AGRICULTURAL FUNDING EFFECT ON NIGERIA ECONOMIC GROWTH (2000 – 2020)

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Abstract
This study exploits Agriculture Funding Effect on Nigeria Economic Growth within the study period of 2000-2020.This study is at the backdrop of declining in the share of Agricultural GDP, despite seemingly robust agricultural budgetary allocation and various funding sources. Data were gathered from the World Bank, National Bureau of Statistics. Variables: Gross Domestic Product (GDP), Agricultural Output (AOT), Credit Size (CS), Interest Rate (INT), Commercial Bank Credit (CBA) was employed for the study. Augumented Dikey Fuller (ADF) test of stationarity (Unit Root Test) show that all the variables were stable at the first differencing.
The ordinary Least Square (OLS) analytical method was used to capture the influence of the independent variables on the dependent variable. The results show that all other independent variables are positively significant to GDP, except Interest Rate (INT), which is has negative effect on the Nigerian economic growth. Its evidently shown that Nigerian economic growth will be more enhanced if financing/funding of agricultural sector is given a deserved attention. Hence the study recommends that an achievable and viable agricultural policies that will spur productivity should be put in place, this will encourage the youths in engaging in agricultural activities.
Key words: agriculture, funding, economic , budgetary, growth

1.0 Introduction

Agriculture is adjudged as the mainstay of the Nigerian economy, having the lion share of the employed population (Philip, Nkonya, Pender and Oni 2009).Nigerian agriculture is an important integral sector of the aggregate economy. It is known as the primary producer sector that supplies both food and raw materials for consumption of the increasing population, as well as for, local industries development. Reportedly, agriculture immensely contributes in various dimensions to the Nigerian aggregate economy. Sadly enough, advent of crude oil heralded the neglect of Nigerian agriculture sector, with attention shifted from developing agriculture to oil and gas sector of the economy.

The role of agriculture in the economic growth was known to government, this made Nigerian successive government to put in place polices aim at enhance agricultural productivity.. Improved agricultural productivity has been proofed to link with accessibility of farmers to source of credit.

Through credits from financial institutions, like banks could spur growth and development of agricultural sector. The commercial bank (deposit money bank) agricultural credit supply has always fallen short of its demand despite all the enabling environment government has put in place to bridge the gap. The informal financial institution like money lender with high interest charges is inimical to repayment of borrowed money by the farmers. Also, the commercial Banks administrative bottle neck, collateral demands etc., does not help farmers accessing of loan for their farming activities.

Agricultural financing is not limited to government/financial institutions funding, but also concern foreign investors, international organization and non-governmental organizations. Academia also has its own share of involvement, such as farmer's capacity building, and researched and training of farmers. Input supply as well as marketing board provision for the agricultural produce will have a great deal of remarkable improvement to agricultural productivity, and subsequently economic growth.

The aim of agricultural financing policies in Nigeria is to adequately sustained agricultural financing schemes, programs and institutions which could provide micro and macro credit facilities for the small, medium and large-scale producers, processors as well as marketers().

Financing of agriculture as the primary hub of industrial development cannot be wished away, despite year in-year-out government and other stakeholders role of funding agriculture, yet this much is needed to be done as poverty and hunger is on alarming rate. According to IFPRI(2008),expenditure on agriculture is not sufficient enough to accommodate the government objective of agricultural policies. Hence the need for this study to embarked on investigating the effect of agricultural funding on the economic growth of Nigeria.

1.1 Objectives of the Study

The general objective of this study is to examine agricultural effect on funding of the Nigerian economy growth.

(i) to examine the relationship between effect agricultural funding on Nigeria economy growth

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2.0 **Review of Relevant Literature**

Agriculture is a mainstay sector of the Nigerian economy having about 70% of employee, inspire of predominance of oil and gas sector of the economy (Angaha and Atong,(2020). Agruculture is the primary supplier of raw materials and intermidate good for the economy. (Ebere and Osundina,2012). As defined by Shreiner and Yaron, 2001).Agriculture financing/funding is described as (be it public or private financing/funding) resources for the development of agriculture productivity, hence spurring the citizen welfare. These resources mentioned could be equity, loan, gift, and subsidy). Funding of agriculture involved both private and public sectors. While public fund are been subsidized, non-public fund are not subsidized, except the counterpart contribution is tax free (Shreiner and Yaron, 2001).

Agriculture financing is essentially a development strategy in a variety of ways. It promotes agricultural investment and adoption of technology necessary to spur economic growth.

Although agriculture finance is only one of the growth factors, it is one of the more important factors in attaining the objectives for development. Chenery and Strout (1966) assume that there is an excess supply of labour, and growth is only constrained by availability and productivity of capital in developing countries.

Mallik (2008),identified three setback that are barrier to economic growth in Africa continent(i) saving(ii) fisical and (iii) trade balance.He asserted that domestic saving is not sufficient enough in Nigeria as well as most of the Africa countries were identified as constraints to growth in most African countries, this pose as a problem in financing agriculture. Balance of trade is not encouraging due to inadequate export earnings, hence inability to properly cater for investing in agriculture. They also have insufficient export earnings required to import capital goods for investment and do not have the revenue raising capacity to cover a desired level of public investment. Loayza, 2000,submitted that if adequate funding is gear toward agriculture, a remarkable economic growth is witnessed. However,some author are of the opinion that economic growth can only occur at long run and that other pertinient factors are needed to be considered before such growth could be observed.

Oji-Okoro,(2005) refer to economic growth as increase in the amount of goods and services produced per capita of the population over a given period of time . Todaro(1992) economic growth is term to be a long time increase in the capacity of supplying various economic goods and services, this is made possible through advancing technology, institutional and ideology adjustments that it demand.

According to (Angaha and Atong,(2020). define economic growth as a stable increases in the particular capacity of the economy over a period of time leading to rising levels in the Gross Domestic Product (GDP).They further, describe economic growth as an index which measures the proportion of changes in the Gross Domestic Product of an economy over a given period of time ,usually one year. Traditionally, economic growth could be measured as the percentage increase in the real Gross Domestic Product of the country over a giving time period.

In the study of Ebere and Osundina (2013) investigation into the Impact of Governmenr Expenditure on Agriculture on Nigerian Economic Growth , using GDP for Nigerian Economic growth, government spending on agriculture significantly and positively related to economic growth.

Literature has it that there exist relationship between agricultural governmental spending and economic growth. (Ideba, Iniobong, Otu & Itoro 2014) .From their statistics of Augumented Dickey Fuller(ADF),Granger Causality test,and Error Correction Model(ECM),indicated an increase in the nation"s agricultural economic growth is caused by the agricultural public capital expenditure(Angah and Atong,2020).

In the study of Nnamocha and Eke (2015) as cited in Angaha and Antong,(2020), on effect of Bank credit on agricultural output in Nigeria between 1970-2013,shows that bank credit and industrial output contributed to agricultural Gross Domestic Product.

Adequate accessibility to credit is a paramount ingredient of agricultural productivity and economic growth via agricultural GDP. Commercial Banks as well as specialized agricultural Bank(e.g. Nigeria Agricultural Cooperative and Rural Development Bank (NACRDB),have been prominent in financing agricultural production in Nigeria .One of the major huddle agricultural leading institution often experience, is the repayment habits of the credit beneficiaries, as many of the farmers default in paying back loans to the lending financial institutions. Advances in literature observed that at times due to uncontrollable natural factors, which have adverse effect on agricultural output served as one of the determinants of loan defaulting by the beneficial farmers. At this juncture, indirect insurance scheme could salvage this situation of which those natural factors that are beyond farmers control could be taking care by the insurance companies.Hoever, . Gurdenson *et al*. (2005) argued that it's a dauting task for the Nigerian rural farmers to access formal credit from the Nigerian Banks, their submission was on the background of Nigerian Banks non.orientation towards financial credit as assistance to rural farmers.

3.0 Method of Data Collection

This study employed secondary data for the period of 2000-2013. These data were obtained from the World Bank, International Monetary Fund and Nigerian Central Bank. The following variables were used**:** GDP as the dependent variable for the economic growth, Agricultural Output (AOT), Credit Size (CS),Interest Rate(INT), Commercial Bank Credit to Agriculture are the independent variables.

3.1 Model Specification

The below model was used. This model with little modification was originally from the Harrod growth model. Implicitly, the model stated below:

$$GDP= \alpha_0 + \beta_1 AOT+ \beta_2 CS + + \beta_3 INT + \beta_4 CBA + ui$$

GDP = Gross Domestic Product

AOT = Agricultural Output

CS = Credit Size

INT = Interest Rate

CBA = Commercial Bank Credit to Agriculture

α_0 = Intercept

ui = Error term

β_1 - β_4 = Parameters to be estimated

3.2 Method of Data Analysis

3.2.1 Unit Roots Test

Before estimation,unit root test is needed to be conducted, hence, the use of Unit Root Test (Augumented Dickey Fuller,ADF) to ascertained the stationarity of the variables as to avoid spurious results. Further to this, Ordinary Least Square (OLS) regression was use, to know the influence of the independent variables on the dependent variable.

Augmented Dickey-Fuller (ADF) Test for Unit Roots

ADF involved extra lagged term of the independent variable(i.e.GDP).this ensures autocorrelation to be eliminated. Akaike Information Criterion(AIC)determines the lag length..Specifically, ADF model is in the form below:

$\Delta y_t = yy_{t-1} + \Sigma\beta_i\Delta y_{t-1} + \mu_t$ -- (1)

$\Delta y_t = \beta_0 + yy_{t-1} + \Sigma\beta_i\Delta y_{t-1} + \mu_t$ --- (2)

3.2.2 Measurements of variable

(i) Gross Domestic Product (GDP:

GDP is measured as the total quantities of all goods and services and multiply with their prices.

(ii)Agricultural Output(AOP):

Is measured by Total Factor Productivity (TFP), which calculated as is the difference between index of agricultural inputs to an index of output

(iii)Credit size (CS):

Is measured as amount of loan/credit allocated to agricultural sector by the government to enhance agricultural productivity in the nation economy.

(iv)Interest Rate (INT):

Interest rate is a percentage charged on the total amount borrowed or save

(v)Commercial Bank Credit (CBC):

Is define as the amount of loan/credit disbursed to agriculture within the study period

4.0 Results and Discussion

4.1 Unit root test

From table 1 below, (the Unit root test statistics), all the variables were non-stationary at the levels, the variables were stationary at the first differencing. This means that further analysis could be carried out without results been spurious.

Table 1: Unit Root Test (ADF)

Variables	T-Statistics	P-value
LN GDP	-3.2819	0.025**
LN AOT	-2.5662	0.036**
LN CS	-3.4587	0.046**
LN INT	-3.8826	0.005**
LN CBA	-4.0654	0.031**

Source: Field data (2021)

4.2 Regression Result

The regression result as indicated in table 2 below, shows that the independent variables Agricultural Output(AOT), Credit Size(CS), Interest Rate(INT) and Commercial Bank Credit(CBA):explained the dependent variable(Agricultural GDP) to the tune of (Adjusted R^2= 0.998;i.e. 99.8%)

(i) Agricultural Output(AOT)

The table 2, below indicated that Agricultural Output (AOT) positively significant related to agricultural GDP. Its coefficient was 0.491 and its p-value was 0.008 and was significant at 5 percent probability level. It means that Agricultural Output (AOT),exert influence on agricultural GDP. This means that if there is substantial financing of agriculture, more of agricultural productivity will be experience, hence increase in economic growth is ensured.

(ii) Credit Size(CS)

Expediently, Agricultural credit Size(CS) is realated to agricultural GDP,the ststitical evidence in Table2, shows a positive influence of Credit Size(CS) on agricultural GDP.).Its coefficient was 0.065 while its p-value was 0.000 which was significant at 5 percent probability level. It implies that the more the value of Credit Size(CS) used, the higher the value of agricultural GDP. This result is in agreement with most of the literature on this study.

(iii) Interest Rate(INT)

Interest Rate(INT) as shown in table 2 below, has a negative relationship with the agricultural GDP. This relationship revelation is expected as the higher the intrest rate on the credit borrowed the lwer is the agricultural productivity. Despite the negative relationship, the influence of Interest Rate (INT) on agricultural output is significant at 5percent level.The coefficient of the relationship is -0.088.

(v) Commercial Bank Credit(CBA)

Statistic in table 2 ,below gives a picture of positive relationship of Commercial Bank Credit(CBA) with agricultural GDP (Table 4.2). Given the Its coefficient of 0.807 while and significantly influence agricultural GDP at 5 percent probability level. Research report of (Angah and Atong,2020).supports the above mentioned findings.

Table 2: Regression Analysis Result

Variable	Coeff	Standard Form	p.Values
Constant	9.888	3.247	0.001**
LN AOT	0.491	0.106	0.008**
LN CS	0.065	0.131	0.000**
LN INT	-0.088	0.312	0.000**
LN CBA	0.807	0.066	0.020**

Source: Field data (2021)

Adjusted R^2= 0.998

5.0 Summary and Conclusion

5.1 Summary

. The study covered a period of 20 years from 2000 to 2020 and secondary data was used. The Unit root test (Augumented Dickey Fuller, ADF) and OLS were used for the analysis of the study. The OLS results showed a positive and significant relationship/effect of all the explanatory variables, with the exception of Interest Rate (INT). The study concludes that ,good agricultural policy aiming at funding agricultural sector for its effective productivity should be pursued.

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