

# The Impact of Agricultural Credit Guarantee Scheme Fund on Agricultural Sector Development in Nigeria

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## Abstract

*The study portrayed the impact of Agricultural credit Guarantee scheme fund (ACGSF) on Agricultural Sector Development in Nigeria. Specific objectives were to ascertain the relationship between the ACGSF and the output of the crop sector in Nigeria, to examine the relationship between ACGSF and the output of the livestock sector in Nigeria, and to determine the relationship between ACGSF and the output of the fishery sector in Nigeria measured by respective gross domestic product (GDP). Secondary data were sourced from Central Bank of Nigeria Publications and Statistical Bulletin. Multiple linear regression of ordinary least square (OLS) model was adopted to establish the relationship between dependent and independent variables. Findings revealed a positive and significant relationship between ACGSF and the agricultural sector development evaluated by the sustained rise in its contribution to GDP. The study also revealed that the scheme had given more funds and impacted more on the crop sector over the livestock and fishery sector. The study recommends among others that the scheme should be sustained and the government should invest more in Agricultural development, and measures should be put in place by the management of the scheme to reduce default in payment arising from borrowers.*

**Key Words:** Agricultural Credit Guarantee Scheme, Gross Domestic Product, Livestock, Fishery, Crop Production.

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## Introduction

Agriculture is seen as crucial to economic development through strengthened economic framework, creation of employment, enhancement of farmers' living standard, provision of raw materials to manufacturers, revenue vehicle for government and contribution to gross domestic production of the country (Adegoye and Ditta, 1985; Anyanwu, 1997; Anyanwu, Oyefusi, Oaikhenan and Dimowo, 1997). Since agriculture is capital intensive, credit to agricultural sector is pivotal in adoption of new improve method of farming, and in transition from subsistence level to commercial and highly mechanized agriculture (Olomola, 2007). In Nigeria, 33 per cent of land area which represents 30.7 million hectares (76 million acres) is utilized for cultivation of agricultural products, and this accounts for employment of over 70 % of the labour force in the sector. The agricultural sector reported second highest contribution of 24.18 per cent to Nigeria's GDP in 2015 following oil and gas sector that accounts for the highest contribution to the GDP. Table 1.1 captures the trend of agriculture's contribution to Nigerian GDP measured at Current Basic Prices (=N=Million) 2016 and first quarter of 2017.

Table 1.1

Agriculture	GDP (=N=Million) 2016					2017
	Ist Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total	Ist Qtr
1. Crop	3,583,980.7	4,017,083.56	5,801,028.13	5,480,989.64	18,883,081.50	3,969,515.26
2. Livestock	464,969.11	437,827.87	433,401.39	539,584.99	1,875,783.36	487,870.92
3. Forestry	53,486.95	59,790.68	54,677.39	68,299.96	236,254.98	58,244.18
4. Fishing	165,454.83	115,157.00	109,355.82	138,425.01	528,392.66	170,591.17

The Agricultural credit guarantee scheme fund (ACGSF) is one of the multifarious schemes initiated by the Federal Government of Nigeria to finance agriculture through provision of incentives for deposit money banks (DMBs) to extend credit facilities to Nigerian farmers. This scheme founded by decree no 20 of 1977 and inaugurated its operations in April 1978 with initial 100 million naira share capital was subscribed by the Central Bank of Nigeria and the federal government of Nigeria (40 per cent and 60 per cent respectively). This capitalization was subsequently shored up to N1 billion in 1999, and further up to N 6 billion in 2006 (CBN, 2007), which is the present amount of fund available for the purpose of guarantee. Under the scheme, the gross credit extension to Nigerian farmers is guaranteed up to 75% of realisable net default value.

### Problem of the Study

The scheme resulted from the need to upscale the traditional and subsistence method of farming practices engaged by farmers in Nigeria since farmers required huge capital to purchase agricultural equipment and input. Again, the limited access to credit also contributed to retarded growth and efficiency of the sector, and the poor adaptation to modern agricultural techniques. (IFPRI, 2004; Paarlberg, 2002; Olukunle, 2013). All this have evidently limited this sector in contributing to the growth and development of the Nigerian economy, and hence the need to finance agricultural activities to eliminate these hindrances. Feder, Just, and Zilberman. (1985) believed that enough credit is needed to strengthen the use of capital intensive technology in agriculture which is more cost effective. According to them, access to credit may result in an increased utilization of improved seedlings and other agricultural inputs which will in turn translate to higher yield. Aliyu (2012) reported also that credit extension are arranged both formal and unconventional financial institutions. He observe that the unconventional providers of credit had extended more credit facilities as a result of poor source funding, and most participants are unable to meet credit covenants and conditions precedent required by formal institutions notably that of collateral for loans. This is a basic requirement for credit transaction with conventional financial institutions leaving the farmers with practically only the choice of getting credit from the informal institutions with unfavourable terms of credit and right conditions.

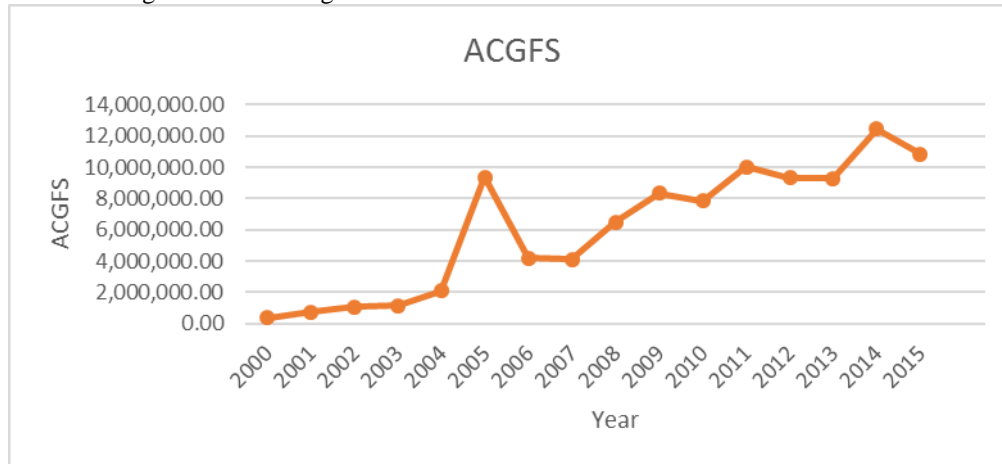
To mitigate the above constrain of sourcing credit, the federal government brought about this scheme with the major objective of increasing formal credit to the agricultural sector through granting of undertaking in respect of bank providing credit for agricultural purposes as listed in the guard line of the scheme. It is against this background that we seek to study the impact of the funding guaranteed by the scheme on the agricultural development in Nigeria.

### Conceptual Framework

By boosting formal credit to the agricultural sector the federal government has the interest to boost agricultural productivity, generate revenue for the farmers, alleviate poverty and earn foreign exchange for the economy. It aims at ensuring food security, rural transformation and improves the nutritional health profile of the citizens. According to Okon and Nkeng (2009), the ACGSF is established on a guidelines or

undertaking framework designed to forestall the hesitant shown by conventional financial institutions in extension of credit to farmers. Through credit guarantee, prospective borrowers who are credit worthy with viable agricultural projects but with insufficient assets to pledge as collateral will have access to required capital needed for growth and expansion.

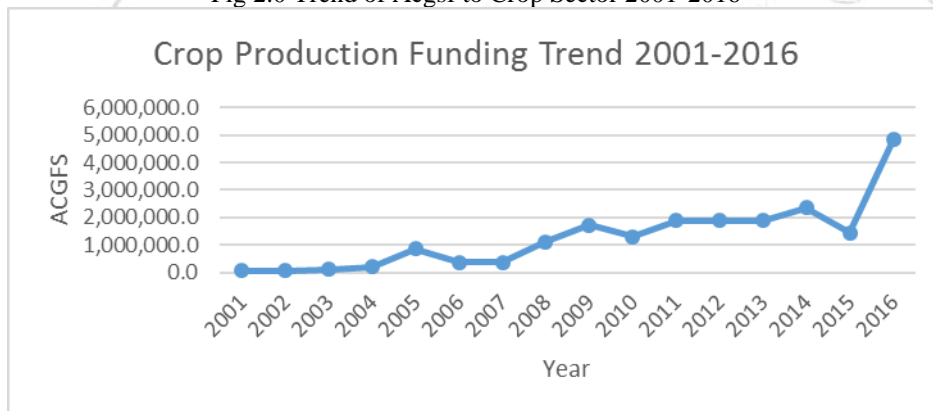
Fig 1.0 Trend of Agricultural Credit Guarantee Scheme Fund 2000 -2015



Source: Researcher Compilation from CBN Statistical Bulletin 2015

Figure 1.0 above shows the trend of total agricultural funding from the ACGSF. There has been a steady and sustained rise in Agricultural financing under the scheme. In 2012, there was a drop in the fund from ₦10,028,988.81 of 2011 to ₦9,332,484, and a further drop to ₦9,256,676.8 in 2013. However, the fund witnessed an increase of 34.5 percent in 2014 to ₦12,456,250.87 , ₦10,857,380.83 in 2015 and ₦4,839,800 in 2016. This clearly shows that from inflation adjusted figure, the flow of credit to agriculture from the scheme has been increasing but in an unstable trend. All figures are in millions and inflation adjusted.

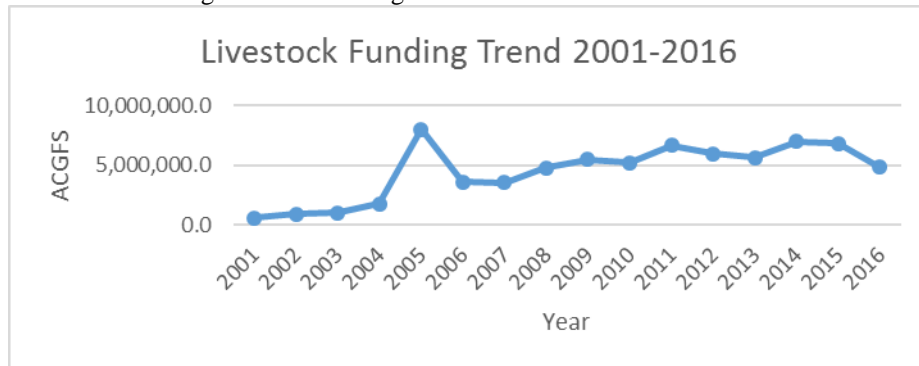
Fig 2.0 Trend of Acgfs to Crop Sector 2001-2016



Source: Researcher Compilation from CBN Statistical Bulletin and Database 2015- 2016

Figure 2.0 above shows the trend of agricultural credit from the scheme to the crop sector. It is observed that there had been a steady rise in credit from 2001 to 2005, ₦60,415.7, ₦ 64,449.6, ₦100,486.4 , ₦ 190,304.0 and ₦844,882.8 respectively. However in 2006, the funding to crop production has a shortfall which further went down from ₦ 368,151.0 to ₦ 353,487.3 in 2007. This position was strengthened from 2008 until the funding peaked at ₦4,839,800.

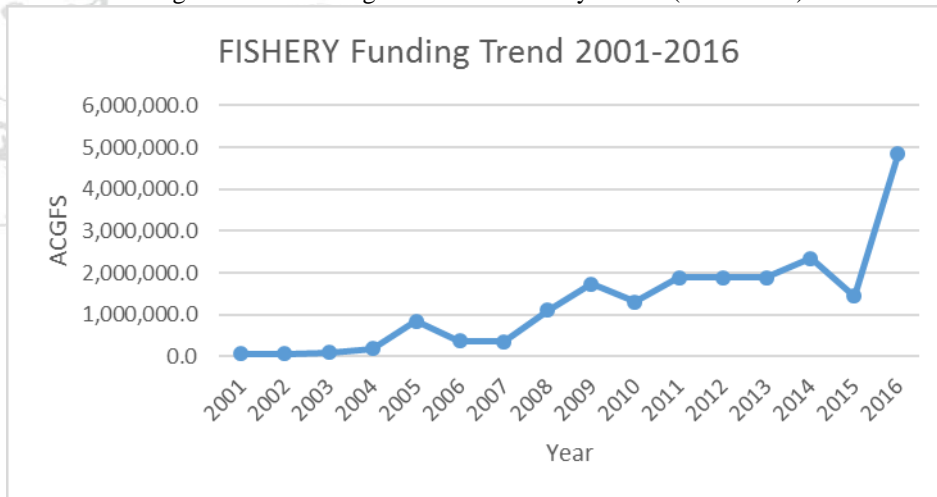
Fig 2.1 Trend of Acgsf to Livestock Sector 2001-2016



Source: Researcher compilation from CBN Statistical Bulletin and Database 2015-2016

Figure 2.1 above depicts the trend of agricultural credit from the scheme to the livestock sector. It reveals that funding under the scheme channelled to livestock grew steadily within the time of study. From ₦605,525.70 in 2001 to ₦8,039,640.10 in 2005 show steady increase in funding. The period of 2006 and 2007 was poorly structured under the scheme for all sectors including livestock that received ₦3,636,053.70 and ₦3,533,429.70 respectively. This position changed from 2008 until the funding peaked at ₦4,869,000 in 2016.

Fig 2.2 Trend of Acgsf Loans To Fishery Sector (2001-2016)



Source: Researcher compilation from CBN Statistical Bulletin and Database 2015-2016

Figure 2.2 above shows the trend of Agricultural Credit Guarantee Scheme funding to the fishery sector from 2001-2016. It is observed that they have not been any appreciable increase in the fund to this sector from 2000-2013 compared to other agricultural sectors. Focus generally was beamed in 2014, 2015 and 2016 with a total credit guaranteed increased to ₦1,810,000.00 in 2016.

**Objectives of the Study**

Following from the aforementioned problem, the objective of this study is to examine the impact of the ACGSF in the development of Nigeria agricultural sector which is evident by it contribution to GDP. The specific objectives are;

1. To ascertain the impact of ACGSF on the output of the crop production in Nigeria
2. To examine the impact of ACGSF on the output of the livestock sector in Nigeria
3. To determine the relationship between ACGSF and the fishery sector output in Nigeria.

### Hypotheses of the Study

The following hypotheses would be tested in the course of this study and their results properly analysed.

H<sub>0</sub>1: ACGSF does not significantly influence the Crop production in Nigeria measured by the GDP

H<sub>0</sub>2: ACGSF has no relationship with Livestock production in Nigeria measured by the GDP

H<sub>0</sub>3: ACGSF does not influence the output of the Fishery sector in Nigeria measured by its GDP

### Theoretical Review

Structural change theory formulated by Nobel laureate W. Arthur Lewis in the mid 1950s which was later modified, formulated and extended emphasized on the mechanism by which developing economies can transform their domestic structure from a heavy dependence on traditional subsistence agricultural to a more modern and advanced agricultural practices through sufficient financial support. An extended version of this theory added that the fall of agricultural development cannot be realized unless government builds a supporting system which creates and provides the necessary incentives, opportunities and most importantly productivity in the agricultural sector.

Chamber and Conway (1991) extended the sustainable livestock theory for capabilities, including capital and other social resources as well as other farming practices required for a means of living. The theory holds that increase output can only be achieved by ensuring secured ownership of, or access to capital resources and income earning activities which includes; reserves and assets to offset risk, ease stocks and meet contingencies as well as enhancement and maintenance of productive resources on a long term basis. Therefore, increase agricultural output (food security) is not just food affordability but the ability to produce food and earn income on a long term basis by farmers.

Wiggins (2006) propounded the Agricultural based economic development theory stressed that Agriculture requires a technical, institutional and financial incentive change that will raise the productivity of small farmers. The theory further explains that in the strive for economic development; agricultural financial scheme can play a dual role of increased purchasing power and provision of input to sustain the industrial revolution.

### Empirical Reviews

Trzeciak (2003) reveals that agriculture like any other sector of the economy needs credit for increase output and development. He suggested that through government channelling of funds to the agricultural sector by its policy, agriculture could be more profitable. Radoiphe (2005) linked the loan commitment theorist and credit rationing theory using asymmetric information between lenders and borrowers under costly terms of lending arrangement and came to the conclusion that banks favour borrowers with well known productive function and long term credit history and that interest may be high if significant market imperfection prevails.

While Rahji and Fakayode (2009) held that agriculture play a compelling role in the nation's development that is remarkable being a dominant contributor to Nigeria's gross domestic product. They acknowledged that the performance of small and medium scale farmers maintained significant part of this contribution to GDP. Hazell (2003) held that agricultural loanable funds play a fundamental role in determining access to the needed inputs that facilitates farming and other extensive agricultural practices which ultimately



transfers into increased output. Aliyu (2012) established that formal credit extended to farmers in Nigeria, positively and significantly influenced the capacity of the crop, livestock and fishery generated by the sectors, and suggested that the Nigerian government should consistently inspire and strengthen conventional extension of credit to reach as more farmers as possible.

Nwosu, Oguoma, Ben and Henri (2010) recommended that government should ensure that banks' claims arising from delinquency and obligor's interest drawn back are liquidated without setbacks, as this will inspire financial institutions and farmers involved the scheme, and will also appeal to the interest of others who are hesitant. He believes that the end result is the nation reaping the dividend of adequate credit into the agricultural sector and that is a sine qua non in agricultural development. Okojie, Monye, Eghafona, Osaghae and Ehiakhamen (2010) explains that the lack of banking participation and substantial collateral and little or no information as regarding the procedure for accessing credit fund is a stumbling block for small scale farmers and local women who need conventional loans and advances.

Ayegba and Ikani (2013) established again that "unregulated private money lenders", the unconventional financial system extends greater part of credit to agricultural sector and is unhealthy for Nigerian economy to grow. They also established that the concentration of banks in urban area has left rural farmers without formal source of credit, while according to Odoemenem and Obinne (2010), output of the sector is hindered by non-availability of funding in terms of loans and advances from organised financial institutions. Ojo (2005) believes that the organised financial sector has failed to meet the primary intermediation objective to which they were licensed.

Saheed (2014) further saw agriculture as the bedrock for the development of other sector and added that almost 90 percent of farmers in the local areas practice subsistence farming due to insufficient funding to operate, increase their capacity or even practice industrialised farming. Olajide, Akinlabi and Tijan (2012) in their finding believe that they is a positive cause and effect relationship between GDP and the output of agricultural sector in Nigeria, and Ijaiya, Abdul and Abdullahi (2009) held that more than 80 percent of Nigeria rural population is engage in one type of agriculture or the other between 1963 and 1964 and the agricultural sector had contributed to up to 65percent of the nation's GDP. He stressed further that the contribution of agriculture most especially food crop have been in the decline this he attributed to lack of agricultural credit.

Enenche *et al* (2014) observe that through various poverty alleviation programmers and agricultural development policies have been put in place but the twin problem of poverty and absence of food security is still lingering. He stressed further that even in the urban centers imported rice and other can food tends to dominate the market places despite our rich agro-ecological and other natural resources in abundance. Efobi and Osabuohien (2011) ascertain that aside crude oil production in Nigeria, Agricultural sector remains is the dominant source of export revenue to the economy. They opined that there exist a high employment opportunities in agriculture, and government in their crusade to diversify economy should evaluate the informal sector such as agriculture. UNDP (2007) establish that it is possible to generate very high returns on investment in agriculture and rural development in Africa. Oji-Okoro (2011) believe that agriculture resources have a remarkable impact in the Nigeria economy in the past decades and is still a dominant sector as it provides employment opportunity for the employable population, eradicate impoverishment and contribute to the GDP of the economy.

## Sources and Methods of Data Collection

The data for this study are basically from secondary sources because of the nature of the study which seeks to analyse events that has already occurred. Data that had been generated as required from the Central Bank of Nigeria (CBN) statistical bulletin 2015 and the CBN statistical database 2016. The time series data cover

36 years ranging from 1981-2016, and this scope is considered adequate to ascertain the impact of the guarantee scheme on agricultural development.

**Method of Data Analysis**

The method of data analysis is the ordinary least square (OLS) of multiple linear regression technique. The researcher made use of E-views and Microsoft excel software this technique was used to analyse the relationship between the variables in the research hypothesis and relevant answer that had been raised in the study answered.

**MODEL SPECIFICATION**

The econometric model for the research study as stated below will be used to test for possible relationship between the dependent variables and independent variables.

**Model 1:**

$$GDPCR\text{P} = f(\text{ACGcc}, \text{ACGmc}, \text{ACGfc}) \tag{1}$$

The model of eqn (1) in its explicit form can be expressed as:

$$GDPCR\text{P} = \beta_0 + \beta_1 \text{ACGcc} + \beta_2 \text{ACGmc} + \beta_3 \text{ACGfc} + u \tag{2}$$

Transforming the above function into a log –linear model we have

$$\text{Log}(GDPCR\text{P}) = \beta_0 + \beta_1 \text{log}(\text{ACGcc})_t + \beta_2 \text{log}(\text{ACGmc})_t + \beta_3 \text{log}(\text{ACGfc})_t + u \tag{3}$$

Where;  $\beta_0, \beta_1, \beta_2$  and  $\beta_3$  are coefficient of the constant, coefficients of Cash Crop, Mixed Crop, Food Crop. t represent the time trend analyzed by the study and  $u$  is provide for the error term . GDPCR $P$  = Gross domestic product of the crop production, ACGcc = Agriculture credit guarantee to the Cash Crop, ACGmc = Agriculture credit guarantee to the Mixed Crop and ACGfc = Agriculture credit guarantee to the Food Crop.

**Model 2**

$$GDPLSK = f(\text{ACGp}, \text{ACGc}, \text{ACGs}, \text{ACGo} ) \tag{4}$$

The model in its explicit form can be expressed as:

$$GDPLSK = \beta_0 + \beta_1 \text{ACGp} + \beta_2 \text{ACGc} + \beta_3 \text{ACGs} + \beta_4 \text{ACGo} + u \tag{5}$$

The log –linear transformation of the model gives us equation 6 below

$$\text{Log}(GDPLSK) = \beta_0 + \beta_1 \text{log}(\text{ACGp})_t + \beta_2 \text{log}(\text{ACGc})_t + \beta_3 \text{log}(\text{ACGs})_t + \beta_4 \text{log}(\text{ACGo})_t + u \tag{6}$$

Where;  $\beta_0, \beta_1, \beta_2, \beta_3$  and  $\beta_4$  are coefficient of the constant, coefficients of Poultry production, Cattle , Sheep/Goat, and other livestock. t represent the time trend analyzed by the study and  $u$  is provide for the error term. GDPLSK = Gross domestic product of Livestock sector, ACGp = Agricultural credit guarantee to the Poultry Farming, ACGc = Agricultural credit guarantee to the Cattle Rearing, ACGs = Agricultural credit guarantee to the Sheep Rearing, and ACGo = Agricultural credit guarantee to other Livestock production.

**Model 3**

$$GDPFSH = f(ACGFSH) \tag{7}$$

The model in its explicit form can be expressed as:

$$GDPFSH = \beta_0 + \beta_1 ACGFSH + u \tag{8}$$

Log-linear transformation of equation 8 results in equation 9 below.

$$\log(GDPFSH) = \beta_0 + \beta_1 \log(ACGFSH) + u \tag{9}$$

Where;  $\beta_0$  and  $\beta_2$  are coefficient of the constant, coefficients of Agricultural guarantee scheme support to fishery. GDPFSH = Gross domestic product for Fishery sector and ACGFSH = Agricultural credit to the fishery Sector

Note:  $\beta_0, \beta_1, \beta_2, \beta_3$  and  $\beta_4, \forall_{it}$  are the parameters to be estimated and U is the stochastic error term.

**Data and Empirical Results**

Data employed in the study consist of annual Agriculture Credit Guarantee Scheme Fund (ACGFS) extended to Crop production (ACGc), Fishery (ACGf) and Livestock production (ACGl) and the Gross Domestic Product attributed to the Nigerian economy from Crop production (GDPc), Fishery (GDPf) and Livestock production (GDPl) respectively from 1990-2016. These are available on the Central Bank of Nigeria Database and Statistical Bulletin 2015-2016.

Table-2.1 Test for Unit Root Analysis

Variable	ADF Level with constant only			ADF First Difference with constant only		ADF Second Difference with constant only	
	5% Test critical values	T. statistic	Prob.	T. statistic	Prob.	T. statistic	Prob.
<b>Test for Livestock</b>							
LACGS Cattle	-3791172	0.033855	0.9917	-4.800752	0.0100	-3.574735	0.0815
LACGS Sheep/Goat	-3.733200	-3.418385	0.0841	-5.502001	0.0028	-5.115924	0.0072
LACGS Poultry	-3.828975	-0.984259	0.9097	-0.244460	0.9817	-7.716162	0.0002
LACGS OLivestock	-3.733200	-1.306163	0.8480	-4.698871	0.0152	-3.959808	0.0483
LGDP Livestock	-3.791172	0.444518	0.9973	-6.68515	0.0006	-8.571905	0.0001
<b>Test for Fishery</b>							
LGDP Fishery	-3.733200	-3.494990	0.0743	-3.521380	0.0794	-5.848758	0.0032
LACGS Fishery	-3.733200	-3.264787	0.1075	-3.981636	0.0370	-4.218599	0.0339
<b>Test for Crop Production</b>							
LACGS Cash Crop	-3.733200	-3.865549	0.0400	-3.936402	0.0426	-6.368515	0.0016
LACGS Mixed Crop	-3.733200	-2.398335	0.3662	-4.359747	0.0202	-5.436287	0.0045
LACGS Food Crop	-3.733200	-1.897480	0.6092	-4.629605	0.0132	-3.841323	0.0527
LGDP Crop	-3.791172	-0.678473	0.9533	-4.168661	0.0255	-6.811510	0.0009



Table-2.2 Test for Cointegration

TRACE				Maximum Eigenvalue			
Hypothesized		Trace	0.05	Hypothesized		Max-Eigen	0.05
Number of CE(s)	Eigenvalue	Statistic	Critical Value	Number of CE(s)	Eigenvalue	Statistic	Critical Value
None *	0.999554	181.4581	60.06141	None *	0.999554	115.7338	30.43961
At most 1 *	0.842503	65.72423	40.17493	At most 1 *	0.842503	27.72521	24.15921
At most 2 *	0.796292	37.99903	24.27596	At most 2 *	0.796292	23.86602	17.79730
At most 3 *	0.597606	14.13301	12.32090	At most 3 *	0.597606	13.65486	11.22480
At most 4	0.031374	0.478143	4.129906	At most 4	0.031374	0.478143	4.129906
Trace test indicates 4 cointegrating eqn(s) at the 0.05 level							

Table 2.1 shows the result for Stationarity under the Augmented Dickey Fuller approach where most of the variables were stationary at levels and 1st difference. Few were stationary at 2<sup>nd</sup> difference hence the test for cointegration and the rule for cointegrated test is that there must be at least one cointegrating equation, and from the table 2.2, tarace test and Max-eigen value test indicates that there are 4 (four) cointegrating equations in the variables utilised in the study.

### Regression Result for Crop Sector

Dependent Variable: LGDP Crop Production

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	7.754622	1.378136	5.626891	0.0001
LMIXED	0.033902	0.017293	1.960514	0.0717
LFOOD	0.411224	0.127692	3.22043	0.0067
LCASH	0.142924	0.077734	1.838633	0.0889
R-squared	0.892469			
Adjusted R-squared	0.867654			
Sum squared resid	1.086051			
F-statistic	35.96507			
Prob(F-statistic)	0.000001			
Durbin-Watson stat	1.846703			

### EvIEWS computation.

$$GDPCR P = 7.754622 + 0.142942ACGcc + 0.033902ACGmc + 0.411224ACGfc + u$$

The results above shows that there is a positive relationship between the dependent variable (GDPCR P) and the independent variables (ACGCRP). The above shows that a unit change in loan guarantee to the Cash Crop production will result 14 per cent change in GDP for crop sector setting other variables at constant. It follows also that a unit change in loan guarantee to mixed crop will translated to 3.3 per cent change in the GDP for the Crop Sector, while the same will result in 41 percent change in the GDP of Crop Sector. The estimated model shows F- ratio of 35.96 implies that agricultural credit guarantee for the period of analysis has significant influence on output. The explanatory power of the regression model with an adjusted R<sup>2</sup> of 0.86 is commendable and means that 86 per cent of GDP for crop production in Nigeria within the period of the study is explained by the agricultural loan guarantee to the sector. The remaining 14 per cent is

explained by variables outside this model. From the results the standard errors for this model is statistically significant at 5%. The F-statistics will be used to test for statistical significant of the parameter.

**Regression Result for Livestock Sector**

**Dependent Variable: LGDP Livestock**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.719264	0.153905	4.673429	0.0001
LCATTLE	0.213769	0.132262	1.616257	0.1162
LOTHERS	-0.241992	0.163076	-1.483916	0.1479
LPOULTRY	0.460898	0.221557	2.080268	0.0459
LSHEEP	0.204742	0.036727	5.574771	0
R-squared	0.849262			
Adjusted R-squared	0.829812			
Durbin-Watson stat	1.23182			
F-statistic	43.66386			

$$GDPLSK = 0.719264 + 0.460898ACGp + 0.213769ACGc + 0.204742ACGs, -0.241992ACGo + u$$

The result of the regression shows that there is a positive relationship between the dependent variable (GDPLSK) and the independent variables, (ACGp, ACGc,ACGs) except for ACGo that exerts a negative influence on the dependent variable. A percentage change in loan guarantee to Poultry, Cattle, Sheep/Goat will influence up to 46 percent, 21.3 percent, and 20.4 percent change in GDP for livestock sector respectively. A percentage change in Agriculture Credit Guarantee Scheme to other livestock production in Nigeria will translate to 24.2 percent negative influence on the GDP of the livestock. The estimated model shows F- ratio is 43.66 with 5 per cent level of significance. This implies that agricultural credit guarantee for the period of analysis has significant influence on output of the livestock sector. The explanatory power of the regression model with an adjusted R<sup>2</sup> of 0.829 is commendable. This implies that 82.9 per cent of GDP for livestock is explained by the agricultural loan guarantee to the sector. The remaining 17 per cent is explained by variables outside this model.

**Regression Result for Fishery Sector**

**Dependent Variable: LGDP Fishery**

Variable	Coefficient	Standard Error	t-Statistic	Prob.
C	7.920606	0.468864	16.89317	0
LACSFSS	0.353805	0.039327	8.996567	0
R-squared	0.843649			
Adjusted R-squared	0.833226			
Durbin-Watson stat	1.050398			
F-statistic	80.93821			

**E-views computation**

$$GDPFSH = 7.920606 + 0.353805ACGFSH + u$$

The results of the regression show that there is a positive relationship between the dependent variable (GDPFSH) and the independent variable (ACGFSH). A unit change in loan guarantee to the Fishery sector will cause 35.4 per cent change in GDP for fishery sector. The estimated model shows F- ratio is 80.94 with 5 per cent level of significance. This implies that agricultural credit guarantee for the period of analysis has significant influence on output of the fishery sector. The explanatory power of the regression model with an adjusted  $R^2$  of 0.833 satisfactorily implies that 83 per cent of GDP for livestock is explained by the agricultural loan guarantee to the sector. The remaining 17per cent is explained by variables outside this model.

## Test of Hypothesis

### Decision Rule for test of hypotheses

The decision rule is to reject  $H_0$  (null hypothesis) if F-calculated is greater than F-tabulated, otherwise accept the  $H_0$ .

$H_{01}$ : Agricultural Credit Gurantee Scheme Fund (ACGSF) does not significantly influence the Crop production in Nigeria

### Results at 0.05 level of significance

From F-calculated for ACGCRP of 35.96 and F-tabulated of 5.75, we reject the null that ACGSF does not significantly influence crop production and concluded that Agriculture credit guarantee scheme fund has a significant influence on crop sector.

$H_{02}$ : ACGSF has no relationship with Livestock production in Nigeria measured by the GDP

### Results at 0.05 level of significance

With T-calculated for ACGLVK of 43.66 and T-tabulated of 5.75, and in line with our decision rule we accept the alternate hypothesis and conclude that ACGLVK has a significant influence on GDPLVK

$H_{03}$ : ACGSF does not influence the output of the Fishery sector in Nigeria measured by its GDP

### Results at 0.05 level of significance

With T-calculated for ACGFSH of 80.93 against T-tabulated of 5.75, and considering our decision rule we accept the alternative hypothesis and concluded that ACSFSH exert a significant influence on GDP of the fishery sector.

## Conclusion

Arising from the above finding, the study concludes that ACGSF has a positive impact on the crop, livestock and fishery sector. From the analysis carried on the data covering the period of study it is observe that there have been that there is increase in the trend of agricultural credit guarantee scheme to the various sub-sector of agriculture. ACGSF is considered to be a crucial factor in the development of Agriculture in Nigeria. The above findings is consistent with the conclusion of Rahji and Fakayode (2009) affirming the significance of agriculture in nation through its major contribution to Nigeria's gross domestic product. Hazell (2003) also supported the findings of this work when it was concluded that agricultural loan able funds has fundamental impact on the inputs that facilitates farming and other extensive agricultural practices and this ultimately transfers into increased output. Aliyu (2012) also concluded that proper credit

extension to agricultural sector positively and significantly influences the productivity of the crop, livestock and fishery sector in Nigeria.

## Recommendations

The following recommendations are put forward from the findings and conclusion above.

1. Government should invest more in Crop production and livestock in other to diversify the earnings of the economy and eliminate her dependency on other nations.
2. Participating banks should make credit available as at when due to qualify applicant under the scheme as late disbursement of loan to farmer could lead to diversion of loan for other purposes and lead to repayment problem.
3. The management of the fund should timely pay off default liability arising from the scheme to participating banks this will encourage them to give more loans to farmers under the scheme.
4. More funds should be granted to the cash crop sub-sector of crop farming as it is where our foreign earning comes from.
5. Government should increase publicity about the scheme and the participating banks should make more fund available to the fishery sector.
6. The scheme should be sustained as it is justifying its mandate

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