

Impact of Central Bank of Nigeria Development financing on the Growth of the Agricultural Sector of the Nigerian Economy

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Abstract

This study was to ascertain the effect of Central Bank of Nigeria Development banking through the Agricultural Credit Guarantee Scheme Fund (ACGSF) on the growth of agricultural sector of the Nigerian economy. The study employs the ex-post facto research design and data on credit to food crop, cash crop, livestock and food crop farming from 1981 to 2018. The data was sourced from the central bank money and credit statistics in the CBN website. The study used scatter plots and regression analysis in analyzing the data and testing necessary hypothesis. The results of the study reveal a positive relationship that exist between credit for cash crop farming and the growth of the agricultural sector. Similarly, a positive relationship was also found to exist between credits given for food crop farming and the growth of agricultural sector of the Nigerian economy. Credit to fish and livestock farming do not have significant effect on the growth of the agricultural sector of the economy. This means that even though, the overall credit to agricultural sector has significant effect on the growth of the sector, it is not all the aspect of the credit that contributed to such significant impact. This study therefore concludes that the credit granted to the various aspects of agricultural sector through the ACGSF is not yet yielding the desired effect as it is yet to show significant impact in some areas. It is therefore recommended that government should strengthen the mechanism and processes through which the credits are delivered and also broaden the scope and availability of such credits for maximum impact.

Keywords: Growth, development, finance, agriculture, credit, farming

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I. Introduction

One of the requirements for sustainable economic growth in any economy is development financing. It involves the supply of finance to various sectors of the economy in order to promote the growth in a holistic manner and for faster rate of growth and development. The Central Bank of Nigeria development finance initiatives involve the formulation and implementation of various policies, innovation of appropriate products and creation of enabling environment for financial institutions to deliver services in an effective, efficient and sustainable manner. The initiatives are mainly targeted at agricultural sector, rural development and micro, small and medium enterprises. The Central bank of Nigeria development finance is the financial initiatives that involves the formation and implementation of policies, programmes and schemes for the provision of credit, and funds to the productive sectors of the economy in order to deliver economic services in an effective, efficient and sustainable manner to achieve economic growth and development (Dori, 2016).

Dori (2016) argues that without sufficient and effective development finance economic growth and development are impossible. Healthy development finance in a country ensures capital formation, higher productivity, better standard of living for citizens and stable and growing economy. Policy measure of development finance intervention which supplies capital in form of finance and credit to the productive sectors of the economy is important and in fact necessary for meaningful economic growth and development. The state of economic development in Nigeria is invariably associated with extent of the growth and development of the financial institutions. Development finance is any finance, donation or credit geared towards achieving economic growth and development in an economic system.

One of the Central Bank of Nigeria's development finance instruments is the Agricultural Credit Guarantee Scheme Fund (ACGSF) established by Decree No. 20 of 1977 and went into operations in April, 1978. It comprised of 60% shares of the Federal Government and 40% holding by the Central Bank of Nigeria. The Fund guarantees credit facilities to the agricultural sector, especially the farmers by banks up to 75% of the amount in default net of any security realized. The day to day operations of the scheme is handled by the Central Bank. Orok & Ayim (2017) argues that by boosting credit to the agricultural sector, the government will boost agricultural productivity, farmers will generate revenue, poverty would be alleviated and foreign exchange earned for the economy. The author further argues that the ACGSF aims at ensuring food security, rural transformation and improves the nutritional health profile of the citizens.

The problem of agricultural productivity mainly relates to unavailability of credit to farmers resulting from inaccessibility to credit facilities by farmers. The need for agricultural financing cannot be over emphasized as it is one major means of alleviating poverty as well as the poor welfare situation of the rural farmers through increased agricultural productivity. This will translate to increase in farm income and food security, reduction in poverty and unemployment levels. Agricultural credit will also bring about inclusive industrial development and economic growth on the aggregate (Awotide, et al, 2015). All these have been found to be the gains of agricultural credit schemes. It is however, disheartening to see that the various agricultural credit schemes in Nigeria do not really translate into the desired goals of improved growth and development occasioned by increase in productivity. It is not certain what the effect of the development financing of the Central Bank of Nigeria has been on the agricultural sector. The Agricultural Credit Guarantee Scheme Fund (ACGSF) is of special interest in this regards. This study was born out of the emphasis on growing the primary sectors especially agricultural sector of the Nigerian economy in this period when the global economy is failing and price of crude oil crashed. It is therefore pertinent to ascertain the effect of the development finance of the Central Bank of Nigeria on the growth of the agricultural sector of the Nigerian economy.

Objectives of the Study

The main goal of this study is to determine the impact of Central Bank of Nigeria developmental finance activities on the growth of the agricultural sector of the Nigerian economy. The specific objectives include:

1. to ascertain the impact of credit to cash crop farming on the growth of agricultural sector
2. to determine the impact of credit to fish farming on the growth of agricultural sector
3. to find out the relationship between credit to livestock farming and the growth of agricultural sector
4. to ascertain the impact of credit to food crop farming on the growth of agricultural sector

II. Literature Review

This study is hinged on the Wiggins (2006) Agricultural based economic development theory. The theory stressed that agriculture requires a technical, institutional and financial incentive that will raise the productivity of small farmers. The theory further explain that in pursuit for economic development; agricultural financial scheme can play a dual role of increased purchasing power and provision of input to sustain the industrial revolution. This, Rahji & Fakayode (2009) argues that agriculture play a compelling role in the development of Nigeria's economy being a dominant contributor to gross domestic product. The study acknowledged that the performance of small and medium scale farmers maintained significant part of the growth to Nigeria's GDP.

Nwosu, *et al*, (2010) review the Agricultural Credit Guarantee Scheme Fund (ACGSF), its roles, problems and prospects towards the nation's agricultural development since inception. The study concluded that the three tiers of government in Nigeria should give the scheme the necessary publicity so that farmers can benefit from its laudable objectives, since credit was needed for improved productivity and agricultural development.

Fadeyi (2018) reviewed literatures on agricultural financing in Nigeria in order to study the streams and impact of financing available to the small scale farmers in Nigeria. The study reviewed 59 studies out of 868 articles from the Emerald Insight database and the ScienceDirect database. The study evaluated the framework for evaluating the need for small scale farming financing in Nigeria based on the use of modern farming technology, the livelihood of the farmers and the level of farm productivity. The defined agricultural financing from the perspective of the provision of credit for agricultural activities by the smallholder farmers. The findings of the review reveal that there has been funding provided to the smallholder farming industry in Nigeria, but the impact of these funds in terms of level of farm productivity, use of modern farming technology and the livelihood of the farmers is yet to be experienced.

Ibe (2014) examined the impact of banks' and public sector's financing on the output of agricultural sector in Nigeria by looking at the Nigeria budgetary allocation to the agricultural sector between 1990 and 2007. The study employed regression analysis, Analysis of Variance (ANOVA) and the student t-distribution (t-test) in testing the relationships. The results of the findings show that the joint action of commercial banks' credit and government financial allocation to agriculture as well as agricultural products prices are factors that significantly influence agricultural production in Nigeria. The encouraged banks to assist institutions that are engaged in agricultural financing and that Agricultural financing should be given paramount attention in policy formulation.

Uzowulu, *et al* (2008) evaluated the influence of credit policies on institutional lending behaviour of farmers in Cross River State and ascertained the relationship between credit and agricultural development using a production function from Coyle & Jimencz (1971), Becker (1970) and Gyeke, *et al* (1977). The results of the study reveal that portfolio lending devices, pursuit of cheap interest rate policies and credit quota have negative effect on credit supply. Farmers demand for credit was found to influence mainly by the availability of

guarantees and the availability of credit subsidies. A positive but inelastic relationship was found to exist between agricultural output and credit while defective production environments, lack of viable technologies and wrong perception of the roles of credit in development were seen as factors that militate against the effectiveness of agricultural credit policies in Nigeria.

Awotide, *et al* (2015) examined the impact of access to credit on agricultural productivity in Nigeria using the Endogenous Switching Regression Model (ESRM). The study reveals that total livestock unit and farm size are positive and significant in determining the farmers' access to credit and that total livestock unit and farm size have negative effect on cassava productivity among the farmers that have access to credit. Household size, farm size, and access to information assets are negative and statistically significant in explaining the variation in cassava productivity among the farmers without access to credit. Access to credit has a significant positive impact on cassava productivity. Thus, credit institutions should consider boosting their credit services to rural farming households in order to guarantee that more households benefit from it.

Enilolobo & Ode-Omenka (2018) examined the impact of credits on agricultural output in Nigeria over the period of 1978 to 2016 using data from various edition of Central Bank of Nigeria Statistical Bulletin. The study employed the Johansen cointegration test and Multivariate Ordinary Least Squares regression estimation as methods of data analysis. The results reveal that there is no long-run relationship between deposit money bank credit to the agriculture sector in Nigeria and agriculture sector output; and that deposit money bank credit to the agriculture sector in Nigeria has a significant positive impact on agriculture sector output in Nigeria.

Odetola & Etumnu (2013) investigated the contribution of the agricultural sector to economic growth in Nigeria using the growth accounting framework and time series data from 1960 to 2011. The findings in the study reveals that the agriculture sector has contributed positively and consistently to economic growth in Nigeria. The study also found that the crop production subsector contributes the most to agricultural sector growth and that growth the agriculture sector is dependent on growth of the crop production subsector indicating the importance of this subsector in the Nigerian economy. The study recommended an increased efforts in developing the livestock, forestry and fisheries subsectors will foster the contributions of agriculture sector to the Nigerian economy.

Okosodo (2016) examined the effect of agricultural credit on the growth and development of the Nigerian economy from 1980-2014. The study employed data from secondary sources, bounds testing cointegration approach, error correction mechanism and unit root test. The findings in the study reveal that there is long run relationship between agricultural sector and economic growth in Nigeria; and that government expenditure in Agricultural sector contribute moderately to the growth of the Nigerian economy. The study recommended that the federal government should encourage commercial bank to give adequate credit facility to Agricultural sector and reduce the bank lending rate to encourage most farmers in Nigeria.

Ayeomoni & Aladejana (2016) examined the relationship between agricultural credit and economic growth in Nigeria using time series data from Central Bank of Nigeria, National Bureau of Statistics and Statistical Bulletin from 1986-2014. This study employed Auto-Regressive Distributed Lag (ARDL) approach to investigate the relationships among variables. The results of the study showed that there is relationship between agricultural credit and economic growth in both short and long run respectively. The real exchange rate and private domestic investment were found to have direct effect on economic growth while inflation rate revealed an inverse relationship in the model. The study concluded dynamic variables such as credit to agricultural sector, real interest rate, real exchange rate, private domestic investment and inflation rate in Nigeria have significant influence on the economic growth of Nigeria.

Udeorah & Vincent (2018) investigated the relative effect of government and deposit money bank financing on the Nigeria's agricultural sector performance using unit root test, estimated error correction regression models and data collected from the Central Bank of Nigeria. The results of the study showed that government financing through the agricultural credit guarantee scheme fund (ACGSF) had a significant positive effect on crop output, livestock output and aggregate agricultural output. Government recurrent expenditure on agricultural sector was found to have a significant negative effect on crop production output and the aggregate agricultural output. The study recommended commitment of more effort and funds to the ACGSF and a deliberate reduction in recurrent expenditure in the agricultural sector. The study also recommended a change in the attitude of deposit money banks towards the agricultural sector and designing of programmes that are either modelled after the ACGSF or even an upgrade of the ACGSF was also recommended.

Orok & Ayim (2017) studied the impact of Agricultural credit Guarantee scheme fund (ACGSF) on Agricultural Sector Development in Nigeria using secondary data that was sourced from Central Bank of Nigeria Publications and Statistical Bulletin. The study employed multiple linear regression model to establish the relationship between variables. The findings in the study revealed significant positive relationship between ACGSF and the agricultural sector development and that the scheme had given more funds and impacted more on the crop sector over the other sub sectors. The study recommend that the scheme should be sustained and that measures should be put in place by the management of the scheme to reduce default in payment arising from borrowers.

III. Research Method

This study employs the ex-post facto research design in studying the impact of Central Bank of Nigeria developmental banking on the growth of agricultural sector of the Nigerian economy. Data on credit to cash crop, cash crop, livestock and food crop farming from 1981 to 2018 was used for the study. The data was sourced from the central bank of Nigeria money and credit statistics in the CBN website. The study employed scatter plots and regression analysis in analyzing the data and testing necessary hypothesis. All hypothesis are tested at 5% level of significance. The model is presented below.

$$AGDP=f(\text{CBN credit to agricultural sector})$$

$$AGDP=f(\text{cash, fish, livestock and food})$$

$$AGDP=\beta_0 + \beta_1\text{cashcrop} + \beta_2\text{Fish} + \beta_3\text{livestock} + \beta_4\text{food} + \varepsilon$$

Where AGDP is Agricultural sector GDP

Cash is credit for cash crop farming; Fish is credit for fish farming; Livestock is credit for livestock farming and Food is credit for food crop farming.

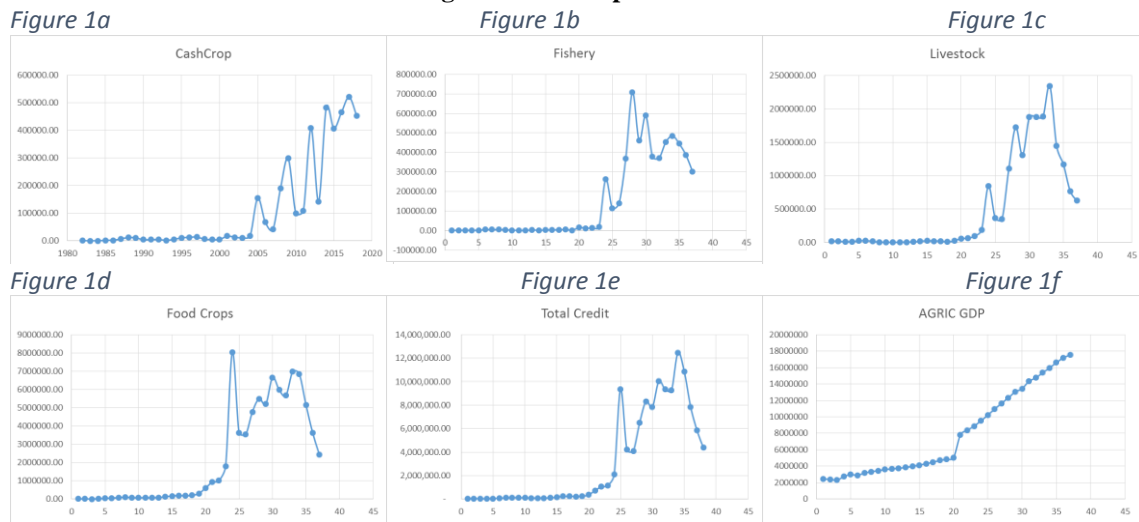
β_0 is the intercept of the regression model while $\beta_1, \beta_2, \beta_3$ and β_4 are the slope of the regression line with respect to each variable when other variables are kept constant.

The test of significance of variables are at 5% level of significance.

IV. Results And Discussion Of Findings

The scatter plots of various variables are presented below. The range of series are from 1981 to 2018.

Figure 1: scatter plots of variables



The scatter plots of the independent and dependent variables are presented in figure 1 above. The credit given to cash crop farming indicates an upward but volatile movement over the years. The plot of credit to the fish farming indicates that an upward movement in the credit facilities given to the fish farming sector, but this declined in recent years. Similarly, credit to livestock and food crop farming increased initially but started reducing in recent times. The overall credit to the agricultural sector in figure 1e reveals same trend in the credit given to the agricultural sub-sectors. The trend in the credit reduced in recent times. The plot of agricultural sector GDP reveals a consistent upward trend over the years. It suggest that the agricultural sector has been on steady growth over the study period.

Table 1: Coefficients of model of AGDP on Credit to Agricultural sector

	Standard					
	Coefficients	Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	4094224	420161.2	9.744412	4.26E-11	3238383	4950064
CashCrop	14.91438	3.131454	4.762766	3.96E-05	8.53582	21.29295
Fishery	5.249828	4.701234	1.116692	0.272441	-4.32627	14.82593
Livestock	-0.94204	1.430451	-0.65856	0.514888	-3.85577	1.971693
Food Crops	0.832915	0.31833	2.616517	0.013447	0.184499	1.481331

R Square=0.8721

The results of the regression model of the relationship between the credit given to the various sub sector of the agricultural sector and the growth of the agricultural sector of the Nigerian economy is presented in table 1. The table presents the model coefficients, the standard errors, the t-statistics, p-values and the upper and lower confidence bounds. A comparison of the respective p-values of the coefficients and the 5% (0.05) level of significance shows that credits for cash crop and food crop farming have significant effect on the growth of the agricultural sector. A positive relationship was found to exist between credit to cash crop farming and the growth of the agricultural sector. This suggests that a unit increase the level of credit to for cash crop farming, brings about a proportionate increase in the growth of the agricultural sector. Similarly, a positive relationship was also found to exist between credits given for food crop farming and the growth of agricultural sector of the Nigerian economy. Credit to fish and livestock farming do not have significant effect on the growth of the agricultural sector of the economy. The r-square of 0.8721 reveals that 87.21% of the changes in the growth of the agricultural sector is attributable to the credits granted to the sub-sectors. These findings are in line with the findings of Ibe (2014) who found that the joint action of commercial banks' credit and government financial allocation to agriculture have influence on agricultural production in Nigeria. Conversely, the result of this study is contrary to the findings of Enilolobo & Ode-Omenka (2018) who found that there is no long-run relationship between deposit money bank credit to the agriculture sector in Nigeria and agriculture sector output; and that deposit money bank credit to the agriculture sector in Nigeria has a significant positive impact on agriculture sector output in Nigeria.

V. Conclusion And Recommendations

This study was to ascertain the effect of Central Bank of Nigeria Development financing on the growth of agricultural sector of the Nigerian economy. The Agricultural Credit Guarantee Scheme Fund (ACGSF) was the focus of this study. This study was born out of the emphasis on growing the primary sectors especially agricultural sector of the Nigerian economy. The findings reveal that credits for cash crop and food crop farming have significant effect on the growth of the agricultural sector. A positive relationship was found to exist between credit to cash crop farming and the growth of the agricultural sector. Similarly, a positive relationship was also found to exist between credits given for food crop farming and the growth of agricultural sector of the Nigerian economy. Credit to fish and livestock farming do not have significant effect on the growth of the agricultural sector of the economy. This means that even though, the overall credit to agricultural sector has significant effect on the growth of the sector (Ibe, 2014), it is not all the aspect of the credit that contributed to such significant impact. This study therefore concludes that the credit granted to the various aspects of agricultural sector through the ACGSF is not yet yielding the desired effect as it is yet to show significant impact in some areas. It is therefore recommended that government should strengthen the mechanism and processes through which the credits are delivered and also broaden the scope and availability of such credits for maximum impact. In line with Nwosu, *et al*, (2010) this study also recommend that the farmers, government and lending institutions must show greater commitment for the scheme to achieve its goals and that farmers should be encouraged to for such loans form to enhance their agricultural productivity.

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