



Impact of Government Expenditure on Food Production in Nigeria

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ABSTRACT

This study critically examined the impact of government expenditure on food production in Nigeria. In order to achieve the objectives testable hypotheses were formulated. Multiple regressions were conducted: DW show absence of spurious regression, ordinary level series parameter result show negative relationship between government expenditure and quantity of food produced. The result of co-integration tested show existence of long run combination of government expenditure and food production. The result of granger casualty indicate that government expenditure do not granger quantity of food produced. For volume of deposit money banks' credit and quantity food produced, null hypothesis of no granger causality was rejected. The result also reveals unidirectional relationship between government expenditure, management of fund and quantity of food produced. The standard of living of the people were negatively affected especially those who depended on the bank staff who were thrown into unemployment. The implication of this study is that government as well as CBN should formulate policies that will enhance the financial stability and efficient performance of banking system. Banks should diversify in their lending activities and investment opportunities, putting into consideration the agricultural sector of the economy. Central banks should promote the ability of the banking sector to withstand shocks and thus prevent financial instability.

Introduction

Nigeria is a country with more than 186 million populations. As the population continues to grow, the demand for food increases and unfortunately many parts of this country are not developed. Agriculture is significant sector in the economy of Nigeria; it provides employment for over 70% of the population. Thus, Kanu (2016) said that agriculture is the major business in the rural areas. Many families rely on this for their sustenance and survival. Despite the importance and the potential of agriculture in Nigerian economy, the sector is weighed down by numerous challenges like lack of crops, tools, fertilizers and pest control for maximum production, natural disaster and lack of formal financial services. However, the major problem of food production in Nigeria is finance. Without sufficient fund, much cannot be achieved as far as sufficient food production is concern.

Lerner, (2015) said that agriculture and financial policies are closely linked. The economic situation of the world—and of each individual country—has a profound effect on agricultural policies, and agricultural policies, in turn, can affect a country's economy. Thus, taking into account macroeconomic variables and policies is vital to both developing countries and the world's economy. In Nigeria, there is still a huge gap between the level of food production and the rate of consumption. Food production is not at same pace with the rapid growing needs of the people. Although in Nigeria, many are involved in agriculture but Agriculture is not mechanized, there is nothing like a technology in the agric business and because agric business is mainly carried in the rural area. Thus, Kanu,(2016) said that there is absence of social amenities, no job satisfaction, as a result standard of living is very poor. The country

produces for masses but never involved in mass production. Hence, Adinoyi (2017), said that human population is exponentially, while climate change with attendant implication for agricultural production is steering us in the face. The option to put in place vibrant and robust science and technology innovation is therefore imperative, the major issue is finance. There is every indication that insufficient amount is been spent on this sector. Agriculture is faced with numerous challenges; it can be poor or no storage facilities, lack of quality seedlings, lack of social amenities, no accessible road and no market for the crops. However, all these issues revolve around fund and the availability of finance will help to resolve these issues. Every year government budget and spend some money on Agriculture. There is every indication that insufficient amount is been spent on this sector

Whenever intervention fund is mentioned, all attention goes to the government intervention fund. This is because after actual budget for the year government go beyond budget and provide intervention fund. Why it is that government must intervene at every circumstance and for how long should government continue to do that? What role has private sectors and NGOs played to encourage agriculture in the country? The population of the country is large and it is impossible for Government to sustain agricultural sector in the country. How has the banking sector encouraged the food production? Why must loan giving to the farmers be at normal interest rate knowing the place of agriculture in the country's economy. Effort has been made by government to bring agriculture back to what it was before the era of oil boom, but all in vain. Hence, Buhari (2009) said that despite decade of public sector contribution to agriculture, there were evidences of unstable or fluctuating trends. Based on this background, the research wishes to evaluation the impact of government expenditure on food production in Nigeria.

Statement of Problem

Nigeria is a great nation endowed with numerous resources, human, Capital, natural and otherwise. As population in Nigeria continues to grow, government expenditure increases yet there is no growth in the industrial sector, no employment and the demand for agricultural products does not decrease; as a result people are trapped in abject poverty and starvation is the order of the day. The

country is largely populated; however, there is still gap between the level of production and rate of consumption and the level of development in the country. The consequence of this is poor standard of living which has caused migration of the many Nigerians to other countries. Natural endowment offer great opportunities for achieving high levels of growth and development if properly managed. However, in the case of Africa and Nigeria in particular, it is not clear whether resource-rich countries have been able to take full advantage of their potential wealth to promote development. In fact it appears that they have often been outperformed by their resource-poor counterparts in this regard.(African Development Bank Group, 2009). Nigeria is one of the countries in African where the rich natural resources seem to be a curse.

Agricultural sector in Nigeria suffers an infrastructural challenge despite what government has expended in the sector. There is no accessible road in almost all the localities of the country. The little quantities that are produced have no market. To confirm this, Federal Ministry of Agriculture for Rural Development in one of its document in 2011 noted that Infrastructure such as motor roads, railroads or irrigation dams are either insufficient, or when available, not cost competitive. They are thus unable to operate to support scale-driven agriculture. That imposes an added cost (up to 50%-100%)on the delivered price of agricultural produce in Nigeria, making it uncompetitive compared to global peers. It went further to suggest that in order to boost farm productivity, raise the level of marketable surplus and expand value chain participants, access to low cost infrastructure should be provided. Nigeria will need to rethink the business and operating model for agricultural infrastructure

The services of Agric sector are essential to everybody in the country yet, no non-governmental organization (NGOs) and private sector have deemed it necessary to contribute towards the development of this sector. Government budget for agric sector, the much provided is not sufficient to fill the financial gap in the sector. In order to achieve effective and efficient food production, private sector has very important play. Financial Institution as the engine of any economy has no programme that focused on the expansion of food production. Philanthropists and other co operations

embark on social responsibility in other sectors of economy but not in the Agricultural sector.

Government on several occasions has initiated intervention programme and provided fund but the problem is in management of the both the programme and the fund. The Gab is not merely in the provision of fund but in the management of the fund. Therefore, the researcher wishes to explore the impact of government expenditure on food production in Nigeria.

Objectives of the study

1. To determine the extent to which government expenditure affects the level of food production in Nigeria.
2. To determine to what extent Deposit Money Banks' credit impact on Agric sector and level of food production
3. To determine the extent to which private sector contribution to Agriculture affect food production
4. To determine whether government expenditure granger cause food production in Nigeria.

Hypotheses

1. There is no significant relationship between government expenditure and the level of food production in Nigeria.
There is no significant relationship between Deposit Money Banks' credit to Agric sector and level of food production.
2. There is no significant relationship between private sector contribution to Agric sector and food production.
3. Changes in government expenditure for agriculture do not granger cause changes in food production.

Literature Review

2.1 Empirical Framework

Udoka ,and Mbat. (2016), conducted research on the effect of commercial banks' credit on agricultural production in Nigeria. The results showed that commercial banks' credit to agricultural sector increased output of agriculture in Nigeria. Again, the results also showed that an increase in government investment in agriculture has resulted in the increase in agricultural output in Nigeria. This result means that an increase in government spending in agriculture in terms of

providing infrastructural facilities and farm inputs will result in the Nigerian agricultural output experiencing an increase.

Afangideh, (2006), worked on the investigation of the several networks by which financial development is being channeled to the agricultural sector and also examines the effect of the financial sector development on the output and investment of the agricultural sector using aggregate data from 1970-2005. He adopted the Johansen cointegration and Engel-Granger two-step (EGTS) approaches. The result showed a significant and positive relationship between bank lending to agriculture and agricultural sector real output.

Enya,. & Alimba, (2008), examine the effect of commercial bank funding on the Nigerian agricultural sector from 1986 to 2005. The result from the OLS multiple regression revealed that, agricultural sector repayment ability, cash reserve ratio and interest rate have the theoretical signs indicating that an increase in interest rate and repayment ability of the agricultural sector causes an increase in the amount of credit by commercial banks to the agricultural sector while cash reserve ratio increases tend to decrease commercial bank funding to the Nigerian agricultural sector.

Udah and Obafemi (2011) conducted research on the financial sector reforms, effect on the Nigerian manufacturing and agricultural sectors using annual time series data between 1980 and 2007. The results showed that credit to private sector has positive impacts on the agricultural and manufacturing sector of the economy and capacity utilization.

However, Siddiqi,. Mazhar-ul, and Baluch, (2004) studied a policy tool for enhancement of agricultural income of Pakistan, the result showed that availability of fund for farmers, the use of chemical pesticides, number of tractors, fertilizer, Irrigation were insignificant with positive contribution to the agricultural production.

2.2 Government Expenditure and Food Production

The issue of food production is the concern of everybody especially in countries like Nigeria. Earlier before now, this country survived with agricultural products due to level attention, interest

and effort made in the agricultural sector. Lots of crops both cash and others were readily available. Palm produce, cocoa, cashew, groundnut, wheat, rice, rubber and others are the products of the Nation. Nigeria is endowed with enough natural resources. Production at that time was massive and some were made available for export with corresponding importation of scarce goods and services into the country without undue pressure on the balance of payment and external reserve.

At the discovery of oil in Nigeria, Agriculture was neglected, abandoned and left into the hands of poor and rural dwellers. Thus, Prince.(2012), said that Nigerian government killed the goose that was laying the golden egg. Agricultural sector was not only abandoned but the country's over dependent on the oil economy turns the country into mono economy. Iganiga and Unemhilin (2011) conducted a study on the impact of agricultural expenditure of government and other determinants of agricultural output on the value of the Nigerian agricultural output. The error correction result revealed that, the capital expenditure of government had a positive relationship with agricultural output.

Now, Nigeria imports virtually everything. It has been on air that federal government of Nigeria will commence the production of pencils which is an indication that even pencils are also imported into the country. If adequate caution is not taken, Nigeria will get up one morning to import broom, God forbid. Oil boom in the country has turn to be oil doom. Due to large activities in importation without much in the export, country suffers deficit balance of payment. The last resort to the country is borrowing internationally in order to make up the variance.

Despite annual budget, government has in several occasions and circumstances intervened in Agricultural sector of the country through the initiation of the different programmes. Nafisat (2009) examined the impact of the expenditure of Nigerian government on output using the ordinary least square (OLS) estimation technique for the period 1977-2006. The results show that agricultural output does not respond significantly to government expenditure on agriculture. It confirms that the government contribution to agriculture is not enough for its development. Some of the financial interventions government offered to the

sector through the states was shared on the altar of politics. The fund is diversified, in most cases; really farmers that will use the money properly will not be reached thus the financial gap in the agricultural sector amidst government expenses to the sector.

According to Daily Trust only three states voted a two-digit figure for agric, despite its strategic importance. They are Sokoto (N14.96 billion), Kebbi (N12.5 billion) and Ogun (N10.2 billion). States with above N5 billion budgets for agric are Bauchi (N9.5 billion), Borno (N8.6 billion), Akwa Ibom (N7.98 billion), Kano (N7.5 billion), Jigawa (N7.4 billion), Katsina (N6.42 billion), Zamfara (N5.82 billion), Yobe (N5.72 billion) and Kaduna (N5.58 billion). States with the least approved budgets for agric include Edo (N100 million), Kwara (N244 million), Anambra (N1.02 billion), Kogi (N1.18 billion), Enugu (N1.3 billion), Bayelsa (N1.36 billion), Rivers (N1.5 billion), Adamawa (N1.6 billion), Ebonyi (N2.4 billion), Niger (N2.53 billion), Plateau (N3.32 billion) and Taraba (N4.2 billion). Banks and government play significant role in financing agriculture in Nigeria with huge expenditure. However, this is an indication that many states have not seen agriculture as the main stay of the economy.

Challenges of Financing Food Production

It is obvious in this country that anything about farming is considered as poor man's affair. That is why agriculture is the major activities of the rural dwellers. Government on annually finance this sector. Agriculture is the mainstay of every economy and a lot has been expended on it to ensure massive production. With the increasing population and demand for food, the production should have been encouraged to reduce the burden of hunger and poverty on the faces of the people. However, huge gap still exist between financing of agriculture and level of food production. This enhances the gap between level of production and rate of consumption in the country.

According to FMARD (2011), problem of agricultural finance hinges around the following, insufficient access to credit and insurance products, inadequate mechanism and channels for agricultural financing, prohibitive interest rates for the agricultural lending, non-recognition of cooperative and other farming-based organizations by financial institutions and inadequate capacity of

financial institutions to lend to the agricultural sector. Many attempts to go back to agriculture have been made, but much has not been achieved. The inherent problems and other challenges that have stunt the effort of the people especially poor farmers. One of these problems is that farming is into the hands of poor rural dwellers. Studies have shown that 75% of the population of country is rural dwellers. As a result, they live in abject Poverty, unable to afford necessary materials needed for effective farming and food production.

Again, agricultural business is majorly done in the rural areas where there is absence of electricity, accessible road, good water and other important amenities. The outcome is that much cannot be achieved in terms of quantity of food produced. There is no good road to access the little produced or the storage facilities for the preservation of the products. Many researchers noted that in addition to economic affordability, physical access to food is also facilitated by adequate infrastructure, such as railway lines and paved roads.

The nature of agricultural business does not give room for the owners to borrow money from individual. Bank which is the lender of last resort do not grant credit to small farmers and have no plans to encourage the sector. The access to financial services by small scale businesses is usually seen as one of the limitation to their benefit from credits and other services (Mashenene & Rumanyika, 2014). According to Kanu (2015), commercial banks in Nigeria sometimes exclude small and rural business owners from obtaining credit because some divert the funds into other uses. As a result, banks will not be allowed to know what they are doing. Some will automatically change their address and resist any investigation into their activities. To confirm this FOA (2015) said that agricultural sector in Nigeria continues to have poor access to financial services that enable farmers and other agricultural producers to adopt new technologies, improve market linkages, and increase their resilience to economic shocks. Poor access to financial services that enable input suppliers, processors, traders and others in agribusiness to address liquidity and encourage targeted private sector engagement in agriculture remains a challenge. Lending rate is too high for the agricultural sector. Interest rate constitutes a very important factor affecting the productivity of agriculture. As observed by Anyawu, Ukeje, Amoo,

Igwe and Eluemunor (2010), one of the purposes of the policies of agricultural credit years over was the provision adequate credit to the agricultural players at an affordable cost and at the right time.

Again, CGAP,(2015) and FOA(2014) said that there is a heavy demand for investment capital and sustainable financial services for rural areas and agricultural activities necessary for global growth and food security. In particular small holders' households and enterprises in developing countries lack the required investment capital and access to financial services, thereby resulting in low agricultural productivity and efficiency with attendant low incomes and high losses.

However, the source obtaining such capital is farfetched. In Nigeria, unlike other countries, there is nothing like rural or mobile banking. Most of the farmers are rural dwellers that may be ignorance of financial services and Deposit Money Banks could not grant access to financial services. As noted, in the Seoul (2014), financial inclusion Action Plan, universal financial inclusion requires bringing 2.5billion people who are currently excluded into the formal financial system. This will enhance sustainable agriculture and food adequacy.

Gender inequality is another issue that hinders providing finance to agricultural sector. Women are at the heart of Agricultural sector; as a result they have less access to land. Deposit Money Bank granting of credit is subject to provision of collateral, women could not do it and have less or no credit from banks. World Bank (2015) posits that providing finance to agriculture is a challenging to both male and female farmers, however, women face some unique challenges. These challenges relates to the role of women in the household that often restrict their control over assets and constraints their available time for productive activities. Their role in the household is often invisible, particularly when it comes to their economic and financial contribution. As such women have lower access to economic and financial services.

In Nigeria, people find it hard to get enough water for their personal use and it comes to agriculture, water is one the challenges. In some areas, irrigation is available, yet it is not sufficient for the farmers that needed it. It is clear that River Basin

Authority has the responsibility of providing water unfortunately the supply is much less than the demand. Although some authors said that optimizing the use of available water resources by the choice of crops with limited water requirement, use of water conservation techniques as well as efficient irrigation methods water provided by river basin authorities is insufficient to enhance effective for supply of water for agriculture.

Government expended heavily on this sector, however, the amount provided is not commensurate with the quantity of food produced. The challenge is not in the provision of money but in the management of the fund. Despite the annual budget on agriculture, government does not provide intervention fund. In some cases, this fund will be diverted to another purpose. The money may not reach the hands of core farmers that will make proper use of it. For example the intervention fund N250m provided by the government through microfinance in 2014 was shared by the politicians overnight. According to FMARD 2013, the problems of the agricultural sector are lack of government coordination, inconsistencies in policy, regulatory, laws, taxes and administrative practices, lack of security of raw material supplies to food processors, lack of human capital, were identified as top constraints facing agribusiness investors in Nigeria. Provision of storage facilities to the agricultural sector will help in the preservation of the little produce.

Some researchers believe that finance is critical to storage; for instance, farmers who need cash quickly are reluctant to store. They thus sell products at the point when poor pricing prevails. All these and more challenges have hindered the production of sufficient food despite the amount of government put to the sector.

3.0 Methodology

In order to achieve the objectives of this study: Government expenditure and food production in Nigeria. E-View Package was used to analyse the data. The relationship between government expenditure, Deposit money Banks' credit to agricultural sector, management of the fund and contribution of private sector to agricultural sector are captured in the multiple regression model specified as follows:

$$\log(QFP) = \beta_0 + \beta_1 \log(VBL) - \beta_2 \log(GE) - \beta_3 \log(MF) + u \dots (1)$$

Where:

QFP = Quantity of Food Production

VBL = volume of bank loan to agricultural sector

GE = Government Expenditure

MF = Management of Fund

PSC = Private Sector Contribution

3.1. Data. β_0 , β_1 , β_2 , and β_3 , are the parameter coefficients of the model where all the indicators of Central Bank's grant to agricultural sector, Deposit money banks' loan, management of government expenditure, fund to agricultural sector and private sector contributions are expected to have a significant relationship with Quantity of Food Production (QFP). That is, $\beta_0 = 0$, β_1 , β_2 , and β_3 .

For the estimation of the multiple regression model specified in equation (1) above, annual data of the specified variables were sourced from the Central Bank of Nigeria Statistical Bulletin, CBN Annual Reports and Statement of Accounts and data from FOA for the period 2010-2016. The aggregate data were analyzed with the aid of the econometric software package E-Views.

4.0 Analysis And Results.

The analyses and results of the study are presented in this section as shown in Tables in the appendix.

4.1 Table 1: DW Statistics

The main purpose of DW statistic is to find out whether there is presence of spurious regression as a result of data used but the result shows that DW statistic is 0.80 and R-squared value 0.72, DW statistic is higher than R. squared indicating absence of spurious regression. Hence the estimated coefficients from the regression can be acceptable.

4.2 Table 2: Ordinary level series parameter results.

The results of ordinary least square estimate the relationship between government expenditure and quantity of food produced indicate F. statistic of 191.3128 and the prob is 0. The estimation is significant at 5% level with 0.87 R.squared as explanatory power. The overall result shows that government expenditure and food production are positively related over the period under consideration. The volume of bank loan at 30%, explaining that at 5% change in the volume of bank loan, food production will change at the rate of

30%. When there is little or no increase in the amount of loan granted by the Deposit Money banks to farmers, there will be no additional output to the quantity of food produced. Again, the result from government expenditure showed that increase in fund does not result corresponding increase in the quantity of food produced. Fund is not properly channeled to agricultural sector; as a result, increase in the fund does not lead to corresponding increase to the total quantity of food produced.

4.3 Table 3: ADF test (Unit Root Test)

Time-dependent characteristics of the variables were examined in the multiple regression models using the Augmented Dicky-Fuller (ADF) unit root test. The result of the ADF tests conducted showed that GE and QFP are not stationary and the variables' stationarity is obtained after second deference 1(2). ADF test is also used to examine the long run relationship between the variables. At the appropriate lag order of 2 selected through Akaike criteria on the variables as shown in Table 3. The ADF unit root test indicates that all the variables are integrated of order 2, which means that the data could become stationary after the second differencing.

4.4 Table 4:Correlation Matrix.

The correlation matrix for all the variables in the model is presented in Table 4 in the appendix. The table shows that the correlation between GE and QFP is 0.201500; between VBL and QFP is 0.0310700. The correlation between MF and QFP is -0.29100. In all, it is evident that the variables are not perfectly correlated and more test needed to be conducted.

4.5 Table 5: Co integration Test.

Having established that the variables in equation (1) are all integrated of order 2, the Johansen co integration test is conducted to examine whether there is any long-run relationship between the dependent and independent variables. The result of the Johansen co integration test which assumes a linear deterministic trend in the data was conducted with a lag interval of 1 to 1. The test indicates that there are two co integrating equations at the 5% level of significance. The test therefore confirms the existence of two long-run dynamic combinations of the dependent and independent variables of government expenditure and quantity of food produced.

4.6 Table 6: parsimonious ECM

Given the existence of a long run relationship among the variables, the error correction mechanism was used to examine the dynamic behavior of the model when confronted with short run shocks. Table 7 in the appendix presents the result of the over-parameterized error correction model estimated using the E-Views. Subsequently, the parsimonious error correction model estimates was derived by employing the general to specific approach. The result of the parsimonious ECM is in Table 6. The parsimonious ECM estimates are obviously more robust than the level series results in Table 6 given a D-W statistic value of approximately 2.118 which indicates the absence of auto correlation in the ECM model. The adjustedR² of the model is approximately 42.69% indicating that the independent; the variables jointly explain about 42.69% of the total variation in FP, the dependent variable. Furthermore, the F-statistic is 2.27 with a p-value of 0.018 which is significant and means that the model is a good fit. However, the error correction coefficient (ECM01) of 0.11835 is not appropriately signed and is also not significant. The results indicate that the increase in the government expenditure does not cause quantity of food production to increase.

$$Y_t = \sum_{i=1}^n \alpha_i X_{t-i} + \sum_{j=1}^n \beta_j Y_{t-j} + u_{1t} \dots\dots\dots(2)$$

$$X_t = \sum_{i=1}^n \delta_i Y_{t-i} + \sum_{j=1}^n \lambda_j X_{t-j} + u_{2t} \dots\dots\dots(3)$$

4.7 Table 7:Granger Causality Test.

To test hypothesis 4 that is formulated to examine the direction of causality between the changes in government expenditure and quantity of food production. The Granger causality test was employed with an optimal lag of 2. The Granger causality test according to Granger (1969) is used for testing the short run direction of causality between variables say Y and X. The test is base on estimating the following bivariate regressions stated below:

Where Y_t and X_t are the variables, of interest while U_{1t} and U_{2t} are the disturbance terms assumed to be

uncorrelated (Gujarati, 2009). The results of the Pairwise Granger Causality tests are presented in Table 5 in the appendix. The causality test results reveal that there is a uni-directional causality relationship running from GE and QFP to MF respectively. For GE, VBL and QFP, null hypothesis of no Granger causality was rejected.

4.8 Table 8: Bar Chart

The researchers used this chart to present the responses obtained from the contribution of private sector to Agriculture sector and its impact on food production (objective no.3) The result indicate that private involvement is high, although there is gradual increase in private sector contribution to the agriculture in the country, but the contribution is very small considering the place of agriculture in the society and the population of the country.

Way Forward

- There is need to provide modern technology and mechanization of the numerous processes of food production especially in the rural area and increase production of the agricultural sector.
- There is need for government to provide intervention fund through Bank of Agriculture, Bank of Industry and Central Bank of Nigeria (BoA, CBN, BOI) with minimal interest rate, as it will help to have sufficient fund to be used in Agriculture. Hence FOA(2015) confirm that to improve financing options and de-risk value chains further, Nigeria will need to intensify innovation in financing ecosystems - the policy objective is to increase productivity by ensuring access to timely, high quality and price competitive inputs
- Sufficient and necessary materials including fertilizers should be provided and delivered to the areas it will be effectively used, in order to improve incentives for fertilizer supply. Soil degradation and deforestation have caused erosion and climate change; it be corrected by the use technology control measures e.g. tree planting

However, numerous factors should be considered before providing the fund: management of the fund, interest rate at which the money will be loaned to the farmers, identification of really farmers and how to the make fund available to them. On different occasion government has provided some fund and the challenged faced is to give to the money to the appropriate farmers.

There is need for all year planting not seasonal planting in the country; this can be achieved through provision of water.

Money should be made available to core farmers and bank should include peasant farmers in financial services. Where possible fund should not be given to farmers but necessary materials that will enhance food production should be provided to them. Even the laborers should be paid direct.

Conclusion

Agricultural transformation which involves higher productivity of the sector and increased production and marketable surplus implies therefore higher growth of the sector and a more substantial contribution to economic growth and poverty reduction, Nigeria should diversify and transit to agriculture, Government should provide special intervention fund to agricultural sector to improve and sustain agriculture in the country, government should provide technology to mechanize agricultural, Bridging the gap between finance and agriculture.

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Agricultural Programmes and Intervention 1962-2010

S/N	PROGRAMME	YEAR	PURPOSE
I.			
	<i>National Agricultural Land Development Authority (NALDA), 1992</i>		
	The Structural Adjustment Programme (SAP), 1986. Degrees of implementation are below:		Restructure the production and consumption patterns of the economy
	The fourth National Development Plan, 1981 – 1985		The need for balanced development sectorally and geographically
	<i>Green Revolution</i>		Create means to meet the needs of smallholder farmers and to spread the benefits of rural development
	<i>Operation Feed the Nation (OFN), 1976</i>		Mobilise smallholder farmers for increased productivity
	National Food Acceleration Production Programme (NFAPP), 1970		Improvement of peasant productivity in staple food crops, introduction of modern farming equipment, and the diversification of crops planted by peasant farmers
	First National development plan, 1962-1968		Promote Agricultural Exports
	Agricultural Land Resource Programme		Monitor and improve land quality
	National Seed Service (NSS) Programme		Produce high quality seeds for Nigerian farmers within a commercial environment and sell high quality seeds and seedlings of selected arable tree crops
	Federal Agricultural Coordinating Unit (FACU)		Promote sustainable agricultural and rural development
	Agricultural Finance Programmes- Agricultural Credit Guaranteed Scheme (ACGS)		Facilitate loans and credits to small-scale farmers with or without collateral
	National Agricultural Research Project (NARP)		Strengthen the country's agricultural research system and ensure availability of food
	National Special Programme for Food Security (NSPFS) Phase I & II		Food security project, Aquaculture and inland Fisheries project, Animal disease and trans-boundary pest control project, Marketing of agricultural commodities and food stock management project etc.
	National Economic Empowerment Development Strategy (NEEDS)		Boost GDP growth and reduce the economic dependence on the public sector
	Microfinance Bank Nigeria Agricultural Co-Operative And Rural Development Bank		Contribute to rural transformation; To make loan available to as many as prospective farmers. They engage in other activities to promote Agricultural productions
	N200 billion Commercial Agricultural Credit Scheme, 2009		Promote commercial agricultural enterprises in Nigeria
	Second National Development plan, 1970-1974		Reconstruction of war ravaged areas and rehabilitation of agricultural production
	The Third National Development Plan, 1975 -1980 Supported the following programmes:		Rural development
	<i>River Basin Development Authority Programme (RBDAP), 1976</i>		Provide water to enhance various forms of productivity, bring the private and public sectors in joint business partnership and ultimately, to bridge the gap between the rural and urban centres
	<i>River Basin Development Authority Programme (RBAP), 1976</i>		Provide water to enhance various forms of productivity, bring the private and public sectors in joint business partnership and ultimately, to bridge the gap between the rural and urban centres
	Agricultural Finance Programmes- Agricultural Credit Guaranteed Scheme (ACGS)		Facilitate loans and credits to small-scale farmers with or without collateral
	National Agricultural Research Project (NARP)		Strengthen the country's agricultural research system and ensure availability of food
	National Special Programme for Food Security (NSPFS) Phase I & II		Food security project, Aquaculture and inland Fisheries project, Animal disease and trans-boundary pest control project, Marketing of agricultural commodities and food stock management project etc
	NIRSAL, 2010		Provide farmers with affordable financial products, while reducing the risk of loans to farmers under other financing programmes offered by the financial institutions

Source: BGL Research

Appendix

Table 1: DW Statistics

Test statistics	Estimated coefficient
R-squared	0.72278
DW statistic	0.80345

Table 2

Ordinary level series parameter results.

Dependent Var.FP	Variable	Coefficient	Std.Error	t-statistic	Prob
	Intercept	1.089455	0.209765	4.123461	0.0000
	GF	0.512560	0.049080	11.90129	0.0000
	VBC(1)	0.308671	0.027890	4.276589	0.0000
	R. Squared				0.871234
	Adjusted R.Squared				0.901768
	DW stat				2.05
	F-statistic			191.3128	prob 0
	LM test(Obs*R-squared)			2.876501	Prob 0.1215670

(*) Significance at 5% level

Table 3: ADF test (Unit Root Test)

Variable	ADF Test Statistic at 1 st Diff.	Order of Integration
GE	-4..676223	1(2)
FP	-2.675158	1(2)

(*) Significance at 5% level

Table 4: Correlation Matrix.

	GE	VBC	MF	QFP
GE	1.000000	0.020051	-0.051400	-.0201500
VBC	-0.030051	1.000000	0.166860	0.0310700
MF	0.016500	0.166860	1.000000	-0.291500
QFP	-0.518300	: 0.021074	-0.291500	1.000000

Source: Author's Computation

Table 5: Error Correction Mechanism

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.292230	0.159542	1.831685	0.1265
D(LOG(GIF(-1)))	-0.145330	0.240227	-0.604971	0.5716
D(LOG(GIF))	-0.367923	0.196228	-1.874973	0.1196
D(LOG(VBL(-1)))	-0.015558	0.214081	-0.072671	0.9449
D(LOG(VBL))	-0.520773	0.347051	-1.500566	0.1938
D(LOG(VBL(-1)))	-0.683328	0.246424	-2.772971	0.03920-0.3504
D(LOG(VBL))	-0.178236	1.029712	0.200664	-0.436459
D(LOG(MIF(-1)))	-0.087582	0.272472	2.583828	0.6807
D(LOG(MIF))	0.704021	0.158976	-0.160883	0.257458
D(LOG(VBL - 1)))	-0.025577	0.775009		0.4734
ECM01(-1)	0.199533			

R-squared	0.820802	Mean dependent var	0.134009
Adjusted R-squared	0.462406	S.D. dependent var	0.361307
S.E. of regression	0.264913	Akaike info criterion	0.924173
Sum squared resid	0.350894	Schwarz criterion	2.290212
likelihood	7.855857	F-statistic	0.186560
Durbin-Watson stat	1.816319	Prob (F-statistic)	

Source: Author's Computation

Table 6: parsimonious ECM

Variable	Coefficient	Std. Error	t-Statistic	Prob.
FP	0.223565.	0.046789	-3.209075	0.0104
D(LOG(FP(-1)))	0.326210	0.105682	-0.203296	0.3973
D(LOG(GIF))	0.363913	0.106985	-3.301502	0.0065
D(LOG(Psc))	0.456882	0.175071		
D(LOG(MIF(-1).))	0.668352	0.161348	-2.528540	0.0138
ECM01(-1)	0.1121201	0.126245	-2.142305	0.0032
			-.505383	0030
R-squared	0.626700	Mean dependent var	0.134009	
Adjusted R-squared	0.626700	S.D. dependent va	0.361307	
S.E. of regression	0.223211	Akaike info criterion	0.531753	
squared resid	0.398587	Schwarz criterion	0.332756	
likelihood	2.118313	F-statistic	2.271001	
Durbin-Watson stat		Prob(F-statistic)	0.018904	

Source: Author's Computation

Table 7. Pairwise Granger

Causality Tests

Date: 03/10/17 Time:

Sample: 2010 2016

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Probability
GIF does not Granger Cause FP	7	1.23339	0.00501
FP does not Granger Cause GIF		1.03456	0.39021
VBL does not Granger Cause FP	7	0.15234	0.12540
FP does not Granger Cause VBL		1.30123	0.26123

Source: Author's Computation

Bar Chart was used to achieve objective no.3

