means that the variables were integrated of the first order or order I (1).

Co-integration test for Agricultural credit Guarantee scheme fund- Agricultural output

Given that the series was integrated of the same order, that is, order I(1) suggested that there was a unit root problem and there is need to conduct co-integration test to determine whether there existed or not long-run relationship among the variables in the estimated equation. To establish the long run-equilibrium relationship among the

variables, the study employed the Johansen and Jesulius (1990) multivariate cointegration approach based on the trace and the maximum eigenvalue tests. To reach an acceptable conclusion, the decision rule is that if the calculated trace and maximum Eigen values are greater than the critical values, then the null hypothesis of no co-integration is rejected and it is concluded that there is existence of a long run relationship among the variables in the model and vice versa. The cointegration test based on the trace test and maximum eigenvalue test are presented in Tables 3 and 4 below.

The co-integration test as presented in Table 3 based on trace test indicated the existence of four co-integrating equations at 5 percent level of significance. This is so because the calculated trace test statistic values in each of the four cointegrating equations were all greater than the critical values at the five percent level of significance. On the other hand, the cointegration test based on the maximum eigenvalue test as depicted in Table 4 indicated three co-integrating equations at the five percent level of significance. This is so because the calculated maximum eigenvalue test statistic values in each of the three cointegrating equations were all greater than the critical values at the five percent level of significance. From the results, it can be concluded that the variables are co-integrated and hence there was long run equilibrium relationship among the variables. This meant that the independent variables had long run impact on the dependent variables.

TABLE 1
Unit root test using the Augmented Dickey-Fuller (ADF) test

Variable	ADF statistic		1st difference	Critical value at 5%	Remarks
	Level	Critical value at 5%			
LAGOUT	-0.027819	-2.945842	-3.395053	-2.945842	I(1)
LCC	-0.940001	-2.943427	-10.29105	-2.945842	I(1)
LRB	-0.717745	-2.943427	-6.410251	-2.945842	I(1)
LPO	-0.563095	-2.945842	-9.416192	-2.945842	I(1)
LINTR	-0.753183	-2.943427	-9.479632	-2.945842	I(1)

Source: Researchers' Computation (2026)

TABLE 2
Unit root test using the Philips – Perron (PP) test

Variable	PP statistic		1st difference	Critical value at 5%	Remarks
	Level	Critical value at 5%			
LAGOUT	-0.684590	-2.94343	-3.24263	-2.94584	I(1)
LCC	-0.8935	-2.94343	-10.1127	-2.94584	I(1)
LRB	-0.6967	-2.94343	-6.41193	-2.94584	I(1)

LPO	-0.53103	-2.94343	-9.53097	-2.94584	I(1)
LINTR	-1.65924	-2.94343	-16.4679	-2.94584	I(1)

Source: Researchers'.Computation (2026)

TABLE 3

Trace test

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.859975	136.0993	69.81889	0.0000
At most 1 *	0.608405	67.29163	47.85613	0.0003
At most 2 *	0.435387	34.47815	29.79707	0.0134
At most 3	0.251654	14.47165	15.49471	0.0709
At most 4 *	0.116254	4.325481	3.841466	0.0375

Trace test indicates 4 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Source: Researchers' Computation (2026)

TABLE 4

Maximum eigenvalue test

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.859975	68.80768	33.87687	0.0000
At most 1 *	0.608405	32.81348	27.58434	0.0097
At most 2	0.435387	20.00650	21.13162	0.0712
At most 3	0.251654	10.14617	14.26460	0.2025
At most 4 *	0.116254	4.325481	3.841466	0.0375

Max-eigenvalue test indicates 3 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Source: Researchers' Computation (2026)

Over-parameterized result of the Agricultural credit Guarantee scheme fund-Agricultural output

Before the error correction model was estimated, the over-parameterized model was first estimated. The over-parameterized model contains more parameters than the original model by including the lagged values of the variables in the model. The aim was to examine the effect of past values of both the dependent and the independent variables on the current value of the dependent variable. The results of the over-parameterized equation of the Agricultural credit Guarantee scheme fund-Agricultural output are presented in Table 5 below. The over-

parameterized results as presented in Table 5 showed that the error correction factor has the correct negative sign of its coefficient and was statistically significant as theoretically expected. The coefficient of the error correction variables of 0.102 showed that about 10 percent of the discrepancy between the actual and the expected value of agricultural output has been corrected within a year. This is a slow speed of adjustment from short run disequilibrium to long run equilibrium.

TABLE 5
Over parameterized result of Agricultural credit Guarantee scheme fund-Agricultural output nexus

Dependent Variable: D(LAGOUT)				
Method: Least Squares function				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.023705	0.009791	2.421155	0.0231**
D(LAGOUT (-1))	0.485837	0.145208	3.345800	0.0026*
D(LCC)	-0.006148	0.017091	-0.359731	0.7221
D(LCC(-1))	-0.010401	0.016059	-0.647684	0.5231
D(LRB)	-0.017895	0.015639	-1.144194	0.2634
D(LRB(-1))	0.010681	0.014463	0.738465	0.4671
D(LPO)	0.028295	0.013890	2.037011	0.0524*
D(LPO (-1))	-0.015094	0.017036	-0.885966	0.3841
D(LINTR)	0.005665	0.003745	1.512512	0.1429
D(LINTR(-1))	-0.004275	0.003990	-1.071411	0.2942
ECM(-1)	-0.101678	0.040601	-2.504329	0.0192**
R-squared	0.619827	Adjusted R-squared		0.587758
F-statistic	2.706455	Durbin-Watson stat		1.781780
Prob(F-statistic)	0.021130			

Source: Researchers' Computation (2026)

The R-squared of 0.619 and the adjusted R-squared of 0.587 showed that the estimated model had a moderately good fit on the data. In particular, the adjusted R-squared of 0.587 showed that about 59 percent of the total variation in the dependent variable has been explained by variations in the independent variables. The model therefore has a moderately high explanatory power. Similarly, the F-statistic value of 2.706 with its low probability value of 0.021130 showed that the overall model was statistically significant at the conventional five percent level of significance. This means that the independent variables have joint impact on the dependent variable. This also meant that there exists a high degree of linear relationship between the dependent and the independent variables. Meanwhile, the Durbin-Watson statistics was carried out to determine whether there was or no autocorrelation in the model. The decision rule for the no autocorrelation condition is that $d_u < DW < 4 - d_u$. That is, the Durbin-Watson value must be greater than the value of the upper boundary but less than $4 - d_u$. From the result, the Durbin – Watson value of 1.782 was greater than

the upper boundary value and less than $4-d_u$, and fell in the no autocorrelation region of the Durbin-Watson critical regions. This showed that there is no problem of autocorrelation in the estimated model. The absence of autocorrelation meant that the residual terms were not interdependent. Hence, the estimated regression equation is well specified and well-behaved.

Parsimonious Error Correction result of Agricultural credit guarantee scheme-Agricultural output Nexus

To estimate the parsimonious short-run error correction model for short-run dynamics, the statistically significant variables and other concerned variables were selected from the over-parameterized model and were used to estimate the error correction model, while the insignificant variables were dropped as required by the rule. The results of the parsimonious error correction estimates are depicted in Table 6 below.

The result as presented in the table above showed that the error correction factor has the expected negative sign of its coefficient and was also statistically significant as postulated theoretically. The magnitude of the coefficient of the error correction variable of 0.086 showed that only about 8.6 percent of the disequilibrium in the Agricultural output was corrected back to equilibrium within one year. This portrayed a very slow speed of adjustment from the short run disequilibrium to the long run equilibrium. The R-squared of 0.590 and the adjusted R-squared of 0.585 showed that the estimated short run equation has a moderately good fit and moderately high explanatory power. In particular, the adjusted R-squared of 0.585 showed that approximately 59 percent of the systemic variation in the dependent variable has been explained by variations in the independent variables.

The F-statistic value of 4.652 with its low probability value of 0.001996 showed that the overall model was statistically significant at the conventional 1%, 5% and 10% levels of significance. This is so, given that the probability value of 0.001996 was less than 0.01, 0.05 and 0.1, respectively for 1%, 5% and 10% levels of significance. This means that the independent variables have joint impact of on the dependent variable. The Durbin-Watson statistics was carried out to determine whether there was or no autocorrelation in the model. The decision rule for the no autocorrelation condition is that $d_u < DW < 4-d_u$. That is, the Durbin-Watson value must be greater than the value of the upper boundary but less than $4-d_u$. From the result, the Durbin – Watson value of 1.873 was greater than the upper boundary value and less than $4-d_u$, and fell in the no autocorrelation region of the Durbin-Watson critical regions. This showed that there is no problem of autocorrelation in the estimated model. The absence of autocorrelation meant that the residual terms were not interdependent. Hence, the estimated regression equation is well specified and well-behaved.

Evaluation of the short run coefficients showed that one period lagged of agricultural output exerted a positive impact on the agricultural output in the current period in Nigeria. This result is consistent with theoretical expectation, showing that a one percent increase in one period lagged of agricultural output resulted to an increase in agricultural output in the current period by

approximately 0.48 percent, *ceteris paribus*. Statistically, one period lagged of agricultural output was significant in influencing the current level of agricultural output the conventional one, five and ten percent levels of significance given that its low probability value of 0.0016. One period lagged of cocoa has negative impact on agricultural output in Nigeria. This result is not consistent with the *a priori* expectation, showing that a one percent increase in the cocoa led to a decrease in agricultural output by approximately 0.005 per cent. Statistically, cocoa was not significant in influencing agricultural output at the conventional one, five and ten percent levels of significance because of its high probability value of 0.6612.

Examination of the result showed that rubber has positive impact on agricultural output in Nigeria in line with *a priori* expectation. This result in real term showed that a one per cent increase in rubber led to an increase in agricultural output by approximately 0.03 per cent, *ceteris paribus*. Statistically, rubber was significant in influencing agricultural output in Nigeria at the conventional five percent level of significance. This is because its computed probability value of 0.0325 was less than 0.05.

Palm oil has positive relationship with agricultural output in Nigeria. This result is constant with theoretical expectation, indicating that a percent increase in palm led to an increase in agricultural output by approximately 0.03 percent, *ceteris paribus*. Statistically, palm oil was significant in its influence on agricultural output at the conventional five percent level of significance, given its low probability value of 0.0126, which was less than 0.05. Lastly, interest rate has positive impact on agricultural output in Nigeria. This result is in line with *a priori* expectation that agricultural credit contributes positively to output. This result in real term means that an increase in interest rate by one percent resulted to an increase in agricultural output by approximately 0.01 percent, *ceteris paribus*. Statistically, interest rate was significant in its influence on agricultural output at the conventional five percent level of significance, given its low probability value of 0.0459, which was less than 0.05.

TABLE 6
Parsimonious result of Agricultural credit Guarantee scheme fund-Agricultural output nexus

Dependent Variable: D(LAGOUT)
Method: Least Squares

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.021437	0.008529	2.513411	0.0178**
D(LAGOUT (-1))	0.482599	0.138326	3.488846	0.0016*
D(LCC (-1))	-0.004658	0.010521	-0.442724	0.6612
D(LRB)	0.025495	0.011353	2.245617	0.0325**
D(LPO)	0.029872	0.011234	2.659222	0.0126**
D(LINTR)	0.006635	0.003181	2.085682	0.0459**

ECM1(-1)	-0.085794	0.034786	-2.466331	0.0198**
R-squared	0.590443	Mean dependent var	0.042742	
Adjusted R-squared	0.585018	S.D. dependent var	0.041739	
S.E. of regression	0.032732	Akaike info criterion	-3.828255	
Sum squared resid	0.031070	Schwarz criterion	-3.520349	
Log likelihood	75.90860	Hannan-Quinn criter.	-3.720788	
F-statistic	4.652034	Durbin-Watson stat	1.873162	
Prob(F-statistic)	0.001996*			

Note: *, **, *** denotes significance at 1%, 5% and 10% levels of significance, respectively.
Source: Researchers' Computation (2026)

Discussion of findings

The analysis of empirical result in the preceding section showed that cash crop exerted a negative and insignificant impact on agricultural output in Nigeria. This outcome was not in agreement with theoretical postulations that agricultural credit guarantee scheme spurred agricultural output. The results of the estimation showed that cash crop had a positive and significant impact on agricultural output in Nigeria during the period under review. This result was consistent with the findings by Badiru (2010) who posit that credit to the agricultural sector is very important in enhancing agricultural productivity. Agricultural Credit guarantee Scheme Fund was to encourage the flow of credit to farmers and to protect participating banks against inherent risk in the production of cash crops, livestock among others. The establishment of the Agricultural Credit Guarantee Scheme Fund was necessitated by the unwillingness of commercial banks to give credit to small holder farmers due to high rate of credit repayment and the absence of collateral securities for bank to fall back to in the event of default, including the high cost of administering low unit value credit to farmers who remained widely scattered "Loan" under the ACGFS includes overdrafts, advances and so on. The following is the summary of findings that emanated from this work;

- (i) The results showed that cash crop (cocoa) had a negative and insignificant effect on agricultural output in Nigeria.
- (ii) The results also revealed that cash crop (rubber) had a positive and significant effect on agricultural output of Nigeria.
- (iii) Meanwhile, the results from the analysis showed that agricultural credit on cash crop (palm oil) had a positive and significant impact on agricultural output in Nigeria as theoretically expected.
- (iv) Lastly, the results showed that interest rate had a positive and significant relationship with agricultural output in Nigeria.

Conclusion

This study was carried out to empirically examine Agricultural credit guarantee scheme fund and agricultural output. Agriculture is one of the most important sectors of the Nigerian economy, this is because it contributes to the country's Gross Domestic Product (GDP), provides employment and export revenue earnings. Thus, the agricultural sector was estimated to be greatest benefactor to Nigeria's non-oil foreign earnings. Recently, the productivity of the agricultural sector and its

contributions to the Gross Domestic Product of the nation have reduced extremely resulting from the oil boom of the late 1970s which led to the neglect and degeneration of agriculture into a shadow of its former self.

Recommendations

Based on the findings, the following recommendations for policy actions are made as follows:

- Farmers should form cooperatives to enable them obtain inputs at reduced cost.
- Government recurrent expenditure on agriculture should be reviewed upward in order to improve agricultural productivity, and that both the commercial banks and Federal government should mobilize more financial resources towards agricultural sector to enhance agricultural productivity which would guarantee maximum agricultural output in Nigeria.
- Government should strengthen the agricultural credit guarantee scheme by meaningful budgeting allocation in order to enhance its capital base significantly.
- Government should endeavor to ensure that there are available and sufficient credits allocations to the sector in Nigeria and at the affordable interest rate.

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