

## **Impact of Agricultural Financing on Aggregate Farming Output in Kogi State, Nigeria.**

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### **Abstract**

Federating states in Nigeria has over the year claimed to have enjoyed various agricultural financing policies aimed at enhancing sustainable agricultural development. Thus, the paper investigates the impact of agricultural financing on aggregate farming output in Kogi State, from 1992 to 2022 with specific objectives as: to evaluate the impact of Agricultural credit guarantee scheme funds (ACGSF) on agricultural output in Kogi state, assess the impact of commercial banks' credit to agriculture on agricultural output in Kogi State, examine the causal relationship between government expenditure on agriculture and farming output in Kogi State. The paper adopts co-integration and ECM econometric techniques for the analysis. The results indicated that relationships exist among the variables and the variables were statistically significant in determining the behavior of the dependent variable. The study therefore concluded that agricultural financing has impact on agricultural output in Kogi State. The study recommends that Credit should be timely granted to farmers who are ready and willing to embark on farming and thoroughly supervised; Government should increase her expenditure on the sector; Government should encourage the financial institutions to allocate certain proportion of their total credit facility available for the sector.

**Keywords:** Food security, Farming output, loan facility, gross domestic product.

### **Introduction**

In developing countries like Nigeria, agriculture is the mainstay of their economies. This is because of the role it plays in national development as well as wellbeing of the people. The sector is one of the most important sectors of the Nigerian economy as it provides food security and employment opportunities to the dynamic population. (Izuchukwu, 2011; Olawumi & Adesanmi, 2018; Iganiga & Unemhilin 2011). The perception that the agricultural sector is the engine of growth in Nigeria can be traced back to the 1940s, 1950s and early 1970s when it contributed significantly to her gross domestic product. Before the discovery of oil, the sector was the major contributor to the Nigerian economy, since it constituted 65 to 70 percent of the country's Gross Domestic Product (GDP) and provides the bulk of the foreign exchange earnings through the export of cash crops (Olawumi & Adesanmi, 2018).

For about four decades, the Agricultural sector has not been performing well in Nigeria, its contributions to GDP have been declining and the nation which was once upon a time an exporter is gradually becoming a major consumer of imported foods. The Agricultural share of GDP in Nigeria in 1950 was 69 percent but declined steadily from that percentage to 49% in 1970, 22% in 1982 and 42.2% in 2007 as well as 40% in 2010 (Ahungwa, Haruna & Abdusalam, 2014). Also, according to the National Bureau of Statistics (NBS), the Agricultural annual contributions to GDP in Nigeria were 23.91%, 23.33%, 22.90% and 23.11% in 2012, 2013, 2014 and 2015 respectively (NBS 2015). In 2017, 2018, 2019 and 2020 it contributed 32%, 24.2%, 23.91% and 26.09% respectively (World Bank, 2021). In other words, the sector is contributing below expectation

compared to what it was known for in the past. However, the declining state of the agricultural sector at national level began with the oil boom in the early 1970s owing to its neglects by successive regimes. Since then, agricultural production fell short of expectations. In addition, low agricultural productivity in Kogi State had been attributed to the loss of soil fertility, the low application of fertilizers, the traditional method of farming, low technology, poor agricultural extension services, lack of funds among others (Dare, 2020). The performance of agricultural sector was largely dependent on the provision of affordable financial services to both the Rural and Urban populations that were engaged in agriculture because lack of finance is seen to be one of the major challenges faced by farmers in the state (Dare, 2020).

Agricultural financing had been identified as an essential aspect of agriculture, as it is an important precursor needed to determine the quantity and quality of inputs in terms of technology, materials and labour that can be used on the farm Etian & Chiedza (2022).

Policies like APPEAL, RIFAN, ACGSF, ABP etc were efforts made by government which aimed at financing agriculture in order to increase agricultural output in Kogi State and Nigeria in general. However, despite these attentions and huge investments the dwindling nature of the sector seems to persist, making people sceptical to the role of the financial system in providing funds to the agricultural sector (Udoka, Mbat and Duke, 2016). Mohammed, (2012) cited Amali, (1996) opined that micro and small-scale farmers source large proportions of their capital requirements from informal sources, such as money lenders, relatives and friends as opposed to financial institutions such as banks. Though, several literatures exist on the relationship between agricultural financing and agricultural output in Nigeria. However, literatures on Kogi State pertaining the issue under discourse are scarcity. Though, findings of the previous work produced an inconclusive and mixed result. With these divergent views on agricultural financing and farming output in the state, it thus informed this empirical to investigate the impact of agricultural financing policies and output in Kogi state.

### **Statement of the Problem**

Agriculture is the mainstay of the Nigerian economy (Salami & Arawomo, 2013). This explains why successive governments in Nigeria pay attention to the sector through the development of programmes that can assist in financing the sector such as Agricultural Development Projects (ADP), Anchor Borrowers Programme (ABP), Agricultural Transformation Agenda (ATA), Rice Farmers Association of Nigeria (RIFAN), Agricultural Product and Productivity Enhancement and Livelihood Support (APPEALS) among others whose sources of financing comes from government budget, ACGSF, BOA, ADB among others. The government is deliberately spending huge sums of money on the sector to improve the output. Precisely in Kogi State, the government is giving priority to the agricultural sector by giving out loans and grants to promote agricultural activities. A good example of the Kogi State government's financial contributions towards the agricultural sector in the state was in 2015/2016 when the Wada administration provided funds to boost rice production in the State. There have been other deliberate interventions in the agricultural sector in the State such as Agricultural Development Projects (ADP), Anchor Borrowers Programme, Rice Farmers Association of Nigeria, Agricultural Transformation Agenda, Agricultural Product and Productivity Enhancement and Livelihood Support among others. According to Obilor (2013), Bank of Agriculture has been mandated to providing loans to the farmers in the state. To encourage banks, the Central Bank of Nigeria established the Agricultural Credit Guarantee Scheme Funds (ACGSF) at each branch to provide guarantees against inherent risk in agricultural lending. Despite these, farmers in Kogi state complained of the gross failure of

these agricultural financing policies towards achieving sustainable farming output in the state, consequent of the bottle neck associated with implementation of the policies. It is based on the premise of the forgoing, that the paper investigated the impact of agricultural financing on farming output in Kogi state. With specific objectives as: to evaluate the impact of Agricultural credit guarantee scheme funds (ACGSF) on agricultural output in Kogi state, assess the impact of commercial banks' credit to agriculture on agricultural output in Kogi State, examine the causal relationship between government expenditure on agriculture and farming output in Kogi State.

## **Theoretical Framework**

### **The Balance Sheet Credit Channel Theory**

The founders of the balance sheet credit channel theory are Bernanke and Gertler (1989). The balance sheet credit channel theory is a specific version of the credit channel theory that emphasizes the role of balance sheet effects on the behaviour of farmers and households in response to changes in credit conditions. According to this theory, changes in credit conditions can have a significant impact on the balance sheets of farmers and households, which can affect their investment on input decisions.

According to this theory, when the balance sheets are strong, they may be more willing to extend credit, leading to an expansion in credit supply to the farmers and a stimulation of economic activity.

In addition, this theory stressed that external finance premium facing a borrower depends on borrower's net worth and overall term of credit. The theory further stated that the quality of borrower's balance sheet similarly affects their investment and spending decisions. The balances that are channel arose due to shift from central bank's policy not only affect interest rate but also the financial position of the farmers.

### **The Bank Lending Channel Theory**

The bank lending channel theory is a macroeconomic theory propounded by Berger and Udell (1995) that explains how changes in a central bank's monetary policy can affect the lending behaviour of commercial banks and ultimately impact on the broader economy. According to this theory, when a central bank reduces interest rates, commercial banks can borrow money from the central bank at a lower rate and, in turn, reduce the interest rates they charge on loans to their customers. This can stimulate borrowing and investment by farmers, leading to an increase in agricultural activities and output. The bank lending channel theory emphasizes the importance of the relationship between central banks and commercial banks in the transmission of monetary policy to the broader economy.

## **Empirical Literature**

Isaac, Hong and Qibing (2022) studied agricultural development in Ghana and identified challenges of modern agricultural development in Ghana. Data from the field were collected from the primary and secondary sources. It was identified that the several Rural Banks disburses the entire loan earmark for particular year to the farmers. However, the banks satisfy only 83.3 percent and 63.4 percent of the applicants in 2015 and 2016 financial years respectively. However, the farmers' complaint of late receipts of the loan and lack of storage facilities compelled them to sell the produce at uneconomic prices which led to low income, low investment and low savings. It was recommended that the rural banks should take into account the advantages of providing credit

in kind for purchased inputs. This credit must be timely as it will prevent the farmers from diversion and loss.

Etian and Chiedza (2022) studied the effects of government expenditure on agriculture and agricultural production in South Africa 1983 to 2019. Their study employed Johansen cointegration test and their results reveal that there is a long-run relationship among the variables. The Granger causality tests results suggest that government expenditure in agriculture does not Granger cause the value of agricultural production. However, the two variables are linked through other variables in the model, such that an increase in government expenditure in agriculture, average annual rainfall, and population were shown to ultimately increase the value of agricultural production based on vector autoregressive (VAR) model analysis. Their study recommended that policy should be put in place which will encourage increase in government expenditure in agriculture.

Florence and Nathan (2020) examined the effects of banks' loan on agricultural output in Uganda. They used time series data from 2008 - 2018. To analyze the data, Autoregressive Distributed Lag technique (ARDL) was used. Their findings revealed that banks' loan is positively significant on agricultural productivity only in the long-run but insignificant in the short-run.

Islam (2020) assessed the impact of agricultural credits on agricultural output in Bangladesh. Secondary data on agricultural credit and agricultural productivity within the period of 19 years (2000-2019) was used. ARDL was used to analyze the data. His result revealed that agricultural credit has a positive significant impact on agricultural output in both longrun and shortrun.

Anh, Gan and Anh (2020) investigated the impacts of agricultural credits on agricultural productivity in Vietnam starting from 2004 to 2016. ARDL bounds test and Toda Yamamoto Granger causality test. Their findings revealed that agricultural output is significantly and positively influenced by agricultural credit in both short-run and long-run. And unidirectional causality exists between agricultural credit and agricultural output.

Ngong, Thaddeus and Onwumere (2020) assessed the performance of banking sector on agricultural output in Central African Economic and Monetary Community (CEMAC). Time series data from 1990-2018 was analyzed with PARDL. Their results showed that long-run relationship exist between bank and agricultural output. And two-direction causality exists between bank and agricultural output in the CEMAC region.

Bahsi and Cetin (2020) examined the impact of agricultural credit on agricultural productivity in Turkey with time series data from 1998-2016 using the Ordinary Least Squares (OLS) technique. Their findings revealed that agricultural credit has a positive significant impact on agricultural output.

Auwal, Egwaikhide and Alexander (2020) analyzed the economic impact of government agricultural expenditure on agricultural output in Nigeria from (1981-2018). Time series data was used and sourced from World Bank and Central Bank of Nigeria. The variables used in the model were agricultural output as the dependent variable, government expenditure on agriculture, gross capital formation, domestic savings, credit from commercial bank to agricultural sector and labour force participation as independent variables. The study used ARDL and found that there is long run relationship among the dependent and independent variables. Also, findings reveals that all the explanatory variables have no significant impact on agricultural output in the short-run, while in the long-run, all the explanatory variables except for domestic savings had significant positive

impact on agricultural output. Based on their findings, they concluded that government agricultural expenditure significantly promotes agricultural output in Nigeria. They therefore, suggested that policy makers and regulatory authorities should create an enabling environment geared towards mobilizing domestic savings from small scale famers, encourage and strengthen credit schemes to famers, encourage labour force participation rate in the sector in order to enhance agricultural output and productivity in Nigeria.

Okafor and Chukwuemeka (2020) examined the effect of commercial bank credits on agricultural development in Nigeria. Secondary data was used and sourced from the Central Bank of Nigeria statistical bulletin. Ordinary Least Square method was used to analyze the data. Their study shows that credit to agricultural sector, government spending on agricultural sector and agricultural credit guarantee scheme fund has positive and significant effects on agricultural output while interest rate has negative and insignificant effect on agricultural output. Therefore, their study concluded that commercial bank credit has positive effect on agricultural output in Nigeria and has increased agricultural production in Nigeria within the period under review. They recommended that government should strengthen the agricultural credit guarantee scheme by meaningful budgetary allocation in order to enhance its capital base significantly. The Agricultural Credit Guarantee Scheme (ACGS) should improve on their conditions for credit guarantee in order to make agricultural financing attractive to commercial banks.

Osabohien, Mordi and Ogundipe (2020) examined access to credit and agricultural productivity in Nigeria. Secondary data was sourced from CBN statistical bulletin. Data from 1998-2018 was analyzed using ARDL Model. Their findings revealed that both ACGSF and commercial banks' credit to agriculture have impacted positively and significantly on agricultural productivity both in short-run and long-run.

Osabohien, Adeleye and Alwis (2020) assessed the effect of agro-financing on food production in Nigeria from 1981 to 2018 using Johansen and Canonical cointegration approaches. The findings showed significant positive effect of agro-financing (proxy with ACGSF) on food production.

At the household level, Fowowe (2020) examined the effect of financial inclusion on agricultural productivity in Nigeria with Generalized Household Survey (GHS) panel data set using fixed effects estimation. The findings showed that financial inclusion (ownership and usage of account, borrowing and saving) has significant positive effect on household agricultural productivity.

In a similar study, Osabohien et al (2020) examined the effect of household credit access on agricultural production in Nigeria with cross-sectional data using propensity score matching (PSM) technique. The results showed that households with access to credit have relatively better yields than households with no credit access.

In another dimension, Orji, Ogbuabor, Anthony-Orji and Alisigwe (2020) examined causality between agricultural financing and agricultural output in Nigeria using Pairwise Granger causality test. The findings showed no causal linkage between agricultural financing and agricultural output within the period under review.

Reuben, Nyam and Rukwe (2020) assessed the impact of ACGSF on agricultural output in Nigeria from 1998 to 2017 using OLS technique. The results showed that ACGSF has significant positive effect on agricultural output.

Eyo, Nwaogu and Agenson (2020) analyzed the effect of agricultural credit guarantee scheme (ACGSF) on agricultural output in Nigeria using OLS technique. The findings showed significant positive impact of ACGSF on agricultural output.

Dare (2020) investigated the impact of international foreign aids on agriculture in kabba/bunu LGA. His study uses secondary data ranging from 2000-2018 and employs a Generalized Method of Moments (GMM) framework. The study revealed that the average sectoral aid allocation to agriculture was 7% during this period, growing from 18 million USD in 2000 to about 47 million USD in 2018. The econometric analysis found out that foreign agricultural aid has a positive and significant impact on agricultural GDP and agricultural productivity at 10% significance, and that disaster and conflict also have a positive and significant impact on aid receipt at 5% significance. This latter finding implies that foreign agricultural aid responds to disaster and conflicts in this region. The study also reveals that bilateral foreign agricultural aid influences agricultural productivity more than multilateral foreign agricultural aid and that multilateral foreign agricultural aid influences agricultural GDP more than bilateral foreign agricultural aid. He recommended that scaling up foreign agricultural aid will increase its impact on agricultural productivity and its contribution to the economy. Finally, a sound synergy must be worked out between foreign agricultural aid and domestic agricultural expenditure to support these critical aspects of agriculture in the region.

Arasomwan (2019) dug into the problems and prospect of financing Agriculture in rural Nigeria. It noted that lack of finance is at the root of suboptimal performance of agriculture sector in Nigeria. The author opines that an increase in agricultural financing in the area of investment in farm mechanization, education, processing facilities, infrastructure such as road networks, power supply and agricultural extension will lead to an agricultural revolution and rapid economic development of the rural areas.

Vihi, Ngu-uma, Sadiku and Adedire (2018) assessed the determinants of access to credit for agricultural production among farmers in Bassa Local Government Area, Plateau State Nigeria. Multistage sampling procedure was used to select 120 farmers from six out of the nine districts in the Local Government Area for the study. Primary data were collected through the use of questionnaires and interview schedule and were subjected to both descriptive and inferential statistics. Findings from the study revealed the mean of 11 years farming experience. Their result also shows a mean annual income of N123375 among the respondents. 87.5% of the respondents were not aware of credit sources in their locality however 71.7% of those who accessed credit said the amount received was not sufficient for any meaningful investment in agriculture. The multiple regression result showed that coefficient of marital status (-0.581) was negative, educational level (-0.426) was also negative and significant at 5% level of probability while credit awareness (1.552) was positive significant at 1% level of probability. Their findings also pointed out some of the major constraints to farmers' access to credit namely; high interest rate on loan, short repayment period with both having 21% each and lack of awareness (18%). They recommended that agricultural extension agents and other relevant agencies should intensify effort in educating farmers on the sources of credit facilities available to them. Interest rate charged on credit facilities should be reduced and finally complicated application procedures of financial institutions should be modified.

Oparinde, Amos and Adeselu (2017) assessed the effect of ACGSF on fishery development in Nigeria from 1981 to 2015 using ARDL model. The results showed that the value of fishery loans guaranteed has significant negative effects on fishery development in both short- and long-run.

**Methodology**

**Model Specification**

**Error Correction Mechanism**

To investigate the impact and the relationship among the variables AGOP, ACGSF, CMB and GXP, an Error Correction Model (ECM) to establish the short run impact and speed of equilibrium restoration was specified as:

$$AGOP_t = \beta_0 + \beta_1 ACGSF_t + \beta_2 CMB_t + \beta_3 GXP_t + \mu t + ECM_{t-1}. \tag{1}$$

Where *ECM* represents the error correction term and *t*-1 shows that the variables will be lagged by one period.

Accordingly, the econometric form of the model was specified as:

$$AGOP = \beta_0 + \sum_{t=1}^{k-1} \beta_1 \Delta ACGSF_t + \sum_{t=1}^{k-1} \beta_2 \Delta CBCA_t + \sum_{t=1}^{k-1} \beta_3 \Delta GXP_t + \lambda ECT + \mu \tag{2}$$

A priori expectations are;  $\beta_1, \beta_2,$  and  $\beta_3 > 0$

**Unit Root Test**

**Table 1. Augmented Dickey Fuller (ADF) Unit Root Test Results at First difference**

VARIABLES	t-Statistic	Critical Values	Prob	I(d)	Order of stationarity
<b>AGOP</b>	-6.9034 **	-2.956766	0.0000	I(1)	Stationary
<b>ACGSF</b>	-6.820853**	-2.967767	0.0000	I(1)	Stationary
<b>CBCA</b>	5.954372**	-2.991878	0.9945	I(1)	Stationary
<b>GEXA</b>	-13.22273**	-2.986225	0.0000	I(1)	Stationary

Source: Author's computation, 2023 using E-view 10.

To test for the variables' order of stationarity, Unit Root test was carried out using Augmented Dickey Fuller (ADF). The result of the unit root test in the above table shows that all the variables attained stationarity at first difference. This is indicated with the absolute values of t-statistic greater than the critical values at 5% levels of significance.

**JOHANSEN CO-INTEGRATION TEST**

**Table 2a Unrestricted Co integration Rank Test (Trace)**

Hypothesized No. of CE(s)	Eigen value	Trace Statistic	5% critical Value	Prob.**
None *	0.998993	193.7632	47.85613	0.0000
At most 1	0.360888	21.23561	29.79707	0.3431
At most 2	0.313175	10.04372	15.49471	0.2774
At most 3	0.025735	0.651810	3.841466	0.4195

Source: Author's computation 2023. Using E-views 10.

**Table 2b. Unrestricted Co-integration Rank Test (Maximum Eigen-value)**

Hypothesized No. of CE(s)	Eigen-value	Max-Eigen Statistic	5% critical Value	Prob.**
None *	0.998993	172.5276	27.58434	0.0001
At most 1	0.360888	11.19190	21.13162	0.6281
At most 2	0.313175	9.391905	14.26460	0.2550
At most 3	0.025735	0.651810	3.841466	0.4195

Source: Author's computation 2023. Using E-views 10.

To find out whether long run equilibrium relationship exists among the variables, Johansen cointegration test of Trace and Maximum Eigen value test was carried out. The result indicates

that the null hypothesis of no co-integration among the variables was rejected at 5% level of significance.

**Table 3. Normalized co-integrating Coefficients Equation.**

I co-integrating Equation:	Log likelihood	-1612.924	
	ACGSF	CBCA	GEXA
AGOP	-0.005902	1.17783	-3.40048
1.000000	(0.00292)	(0.08112)	(0.00568)

Source: Author's computation, 2023 using E-view 10.

Evidence from Table 4 indicated that there existed a long run co-integration in the model. The estimated long-run model revealed that inverse relationship exist between commercial bank credit to Agricultural sector and Agricultural Output while direct relationship exist among the Agricultural Credit Guarantee fund, Government Expenditure on Agricultural sector and Agricultural Output respectively.

This can be represented in the model below;

$$AGOP = (-0.005902ACGSF)_t + (1.17783CBCA)_t + (-3.40048GEXA)_t + U_t + ECT.$$

**Error Correction Results**

**Table 4. Error Correction Model Result Table**

Variables	Coefficient	Std. Error	t-statistic	Prob.
C	-1788855.	2544586.	-0.703004	0.4894
$\Delta(CBCA)$	3.581176	2.420216	1.479693	0.1531
$\Delta(ACGF)$	-471.2222	5427.719	-0.086818	0.9316
$\Delta(GEXA)$	3.155911	0.060679	52.00954	0.0000
ECT(-1)	-0.050428	0.054440	-0.4126304	0.0343

Source: Author's computation, 2023 using E-view 10.

In order to ascertain whether the model returns to short run equilibrium, the ECM model was specified as  $\Delta(AGOP) = \beta_0 + \beta_1\Delta(ACGSF)_t + \beta_2\Delta(CBCA)_t + \beta_3\Delta(GEXA)_t + U_t + ECT.$

Evidence from the error correction model depicted that the model was correctly signed and statistically significant thereby validated the presence of long-run relationship in the model and that 5% of the short run inconsistencies are corrected and incorporated into the long-run dynamics annually because the coefficient of ECM is negative (-0.05) as shown in the table 5 above. Furthermore, it was indicated that  $\Delta(CBCA)$  and  $\Delta(GEXA)$  were positive, the  $\Delta(CBCA)$  was not significant while the  $\Delta(GEXA)$  was significant at 5% respectively. The commercial bank credit to Agricultural sector (CBCA) indicated that a percent change in CBCA increased Agricultural output by 35.8%. Also, Government Expenditure on Agriculture (GEXA) showed significant positive impact on Agricultural output which implied 31.6% increase in Government Expenditure on Agriculture (GEXA) will lead to increase in Agricultural output. Contrary, Agricultural Credit Guarantee Fund has significant negative impact on the Agricultural output by 471% decrease. The R-square value of 0.999921 shows that about 99% of changes in Agricultural output can be explained by commercial bank credit to Agricultural sector, Agricultural guarantee credit fund and Government Expenditure on Agricultural sector. In addition, F-statistics (69815.91) shows that the overall model is statistically significant at (p-value  $0.000000 < 0.05$ ).



## Post Estimation Results

### Ramsey test for stability

From the table below, Ramsey instrument for stability test was used to determine the stability of the variables. However, using the result below the study therefore accepts the alternative hypothesis and concluded that the variables were stable.

**Table 5: Ramsey test for stability Result**

	Value	Df	Probability
t-statistic	0.160620	24	0.8737
F-statistic	0.025799	(1, 24)	0.8737
Likelihood ratio	0.031157	1	0.8599

Source: author's computation, 2023. Using e-view 10.

### Serial Autocorrelation

To carry out serial autocorrelation test, the serial autocorrelation LM technique was used. The result of the test below shows that there is no Autocorrelation because the probability values of F-statistic was less than 0.05.

**Table 6: Serial Autocorrelation Result**

F-statistic	4.748649	Prob. F(2,23)	0.0188
Obs*R-squared	8.475217	Prob. Chi-Square(2)	0.0144

Source: Author's computation, 2023. Using E-view 10.

### Result of the Findings

The result of the ECM revealed that government expenditure on agricultural sector has positive and significant impact on agricultural output. This implies that government financing of agricultural sector enhances agricultural output thereby contributing to the GDP of the state. The result conformed to the empirical findings of Etian and Chiedza (2022), who found direct relationship between government expenditure on agriculture and agricultural output.

Also, the result of the ECM also revealed that ACGSF has negative and insignificant impact on agricultural output. This implies that in the short –run the ACGSF did not provide financial institution result in the improvement of agricultural output. This may be as a result of late implementation, wrong targeting, fund diversion among others. This finding is in line with the findings of Oparinde, Amos and Adeduka (2017) who found that ACGSF have negative effect on fishery development and performed poorly in explaining agricultural output.

Furthermore, the ECM result revealed that Commercial Banks' Credit on Agriculture has direct relationship with the agricultural output in the study area. This implies that the financing of agricultural sector by Commercial Banks through the provision of loans and advances have improved agricultural output in the study area. This result is in consonant with the finding of Okafor & Chukwuemeka (2020) who indicated that there was positive relationship between CBCA and real agricultural GDP.

Finally, since the 99% of the total behaviour of the dependent variable (AGOP) is been explained by the explanatory variables (GEXA, ACGSF and CBCA), the study then concluded that agricultural financing has significant impact on agricultural output in the study area.

This paper aimed at investigating the impact of agricultural financing on agricultural output in Kogi State. The specific objectives of the study were to; evaluate the impact of Agricultural credit

guarantee scheme funds (ACGSF) on agricultural output; assess the impact of commercial banks' credit to agriculture on agricultural output and; examine the causal relationship between government expenditure on agriculture and agricultural output in Kogi State respectively. The data was analyzed with econometric techniques involving unit roots, Johansson cointegration test and ECM were estimated also some post estimation tests were carried out. The formulated hypotheses were tested and the results of the findings were discussed and conclusion was drawn.

Emanating from the findings of this study, a negative and insignificant relationship between ACGSF and agricultural output was revealed while commercial banks' credits on agriculture and government expenditure on agriculture have positive and significant relationship with the agricultural output.

Finally, since the 99% of the total behaviour of the dependent variable is been explained by the explanatory variables, the study then concluded that agricultural financing has significant impact on agricultural output in the study area.

### Recommendations

Based on the findings, the following recommendations were made.

- i. Credit should be timely granted and ease accessibility to farmers who are ready and willing to embark on farming to enhance agricultural output.
- ii. Increase funding to the agricultural sector to meet WHO 10% minimum budget allocated to the sector.
- iii. Government should encourage the financial institutions to allocate sizeable proportion of their total credit facility to farmers to enhance agricultural output.

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