Agricultural Development in Nigeria: A Study Case of Bank of Agriculture

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Abstract

The study examined the impact of Bank of Agriculture on financing Agricultural Development in Nigeria. The study employs annual time series data covering the period 1993-2019 obtained from Central Bank of Nigeria (CBN) Statistical Bulletin, CBN Annual Report and Nigerian Bureau of Statistics (NBS). In carrying out the study, total crop financing, total fishery financing and total livestock financing are the proxies for the independent variable (Bank of Agriculture) while Agricultural Gross Domestic Product (AGDP) serve as the dependent variable. The data collected were analyzed using ordinary least square (OLS) technique. Other test conducted was stationarity/unit root test. E-view 9.0 were used to analyze the data and results obtain indicated that, Total Crop Financing (TCF) has positive but insignificant effect on Agricultural Gross Domestic Product (AGDP).Total fishery Financing (TFF) has positive but insignificant impact on Agricultural Gross Domestic Product (AGDP) Total livestock Financing (TLF) has positive but non-significant effect on Agricultural Gross Domestic Product (AGDP) The study recommended among others the sustenance of government policy that encourages consistent injection of funds into agriculture. Farmers should be encouraged to apply for loans from the participating banks to enhance their agricultural activities and productivity; and also, to repay the loans as and at when due.

Keywords: *Bank of Agriculture, Total crop financing, Total fishery financing, Total livestock financing and AGDP*

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Background to the Study

Cultivation of the soil for the growing of crops and the rearing of animals is the first occupation of mankind. It is the art and practice of farming which is known as agriculture that provides food, wool and other products for man. It is also an important aspect of human development and civilization, whereby farming of domesticated species created food surpluses that nurtured the development of human civilization (Ibe, 2014). Agricultural sector is a major sector of the Nigeria economy, providing employment for about 70% of the labour force. Nigerian agriculture is characterized by considerable regional and crop diversity. (Ogbuabor and Nwosu, 2017)

It should be noted that 82 million hectares out of Nigeria's total land area of about 91 million hectares were found to be arable. Much of this land was farmed under the bush fallow system, whereby land is left idle for a period of time to allow natural regeneration of soil fertility (Ojo and Oluwaseun, 2015). During the period under review, about 18 million hectares of land were classified as permanent pasture, but had the potential to support crops growing. Most of the 20 million hectares covered by forests and woodlands are believed to have agricultural potential (Nnamocha and Eke, 2015). In the 1960's, agricultural sector contributed immensely to domestic production, employment and foreign exchange earnings of Nigeria. It contributed about 32% to gross domestic product (GDP) of Nigeria in 2001 (National Bureau of Statistics, 2014). During the year under review agricultural holdings are generally small and scattered, and characterized by use of simple farm tools and shifting cultivation. These small farms produce about 80% of the total food. The situation remained the same for some decades later with the exception that it is no longer the principal foreign exchange earner, a role now being played by oil (Anifowose and Ladnu, 2015).

In the decade of 1970s, the agricultural sector of Nigeria remained stagnant during the oil boom and this accounted largely for the declining share of its contributions to AGDP in Nigeria. The trend in the share of agriculture in the AGDP shows a substantial variation and continue to decline from 60% in the early 1960's through 48.8% in the 1970's and 22.2% in the 1980's (Ademola, 2019). Unstable and often inappropriate economic policies, the relative neglect of the sector and the negative impact of oil boom were also important factors responsible for the decline in its contributions to GDP in Nigeria (Philip, 2009). Different policies have been developed by the government to help in financing the agricultural sector in Nigeria in order to boost productivity. Bank of Agriculture (BOA) Limited was among and such as was incorporated as the Nigerian Agricultural Bank (NAB) in 1972 and which became operational in 1973.

The institution's name was changed from NAB to Nigerian Agricultural and Co-operative Bank (NACB) Limited in 1978 to reflect a broader mandate. The Federal Government in its efforts to streamline the operations of its agencies in 2001, the NACB, People's Bank of Nigeria (PBN) and the risk assets of the Family Economic Advancement Programme (FEAP) were merged to form Nigerian Agricultural, Co-operative, and Rural Development Bank (NACRDB) Limited (Obialor, 2013). In October 2010, the Bank was rebranded and it adopted the new name Bank of Agriculture (BOA) Limited as part of its Institutional Transformation Programme (Ademola, 2019)

Statement of the Problem
Growth in agricultural production is necessary not only to increase food availability and nutrition levels of the population; but also essential to the development process in Nigeria (Colman and Young, 1989). It is painful that the agricultural sector in Nigeria is still faced with the problem of accessibility to funds. There is need for credit hence the introduction of new technology which promotes higher productivity.

The credits needed for the purchase of new technology to boast Agriculture are not available, and this jeopardizes output growth and hence the farmers resort to subsistence farming (Fankun and Evbuomwan, 2017) When the credits are available the lending rates given by banks tends to be very high and that makes borrowing difficult and discouraging the farmers. Again, there is no collateral for these credits since most people engaged in agriculture are mostly rural dwellers (Chandio, Yuansheng, Sahito and Larik, 2016)

Agricultural finance is a risky and expensive business, and those risks does not lie with the unchangeable cost, and expensive nature which can be avoided by not providing access to rural smallholders but with the accurate management of the risks and costs (Fiebig, 2001). It is a known fact that agricultural finance differs from other kinds of finance, in that it was characterized by a large number of small loans (Ogbuabor and Nwosu, 2017).

It was also noted that, the drive towards urbanization has led to labour shortages in rural areas as well as insufficient investments in agriculture. Added to this, farmers, when contacted by industrial lenders, tend to lack appropriate collateral to secure their borrowing to the extent that unsuitable items, including land, reservations and woodland, are frequently offered as collateral (Lawal, Olayanju and Aeni, 2019). The demand for agricultural finance is also seasonal, since agricultural activities tend to follow a seasonal pattern, and then natural. The problem which this study tends to address was to evaluate the impact of Bank of Agriculture in financing Agricultural Development in Nigeria 1993-2020

Objective of the Study
The main objective of this study was to evaluate the impact of Bank of Agriculture in financing Agricultural Development in Nigeria. The specific objectives are to;
  i)   Ascertain the effect of Total Crop Financing by BOA on Agricultural Gross Domestic Product in Nigeria.
  ii) Determine the impact of Total Fishery Financing by BOA on Agricultural Gross Domestic Product in   Nigeria.
  iii) Examine the degree of causality relationship of Total Livestock Financing by BOA and Agricultural Gross Domestic Product in Nigeria.

Research Questions
The following research questions guided this study:
  i)   To what extent has Total Crop Financing by BOA affected Agricultural Gross Domestic Product in Nigeria?
  ii) How far did Total Fishery Financing by BOA impact on Agricultural Gross Domestic Product in Nigeria?

iii) To what degree of causality did total Livestock Financing by BOA had with Agricultural Gross Domestic Product in Nigeria?

Statement of Hypotheses
Ho_1:   Total crop financing by BOA has no positive and significant effect on Agricultural Gross Domestic Product.
Ho_2:   Total fishery financing by BOA has no positive and significant impact on Agricultural Gross Domestic Product.
Ho_3:   Total Livestock financing by BOA has no causal relationship with Agricultural Gross Domestic Product

Review of Related Literature
Conceptual Review
Bank of Agriculture (BOA)
Bank of Agriculture (BOA) Limited was incorporated as Nigerian Agricultural Bank (NAB) in 1972 and became operational in 1973. In 1978, the institution's name was changed to Nigerian Agricultural and Co-operative Bank (NACB) Limited to reflect a broader mandate. In October, 2001, following the Federal Government's efforts to streamline the operations of its agencies, the NACB, People's Bank of Nigeria (PBN) and the risk assets of the Family Economic Advancement Programme (FEAP) were merged to form Nigerian Agricultural, Co-operative Rural Development Bank (NACRDB) Limited. Ten years later, in October 2010, the Bank was rebranded and it adopted the new name Bank of Agriculture (BOA) Limited as part of its Institutional Transformation Programme (Obialor, 2013)

Total Crop Financing
The finance covers the crop production expenses, post-harvest expenses, contingencies, etc. (Prashant, 2018). Crop finance can be considered for the following purposes:
1.   Purchase of hybrid/ improved seeds, fertilizers, manures, insecticides, pesticides, weedicides, etc.
2.   Hire charges of tractor and other farm machinery/ implements, wages of hired labour, irrigation charges/ cost of fuel or power for running pump sets, etc.
3.   Advance for storing the harvested produce for sale.
4.   Advance for cultivation of commercial crops including horticulture and plantation crops.
5.   Finance for multiplication of hybrid/ high yielding varieties of seeds
https://www.quora.com/What-is-crop-loan, 2018

Crop finance also refers to (public or private) resources (in form of equity, gift or loan) for improving social welfare through development of agricultural sector (crop sector specifically) (Shreiner and Yaron, 2001)

Total Fishery Financing
 Fishery is an activity leading to harvesting of fish. Fishery financing is the extension of financial assistance for Construction/renovation of ponds/tanks., construction of sluices,

purchase of fish prawn, fry and fingerlings/ fish seed/ prawn seed, purchase of inputs like oil cake, fertilizers, organic fertilizers and other feed materials up to the first harvest, purchase of nets, boxes, baskets, ropes, shovels, hooks and other accessories etc. *(https://www.pnbindia.in/document/agricultural-banking/Scheme13.pdf, 2020)*

Fishery finance also refers to (public or private) resources (in form of equity, gift or loan) for improving social welfare through development of agricultural sector (fishery specifically). It encompasses not only government funds but also funds of non-governmental organizations that use matching grants to attempt to promote community and sector development, income equality and local empowerment (Yaron, 2001)

Total Livestock Financing
Livestock finance refers to (public or private) resources (in form of equity, gift or loan) for improving social welfare through development of agricultural sector (livestock specifically). It encompasses not only government funds but also funds of non-governmental organizations that use matching grants to attempt to promote community and sector development, income equality and local empowerment. (Shreiner and Yaron, 2001)

Concept of Agricultural Development
Agricultural development can simply be defined as a rise in GDP or AGDP per capita income of any economy (Kwong, 2017). Palmer (2012) defines Agricultural development as an increase in the productive capacity of agricultural sector of an economy and leading ultimately to the production of additional quantities of goods and services. Agricultural development can also be referred to as the process of increasing the sizes of national economies, the macro-economic indications, especially the AGDP per capita, in an ascendant but not necessarily linear direction (Haller, 2012).

Palmer (2012) also asserts that AGDP, which is the common proxy for Agricultural development, is a measure of the agricultural goods value produced in the economy irrespective to the owners of the factors of production used to produce these goods and services. Thus, it will be realized that Agricultural development and growth in AGDP are synonymous. World Bank (2013) had defined AGDP as value added amount by the entire producers. Values added are equal to the value of gross output after deducting the value of product in processing used in production, before accounting for predetermined capital expenditure in the production (Nelson, 2010).

Theoretical Underpinning
This study adopted the Keynesian theory by Keynes (1985). The Keynesian school of thought suggested that government spending can contribute positively to sectorial growth (like the agricultural sector) in the economy (Solow, 1956). Thus, an increase in government consumption is likely to lead to an increase in employment, profitability and investment through multiplier effects on aggregate demand. Consequently, government expenditure is capable of increasing the aggregate demand which will bring about an increased output depending on expenditure multipliers. Keynes regards public expenditures as an exogenous

factor which can be utilized as a policy instruments to promote growth. On the other hand, neoclassical growth theory based its conclusion on Solow's (1956) growth model. The neoclassical is of the view that government expenditure is detrimental to economic growth in the long-run.

The argument brought forward is that government expenditure engenders the crowding out effect and in times of budget deficit, taxes are raised which increase production costs and lead to increased price and low demand or the government results to borrowing (Solow, 1956).However, the basic improvement of the endogenous growth theory over the previous models is that it explicitly tries to model technology (that is, looks into the determinants of technology) rather than assuming it to be exogenous (Gregorous and Ghosh, 2007).

Mostly, economic growth comes from technological progress, which is essentially the ability of an economic organization to utilize its productive resources more effectively over time. Much of this ability comes from the process of learning to operate newly created production facilities in a more productive way or more generally from learning to cope with rapid changes in the structure of production which industrial progress must (Verbeck, 2000).

Empirical Review
Ayimand and Orok (2016), studied the impact of Agricultural credit Guarantee scheme fund (ACGSF) on Agricultural Sector Development in Nigeria which 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 from 1990-2016. 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.

Lawal, Olayanju, Ayeni and Olaniru (2019) examined the effect of bank credit on agricultural productivity in Nigeria so as to ascertain the existence of causal relationship between them. To achieve this objective, the secondary sources of data used in the study includes: written materials such as books and journals and also the use of time series data like Agricultural Gross Domestic Product (AGDP), commercial bank credit to agricultural sectors (CBCA), Interest rate charges (INT), Government spending on agriculture (GSA), and Agricultural Credit Guarantee scheme (ACGSF). The statistical tool of analysis is the Toda and Yamamoto granger non causality techniques. Conversely the variables were exposed to the Unit Root Test to ensure stationarity both with and without structural break, the Johansen Co-

Integration Test which showed that a long term relationship does not exist among variables. It was found that there is a unidirectional causality running from ACGSF to AGDP thereby buttressing the estimate of the VAR model with respect to the role of ACGSF in explaining changes to AGDP.

Ndubuaku and Okoro (2019), investigated the impact of agricultural financing on agricultural sector contribution to GDP in Nigeria. The objective of the study was to determine whether agricultural financing had any significant impact on agricultural contribution to GDP in Nigeria. The dataset covered a 36-year period from 1981-2016. Data was sourced from the CBN statistical Bulletin. The dependent variable was the Agricultural GDP (AGDP). The independent variables were government funding {represented by Government Capital Expenditure on Agriculture (GCAG) and Government Recurrent Expenditure on Agriculture (GRAG)}, Agric Credit Guarantee Scheme Fund (ACGSF) and Commercial Banks' Credit, Loans and Advances to the Agricultural Sector (CBCA). Standard analytical tests were used to determine the properties of the data. The Auto Regressive Distributed Lagged regression model (ARDL) was used to estimate the data. The study found that government funding to agriculture and Agric Credit Guarantee Scheme Fund (ACGSF) had a non-significant impact on Agricultural Contribution to GDP (AGDP). On the other hand, the study found that Commercial Banks' Credit, Loans and Advances to the Agricultural Sector (CBCA) had a positively significant impact on AGDP. The study recommended the sustenance of government policy that encouraged consistent injection of funds into agriculture. It advocated that a sizeable portion of Commercial Banks' credit should be channeled to agricultural production

Medugu1, Musa and Abalis (2019), empirically examined the impact of Commercial Banks' credit on Agricultural output in Nigeria, covering the period 1980 to 2018. Annual time series data was employed, which was sourced from Central Bank (CBN) publications such as Statistical Bulletins and Bullions, and National Bureau of Statistics (NBS) publications. Stationary test was conducted on variables to ascertain whether they have unit roots. It was discovered that they were all stationary at first difference. Co integration test however, revealed that long run relationship exists among the variables, also ECM model result showed that the model returns to short run equilibrium after an exogenous shock, with speed of adjustment of negative one (-1), this implies that 100% of all the deviations in the past will adjust to equilibrium. Ordinary least square Method was employed to estimate the relationships among the variables and the result showed positive and significant relationship exists between commercial banks' credit and Agricultural output in Nigeria, the same relationship also exists between Expenditure made on Agriculture by Government and Agricultural output in Nigeria. Interest rate was negatively related to Agricultural output in Nigeria, the results are all according to *a priori* expectations.

Ewubare and Ologhadien (2019) studied the impact of agricultural financing on cassava production in Nigeria during 1985-2015. The objectives were to determine the contributions of government capital expenditure on agriculture, recurrent expenditure on agriculture, agricultural credit guarantee scheme fund and deposit money banks' credits to agriculture on

cassava production. The data required for the empirical analysis were extracted from the Food and Agricultural Organization Statistics (FAOSTAT) and CBN Statistical Bulletin. The estimation techniques relied on the error correction mechanism. The parsimonious ECM reveals that cassava output in previous periods is positively related to output in current period. Similarly, public capital spending in agriculture has a positive and significant impact on cassava production. It is recommended that public capital expenditure on agriculture should prioritize mechanization of cassava production to increase its attractiveness for the youths and boost output and its associated value chain.

Methodology
Research Design
This study adopted the *ex-post facto* research design. The choice of the *ex-post facto* design is because the research relied on already recorded events, and researchers do not have control over the relevant dependent and independent variables they are studying with a view to manipulating them (Onwumere, 2009). The secondary data employed was sourced from the Central Bank of Nigeria (CBN) statistical bulletin of various years within the period of 1993 to 2018.

Model Specification
This study adopted the work of Eze and Okoye (2013), which was modified to suit this study. To examine the impact of Bank of Agriculture in financing Agricultural Development in Nigeria, we proxy Bank of Agriculture as total crop financing, total fishery financing and total livestock financing the independent variables. The Agricultural Gross Domestic Product (AGDP) serves as dependent variable. Given the above considerations, we specify a three-predictor model as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 \text{----------------------------------}\beta_n X_n + U_t \text{ -------------- } 1$$

Where;
Y = Dependent variable
$X_1, X_2 X_3$-------------X_n = the explanatory or independent variables
$B_1, \beta_2 \beta_3$---------------β_n = the coefficient of the parameter estimates or the slope
U = Error or disturbance term
t = Time

In relating this to the study
$$AGDP = f(TCF, TFF, TLF) \text{ -----------------}U_t \text{------ } 2$$

Relating to econometric form and the variables log linearised, it will appear thus;
$$LAGDP = \beta_0 + \beta_1 LTCF + \beta_2 LTFF + \beta_3 LTLF \text{--------------}U_t \text{--------------- } 3$$

Where;
LAGDP = Agricultural Gross Domestic Product
LTCF = Total Crop Financing

LTFF = Total Fishery Financing
LTLF= Total Livestock Financing
B_0 = intercept (Constant term)
U_t Error term
A priori expectation: It is expected that $\beta_1 - \beta_3 > 0$

Description of Model Variables
Total Crop financing
Crop finance refers to (public or private) resources (in form of equity, gift or loan) for improving social welfare through development of agricultural sector (crop sector specifically) (Shreiner and Yaron, 2001). It encompasses not only government funds but also funds of non-governmental organizations that use matching grants to attempt to promote community and sector development, income equality and local empowerment

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Data Presentation and Analysis
Data Presentation
This is the raw dataset for Bank of Agriculture financing on Agricultural Development in Nigeria, 1993-2018.

Table 1: Annual frequency format of LNAGDP, LNTCF, LNTFF and LNTLF

YEARS	CROP (N, 000)	FISHRY (N, 000)	LIVESTOCK (N, 000)
1993	70,252.00	428.00	5,505.80
1994	82,072.40	2,438.00	10,527.90
1995	121,067.60	1,512.00	18,048.50
1996	171,836.30	2,145.00	28,216.90
1997	187,491.60	3,554.50	23,404.70
1998	175,764.80	3,456.00	22,587.10
1999	204,058.00	6,180.00	11,952.00
2000	303,677.00	899.00	27,307.00
2001	605,525.70	15,742.20	60,415.70
2002	925,734.70	12,069.30	64,449.60
2003	1,015,194.60	13,050.00	100,486.40
2004	1,807,667.70	18,240.00	190,304.00
2005	8,039,640.10	262,195.00	844,882.80
2006	3,636,053.68	114,400.00	368,151.00
2007	3,533,429.69	140,690.00	353,487.25
2008	4,775,375.65	368,630.00	1,108,483.82
2009	5,496,286.16	708,621.24	1,725,801.27
2010	5,194,976.13	461,128.00	1,305,432.50
2011	6,657,657.24	589,667.50	1,878,263.35
2012	5,979,762.86	378,311.89	1,878,042.97
2013	5,668,766.55	371,403.00	1,883,008.25
2014	6,976,103.98	453,426.00	2,342,246.89
2015	6,851,874.73	485,089.18	1,444,012.50
2016	5,163,766.49	444,763.00	1,169,448.00
2017	3,626,099.71	387,084.00	768,086.00
2018	2,424,619.94	301,348.00	626,24.00
2019	2,893,741.00	382,385.00	731,34.01
2020	3,478,882.65	324,879.90	578,45.57

Source: CBN Statistical Bulletin Various issues (2020)

Descriptive Statistics
We conducted descriptive statistics for our set of variables as presented in Table 2.

Table 2: Descriptive Statistics of the Variables

	LNAGDP	LNTCF	LNTFF	LNTLF
Mean	8.301748	14.10245	10.68937	12.23197
Median	8.292225	14.88948	11.75089	12.79593
Maximum	8.763813	15.89989	13.47108	14.66662
Minimum	7.861249	11.15984	6.059123	8.613557
Std. Dev.	0.251029	1.639368	2.459323	2.007542
Skewness	0.111020	-0.530764	-0.403983	-0.324238
Kurtosis	2.049209	1.687971	1.606352	1.567322
Jarque-Bera	1.032747	3.085615	2.811319	2.679176
Probability	0.596680	0.213780	0.245205	0.261954
Sum	215.8455	366.6638	277.9237	318.0313
Sum Sq. Dev.	1.575394	67.18823	151.2067	100.7557
Observations	26	26	26	26

Source: Author's E-views 9.0 output, 2020

Descriptive statistics in table 2 shows that Agricultural Gross Domestic Product (AGDP) attained a mean of 8.301748 between 1993 and 2019 having a highest level at 8.763813 and lowest at 7.861249. The mean of Total Corp Financing (TCF) stood at 14.10245 and maximum 15.89989 while the minimum of 11.15984 over the period. The high and low point of Total Fishery Financing (TFF) by BOA was 13.47108 and 6.059123 respectively, but was averaging 11.75089 over the sample period. Total Livestock financing on the other hand obtained a maximum of 14.66662 and minimum of 8.613557, with a mean of 12.23197 during the period.

We observed from the results that our response variable, AGDP, is normally distributed ($p > 0.05$) and is statistically different from zero. The normality in the variable description is based on the skewness of the variables and of which TCF, TFF, and TLF are negatively skewed ($S<O$). The results in tables 2 indicate that probability value of the Jarque-Bera (J-B) statistics for AGDP is greater than 5% conventional level of significance, it entails that we cannot reject the null hypothesis that our variables are normally distributed. The p-value of the J-B statistics of the variables is more than 5% significant level thereby indicating that the identified series are not normally distributed.

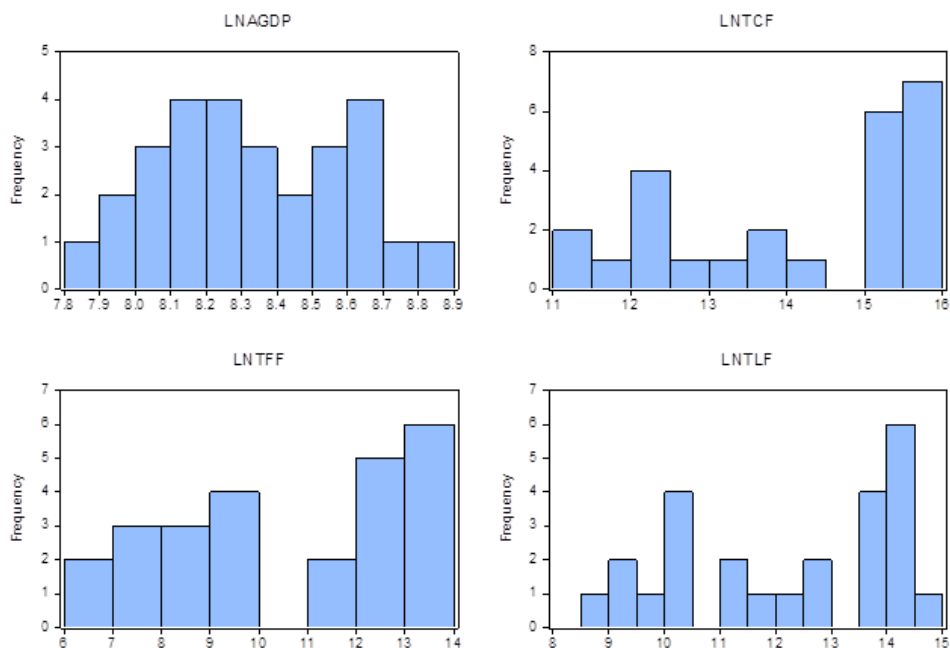**Graphic Representation of the Variables Under Study in Distribution**

Fig. 1: Test of Stationarity (Unit Root Test)

It is not econometrically appropriate to carry out a regression analysis on time series data that are not stationary. Such operation is likely to produce a spurious regression result. In order to address the problem, the Augmented Dickey Fuller (ADF) unit root test was employed to determine the existence of unit root in the time series data, as well as the order of integration of the variables.

Table 3: Summary of Unit Root Test Results

Variables	ADF-Stat	5% critical value	P-value	Inference
AGDP	-20.33805	-2.998064	0.0000	1(1)
LTCF	-4.209397	-2.991878	0.0034	1(1)
LTFF	-8.042206	-2.991878	0.0000	1(1)
LTLF	-4.495488	-2.991878	0.0017	I(1)

Source: Author's computation from E-views result, 2020

Table 3 report the test for stationarity properties of the series following the ADF statistics. It indicates that all the variables attained stationarity at first difference/ order as reported; the ADF statistics for the respective variables were more negative than the critical values at 5% and level of significance. The reported p-value is all less than 0.05 for which cause the null hypotheses with the presence of unit root in all the variables rejected.

Table 4: Regression Analysis

Dependent Variable: LNAGDP
Method: Least Squares
Date: 03/13/20   Time: 09:27
Sample: 1993 2018
Included observations: 26

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	7.347648	0.726313	10.11637	0.0000
LNTCF	0.020261	0.127707	0.158652	0.8754
LNTFF	0.009249	0.075872	0.121902	0.9041
LNTLF	0.046559	0.124198	0.374877	0.7113
R-squared	0.349272	Mean dependent var		8.301748
Adjusted R-squared	0.260537	S.D. dependent var		0.251029
S.E. of regression	0.215865	Akaike info criterion		-0.087686
Sum squared resid	1.025153	Schwarz criterion		0.105868
Log likelihood	5.139914	Hannan-Quinn criter.		-0.031949
F-statistic	3.936102	Durbin-Watson stat		1.735006
Prob(F-statistic)	0.021730			

Source: E-view 9.0 output, 2020

From table 4 above, the coefficient of the constant variable is 7.347648. It implies that when the independent variables are held constant, the value of the gross domestic product will be 7.347648. It can be observed that Total Crop Financing (TCF) has positive but non-significant effect on Agric Gross Domestic Product (AGDP). This was explained by the positive coefficient value of TCF and its corresponding probability value (0.8754), which is greater than 0.05 significance levels. The results indicate that 1% increase in TCF led to about 20% increase in AGDP. However, a period lag of Total Crop Financing is positively associated with AGDP. Furthermore, Total Fishery finances and Total Livestock financing exerted positive but non-significant impact on AGDP.

From the model above, R^2, which is the coefficient of determination, is 0.3492.. This entails that 35% of dependent variable was explained by changes in the independent variables, and the remaining 65% was explained by variables not included in the model. The adjusted R^2 take account of a greater number of regressors included in our model and it shows that the regressors still accounts for about 26% of the variations in the dependent variable. The F-value (3.9361), with a probability value 0.0217< 0.05 is an indicative that the overall regression is significant. The Durbin Watson statistics (DW) approximate value of 2.0 shows there are no signs of serial autocorrelation, implying that our result is reliable.

Test of Hypothesis
Hypothesis One
Re-Statement of Hypothesis:

Ho: Total crop financing by BOA has no positive and significant effect on Agricultural Gross Domestic Product in Nigeria

H$_1$: Total crop financing by BOA has positive and significant effect on Agricultural Gross Domestic Product in Nigeria

Decision Rule

Using table 4; the decision criterion is not to reject the null hypothesis if the probability of t - statistics is > 0.05 level of significance. Otherwise reject the null hypothesis and accept the alternate hypothesis accordingly. Table 4 shows a positive coefficient of 0.020267 and the probability value of t – statistics of 0.8754 > 0.05 level of significance; therefore, we do not reject the null hypothesis but conclude that crop financing has a positive but insignificant effect on AGDP in Nigeria

Hypothesis Two
Re-Statement of Hypothesis

Ho: Total fishery financing by BOA has no positive and significant impact on Agricultural Gross Domestic Product in Nigeria

H$_1$: Total fishery financing by BOA has positive and significant impact on AGDP in Nigeria

Decision Rule

Using table 4.4; the decision criterion is do not reject the null hypothesis if the probability of the t-statistics is > 0.05 level of significance; otherwise, reject the null hypothesis and accept the alternate hypothesis accordingly. Table 4 shows a positive coefficient of 0.009249 and the probability of the t- statistic of 0.9041 > 0.05 level of significance; therefore, we do not reject the null hypothesis but conclude that total fishery financing has a positive but insignificant impact on AGDP in Nigeria.

Table 5: Causality Tests

Pairwise Granger Causality Tests
Date: 09/26/20   Time: 22:06
Sample: 1993 2019
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
LNTCF does not Granger Cause LNAGDP	25	14.3902	0.0001
LNAGDP does not Granger Cause LNTCF		0.61969	0.5481
LNTFF does not Granger Cause LNAGDP	24	14.7773	0.0001
LNAGDP does not Granger Cause LNTFF		1.80857	0.1910
LNTLF does not Granger Cause LNAGDP	25	15.4775	9.E-05
LNAGDP does not Granger Cause LNTLF		1.73067	0.2027
LNTFF does not Granger Cause LNTCF	24	2.68843	0.0937
LNTCF does not Granger Cause LNTFF		6.57564	0.0068
LNTLF does not Granger Cause LNTCF	25	1.25967	0.3053
LNTCF does not Granger Cause LNTLF		1.93885	0.1700
LNTLF does not Granger Cause LNTFF	24	8.62373	0.0022
LNTFF does not Granger Cause LNTLF		1.28311	0.3001

Source: E-view 9 output, 2020

From the Granger Causality test result in 5 done with a lag of 2, GDPAGR is tested against all the explanatory variables. The choice of lag of 2 is aimed at not sacrificing greater degree of freedom which may affect the outcome of the test. In determining the existence and direction of causality, the p-value of the F-statistics is used with 5% level of significance to either accept or reject the null hypotheses as stated.

Hypothesis Three
Re-statement of hypothesis
Ho: Total Livestock financing by BOA has no causal relationship with Agricultural Gross domestic Product in Nigeria
H$_{1:}$ Total Livestock financing by BOA has causal relationship with Agricultural Gross domestic Product in Nigeria

Decision
Using table 5; the decision criterion is, do not reject the null hypothesis if the probability of

the t-statistics is > 0.05 level of significance; otherwise, reject the null hypothesis and accept the alternate hypothesis accordingly. The Pair wise Granger Causality test shows that there is a unidirectional causality running between TLF and Gross Domestic Product Agric sector growth in Nigeria.

Summary of the Findings
The following are the findings from the specific objectives of the study:
1. Total Crop Financing (TCF) by BOA has positive but insignificant effect on Gross Domestic Product (GDP)
2. Total fishery Financing (TFF) by BOA has positive but insignificant effect on Gross Domestic Product (GDP)
3. There is a unidirectional causality running from TLF to Gross Domestic Product in Nigeria.

Conclusion
The study has analyzed the impact of Agriculture Financing on Agricultural Development in Nigeria. Against this background, we specifically sought to ascertain the contribution of total crop financing by BOA to Gross Domestic Product in Nigeria, to determine the contribution of total fishery financing by BOA to Gross Domestic Product in Nigeria, to examine the effect of total livestock financing by BOA to Gross Domestic Product in Nigeria. Our analyses based on the OLS technique using annual data set from 1993-2019 showed that Total Crop Financing (TCF) by BOA has positive but non-significant effect on Nigeria's GDP and fishery Financing (TFF) by BOA has positive but non-significant effect on Nigeria's GDP, whereas Total livestock Financing (TLF) has unidirectional causality running from TLF to Nigerian's GDP. In inclusion this means that the three Agriculture financing valuable which are crop financing, fishery financing and livestock financing by BOA has contributed a little to gross domestic product (GDP).

Recommendations
Based on the findings of the study, we make the following recommendations
1. The study recommended the sustenance of government policy that encouraged consistent injection of funds into agriculture.
2. Farmers should be encouraged to always apply for loans from Banks of Agriculture to enhance their agricultural activities and productivity.
3. Bank of Agriculture should make efforts to grant agricultural loans at the appropriate time to farmers who met the conditions. Late release of funds to farmer leads to loan diversion/ misuse which have been established to be a major cause of poor loan repayment

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