GOVERNMENT SPENDING AND AGRICULTURAL OUTPUT IN NIGERIA

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ABSTRACT

This work studied government expenditure on agriculture and agricultural output in Nigeria. It examined the effect of government spending on agricultural output in Nigeria from 1980-2018.The needed data were sourced from the CBN statistical Bulletins. The main analytical tools used are the Augmented Dickey-fuller test and the Autoregressive Distributed Lag model. The ADF unit root test result reveals stationarity among the variables at zero and one. This satisfies the requirement to employ the ARDL bound testing approach. The ARDL Bound test showed the existence of long run relationship among the variables. The findings revealed that government expenditure on Agriculture both capital and recurrent had significant relationship with agricultural output for the period under study. Whereas Commercial Bank loan to Agriculture and Agricultural Credit Guarantee scheme fund both are not significant in the determination of Agricultural output in Nigeria for the period under study. It further reveals that the most important variables that affect agricultural output in Nigeria in ascending order of importance are government recurrent expenditure on agriculture and government capital expenditure on agriculture. These findings imply that Policies that promote increase in government   recurrent and capital expenditures on agriculture will increase agricultural output. The result of the study or policy attention also have important implications for policy attention, showing the preference order in policy attention.

KEYWORDS: Government Spending, *Agriculture*, ARDL

1. INTRODUCTION

Agriculture occupies a unique position in the history of economic development in general and poverty reduction in particular. In contemporary times, agriculture has been acknowledged to be the key tool for achieving the sustainable development goals-SDGs (Umo, 2012). Agricultural sector is a catalyst that speeds up the pace of structural transformation and diversification of economies, makes it possible for countries to fully utilize their factor endowments, depending less on foreign supply of agricultural product or raw materials for their economic growth and development.

Moreover, agriculture provides the source of livelihood for all families and nations. The variety of crops available through agriculture provides hope of livelihood, strength, nourishment and survival for millions of people in a nation. Agriculture is no doubt the foundation of the wealth of several nations. It is the major source of raw materials, food, foreign exchange earnings and employment. For instance, in the 1960s and 1970s, the agricultural sector employed over 75 percent of the industrial labour force in Nigeria (Gbosi, 2015). The sector is fundamental to the sustenance of life and the bedrock of economic development, especially in the provision of adequate and nutritious food so vital for human development and industrial raw materials Obayelu (2011). The technologically advanced countries of Europe and America took-off from revenue derived from agriculture before their technologically breakthroughs (Obafemi, 2004). It therefore became obvious to postulate that agricultural sector has the potential to be the industrial and economic springboard from which Nigeria's development can take off.

In the 1960s and up to the early 1970s, Nigeria's agriculture flourished. The country was one of the world's highest producers of palm oil, cocoa, groundnut, rubber, cotton etc., and these cash crops formed the main source of foreign exchange earnings for government to provide land mark social and economic infrastructure. In this regard, Lawal (1997) posits that even with the reliance of Nigerian peasant farmers on traditional tools and indigenous farming methods, these farmers produced 70% of Nigerian exports and 95% of its food needs in the 1960s. But today crude oil has taken over that position. To put it in another way, the exploitation of crude petroleum and the huge inflows of foreign exchange revenues that accompanied it diverted the attention of the government and agricultural producers into other activities aimed at reaping the economic boom created by the huge oil revenues. To be honest, since the advent of oil as a major source of foreign exchange earnings in Nigeria the picture has been almost that of general reduction in agricultural output and exports. The utter neglect of agriculture and overdependence on oil had created disincentives to millions of farmers who had abandoned their farming implements and migrated into cities in search of jobs outside the farms. This has resulted to sharp decline in agricultural production. No nation can truly be great if it cannot boost agricultural output to feed her populace and no meaningful progress can be made in other sectors of life if there is scarcity of food for the people. The need for a well fed populace cannot be overemphasized, since it is accepted worldwide that food is the source of energy and energy by definition is the ability to do work. A poorly fed populace cannot supply the needed labour necessary to move the nation forward.

However, a cursory look at agricultural sector in Nigeria indicates that farming is carried out by marginal farmers (small holder farmers) who employ traditional methods of farming. These poor farmers, who are stuck with their old ways, get very little or no assistance from government. The sector remains without adequate spending (intervention) by the government. This development has deprived the sector from its contribution to economic growth and development.

In addition, the public sector has a major role to play in providing and financing agricultural services, although private service providers are also central, for example in input supply and output processing and marketing (Aderibigbe et al, 2014). Government (public) spending in agriculture could come from bo.th domestic and external sources. One major domestic source of public investment in agriculture is government spending, which include spending in a range of areas including administration supervision and regulation; agrarian reform; agricultural land settlement, development, and expansion; food control; farm price and income stabilization programs; extension, veterinary, pest control, crop inspection, and crop grading services; production and dissemination of general and technical information on agriculture; and compensation, grants, loans, and subsidies to farmers. The other important domestic public spending in agriculture is on R&D, which includes spending on research on different subsectors of agriculture and socioeconomic aspects of primary production as well as research on on-farm, postharvest activities and food processing. The major foreign source of public investment in agriculture is World Bank-Agricultural Development Projects (ADP), which is also used to finance most of the activities mentioned above (FAO, 2012) The public spending that is directed towards increasing the agricultural productivity to meet growing demand for foods, raw materials, foreign exchange, increasing supply of consumer goods and encourage expansion of small indust3' will stimulate economic growth and development in Nigeria.

To achieve increase the agricultural productivity, various governments in Nigeria have enunciated and implemented a myriad of programmes including National Accelerated Food Production Programme (NAFPP), National Agricultural and Co-operative Bank (NACB), Operation Feed the Nation (OFN), Agricultural Credit Guarantee Scheme (ACGS), Rural Banking Scheme, Commodity Boards, The River Basin Development Authorities (RBDAs), The Green Revolution Programme (GRP) and The National Agricultural Land Development Authority (NALDA). Yet the performance of the agricultural sector i's not impressive.

Furthermore, the level of public spending on agriculture in Nigeria remains inadequate regardless of the indicator used. Agricultural spending as a share of total federal spending averaged 4.6 percent from 2008-2012 (Aderibigbe et at, 2014). Budgetary allocation to agriculture compared with other key sectors is also low despite the sector's role in the, fight against poverty, hunger, and unemployment, and in the pursuit of economic development. Supporting this, (Aderibigbe et al, 2014) submitted that government spending in agriculture is critical to the-transformation of the agricultural sector in Nigeria, especially in view of the low level of investment in the sector in spite of its huge potentials for wealth creation, employment generation, and poverty alleviation. Strictly speaking, agriculture is considered to be the sector with the greatest potential for pro-poor growth in the country. A large proportion of the agricultural labour force is engaged in subsistence farming rather than large-scale commercial agriculture, which has greater potential for accelerating economic growth. Different studies, including the, World Deve1opmnt Report on agriculture (World Bank, 2007), assert that effective resource allocation to the agricultural sector, such as for the delivery of services like extension, credit, research and development (R&D), and plant and livestock disease control, are critical

to the strong performance of the agricultural sector. Yet on average, less than 4 percent of total public spending in Nigeria is allocated to agriculture. In Nigeria, intensity of public spending in agriculture-measured by percentage of agricultural expenditure in agricultural GDP is among the lowest in the world (Aderibigbe et al, 2014). This means that much attention has not been given to the agricultural sector because the percentage of agricultural spending in total government spending can be taken as an indicator to measure how much attention government gives to the sector. Therefore, there is need to examine the impact of government spending on agricultural output in Nigeria from 1980 to 2018.

Agricultural sector remains the engine of growth and development. It contribution to the promotion of economic growth and higher standard of living is substantial. Agriculture is a strong option for spurring growth, overcoming poverty and enhancing food security. In spite of the development role noted above for agriculture, many opportunities have been lost by not removing the, impediments to its growth. These impediments include low investment in agriculture (inadequate funding), weak agro-business linkages, rural-urban migration, poor research and extension. Nigerian agriculture to a large extent still posses the characteristics of a peasant economy that was prominent in the pre-independence period. Farmers still practice the traditional or subsistence agriculture in which simplest traditional, rudimentary technology consisting mainly of hoe and cutlass are being used. The subsistence nature of farming characterized by low adoption of technology, inadequate use of fertilizers and improved seeds accounts for low productivity of the sector. Moreover, the problem of poor transportation network can never he wished away, as transport cost escalates the prices of food stuff. In addition, majority of the farmers are in the rural areas and, due to inaccessible roads, many of them are unable to transport their produce to the market. Even when those that eventually get to the market through the efforts of middlemen, are sold at outrageous prices in order to maximize profit.

In addition, lack of access to adequate funds to invest in the sector has been identified as a major hindrance to improved productivity. For instance, the budgetary allocation to agricultural sector falls short of the 10% of public expenditure pledged by African leaders, to be spent on agriculture as contained in their Comprehensive African Agricultural Development Programme (CAADP), Maputo Declaration, in order to boost the growth of the sector at least by 6 percent annually (NEPAD and AU, 2003). That is, inadequate funding in this regard is central to the crisis of food production, food security and decline in agricultural output in Nigeria. As a result of the decline in agricultural output, domestic food supply had to be augmented with large imports. Supporting this, Aderibigbe, Tewodaj, Tolulope, Chinedum, Edet, Reuben and Justice (2014) submitted that the level of public spending on agriculture in Nigeria remains inadequate regardless of the indicator used. Agricultural spending as a share of total federal spending averaged 4.6 percent from 2008-2012. Budgetary allocation to agriculture compared with other key sectors is also low despite the sector's role in the fight against poverty, hunger, and unemployment, and in the pursuit of economic development. Aderibigbe, Tewodaj, Tolulope, Chinedum, Edet, Reuben and Justice (2014) further submitted that government spending in agriculture is critical to the transformation of the agricultural sector in Nigeria, especially in view of the low level of investment in the sector in spite of its huge potentials for wealth creation, employment generation,

and poverty alleviation. The inability of the agricultural sector to ensure food security in the country gave way to massive importation of basic food items such as rice, beans and wheat (Egbuna, 2003). Hence, the massive importation of food products to supplement local production and this exerts negative effects on the country's resource base thereby hindering the achievement of sustainable economic growth.

Moreover, different studies, including the World Development Report on agriculture (World Bank, 2007), assert that effective resource allocation to the agricultural sector, such as for the delivery of services like extension, credit, research and development (R&D), and plant and livestock disease control, are critical to the strong performance of the agricultural sector. Yet in Nigeriar intensity of public spending in agriculture-measured by percentage of agricultural expenditure in agricultural GDP is among the lowest in the world (Aderibigbe, Tewodaj, Tolulope, Chinedum, Edet, Reuben & Justice, 2014). This means that much attention has not been given to the agricultural sector because the percentage of agricultural spending in total government spending can be taken as an indicator to measure how. much attention government gives to the sector.

Over the years, several measures have been adopted by the Nigerian government to remove the impediments and boost agricultural production. Some of these measures and programmes include reforms in inputs supply, improved socio-economic infrastructure, improving the efficiency of agricultural loans and better access to modern farming practices. Others are increased support for agricultural research, human resource development of agriculture and government active participation in agriculture (Gbosi, 2015).

Despite these laudable efforts, Nigeria's agricultural sector is still characterized by low yields, low level of inputs and limited areas under cultivation. For instance, an analysis of the sectoral contributions to GDP showed that the share of agriculture in GDP had declined in the period 1960-2010. It fell from 55.8 per cent in the period 1960-1970 to as low as 28.4 per cent in the period 197 1-1980 (Sanusi, 2011). The country faces an acute shortage of food as a result of low agricultural productivity (Okoiliya, 2003). As reported by Gbosi (2015), the period 1980 to 2001, witnessed a low growth in all aspects of agricultural production. The growth of the agricultural sector remained at 5.8% between 1987 and 1988. It further declined to 1.3% between 1988 and 2004. However, Gbosi further revealed that during the period 1990-200 1, agricultural share to GDP showed an average growth rate of 2.8%. The growth in the sector was disturbing given the rich arable land all over the country. Agricultural productivity has seriously declined over the past five decades and has resulted into high incidence of rural poverty. In order for the sector to have any meaningful impact on poverty alleviation in the country, the agricultural sector must grow between 70 and 75% (Ekpo, 2003). But Umo (2012) revealed that of the 68 million arable land available in Nigeria, only an estimated 48.5% has been put to use while 51.5% is yet to be exploited because of poor government spending on agriculture making the achievement of adequate growth in the sector difficult.

Nevertheless, a number of studies have been carried out on different aspects of this subject using various measures to examine the relationship between government spending and agricultural output in Nigeria. However, the studies have provided mixed results. While the studies of Elijah (2011), Ewubare and Eyitope (2015), Okpara (2017), Ama and Omojola (2017) revealed that federal government agricultural expenditure exerts a positive and significant impact on agricultural output in Nigeria; Matthew and Mordecai (2016) discovered a negative and significant impact of federal government agricultural expenditure on agricultural output in Nigeria. The difference in empirical findings on the impact of government agriculture expenditure on agricultural output in Nigeria is of serious concern and the above state of affairs raised a pertinent question: what is the relationship between federal government agricultural expenditure and agricultural output in Nigeria? This question begs for an answer and this study therefore seeks to appeal to empirical evidence to resolve this question.

Moreover, most studies on the impact of government spending on agricultural output in Nigeria add up government capital and recurrent spending on agriculture together without separating them. In related terms, similar studies have lost touch on current realities of the government capital expenditure on agriculture and government recurrent expenditure on agriculture. Thus, this study stands out, to add to wherever scarce studies already existed in this research area.

The broad objective of this study is to analyze the effect of government spending on agricultural output in Nigeria from 1980-20 18. The Specific objectives are to determine the effect of government capital and recurrent expenditures on agricultural output in Nigeria and to measure the relative importance of government capital expenditure, recurrent expenditure and other relevant variables influencing agricultural output in Nigeria.

The research work was guided by the following null hypotheses:

$H0_1$: government capital and recurrent expenditure on agriculture do not have significant effect on agricultural output in Nigeria. The research focused on a detailed analysis of the impact of government spending on agricultural output in Nigeria. Specifically, the research will be of immense help as it will provide the basis for agricultural policy measures aimed at achieving sustainable increase in agricultural output in Nigeria. It would also serve useful purpose to different groups of organizations, policy makers, academicians, students, investors, reference material for further research work in the field of study. Lastly, it is hoped that the analysis and recommendations of this study will help to improve policies, promote dialogue among stakeholders and catalyze government effort towards improving the agricultural sector.

The study basically focused on the effect of government spending on agricultural output in Nigeria. That is, how federal government spending on agriculture has impacted on agricultural output in Nigeria. The study covered the period 1980-2018. All the conclusions were made with reference to

this period only. The data and other pieces of information that were utilized in the conduct of the study were obtained from secondary sources, including journals, textbooks, magazines, internet, etc.

Government spending is the expenditure incurred by public authorities like federal, state and local governments to satisfy the collective social wants of the people. Nurudeen and Usman, (2010) see government spending as the outflow of resources from government to other sectors of the economy. According to Okoh (2015), government expenditure is defined as the expenses incurred by the government in carrying out its responsibilities, i.e. in the provision of social services and defense, to mention just a few. Government expenditure can be classified into capital and recurrent expenditure. Recurrent expenditure is expenditure incurred for day-to-day functioning of the government machinery including civil administration, police, judiciary and current expenses of beneficent department including agriculture, health and education (Ajie, Akekere and Ewubare, 2014). In addition, capital expenditure is expenditure incurred on building assets of a lasting character, like construction of canals, darns, water storage, roads and railway lines, public building of various kinds, ports, etc.

Momentously, public spending in agriculture could come from both domestic and external sources. According to Food and Agricultural Organization (FAO, 2012), one major domestic source of public investment in agriculture is government spending, which include spending in a range of areas including administration supervision and regulation; agrarian reform; agricultural land settlement, development, and expansion; food control; farm price and income stabilization programs, extension, veterinary, pest control, crop inspection, and crop grading services, production and dissemination of general and technical information on agriculture, and compensation, grants, loans, and subsidies to farmers. The other important domestic public spending in agriculture is on R&D, which includes spending on research on different subsectors of agriculture and socioeconomic aspects of primary production as well as research on on-farm, postharvest activities and food processing. Supporting this, Matthew and Mordecai (2016) submitted that 'public expenditure on agriculture includes spending by local/municipal regional and national governments on agriculture from annual budgetary allocation. It is the expenditure on crop development, seed production and distribution, fertilizer procurement, agricultural mechanization, extension services, control of pests and diseases, soil conservation, irrigation, research, etc" The major foreign source of public investment in agriculture is World Bank-Agricultural Development Projects (ADP), which is also used to finance most of the activities mentioned above.

Strictly speaking, public spending that is directed towards increasing the agricultural productivity to meet growing demand for foods, raw materials, foreign exchange, increasing. supply of consumer goods and encourage expansion of small industry will stimulate economic growth and development in Nigeria. Investment in infrastructure to improve the accessibility of a given region by reducing travel time or increasing the potential to travel will increase agricultural output in the country.

Investment in economic infrastructure-roads, electricity, water and sanitation, transport and communications, railways, waterways, airways, and the like will facilitate economic activities. For example, investment in new tractors may increase the total output of the crops farmers can produce. Investment to ensure adequate transport facilities will make possible for farmers to get the extra products to commercial markets thereby making the investment to add something to national food production Investment in the installation of irrigation systems may improve the quality of a nation's agricultural land by raising productivity per hectare. The use of chemical fertilizers and the control of insects with pesticides may have beneficiary effects in raising the productivity of existing land farm. All these forms of investment are ways to boost agricultural output.

Agriculture holds a highly important position in the growth and development any country. Agriculture involves the cultivation of land, raising and rearing of animals, for the purpose of production of food for man, feed for animals and raw materials for industries. It involves cropping, livestock, forestry, processing and marketing of these agricultural products. Supporting this, Akinboyo (2008) defined agriculture as the science of making use of the land to raise plants and animals. It is the simplification of nature's food webs and the rechanneling of energy for human planting and animal consumption. According to Ebere and Osundina (2012), agriculture is the art and science of crop and livestock production. In its broadest sense, agriculture comprises the entire range of technologies associated with the production of useful products from plants and animals, including soil cultivation, crop and livestock management, and the activities of processing and marketing. Moreover, until the exploitation of oil reserves began, in the 1980s, Nigeria's economy was largely dependent on agriculture. Nigeria's wide range of climate variations allows it to produce a variety of food and cash crops. The importance of agriculture in transforming both the social and economic framework of an economy cannot be overemphasized. It is a source of food for man and raw materials for the industrial sector. It is also essential for expansion of employment opportunity, for reducing of poverty and improvement of income distribution, for speeding up of industrialization and easing the pressure on balance of payments (BOPs). In effect, agriculture has been seen as the main source of gainful employment, from which the nation can feed its teeming population, a regenerative; providing the nation's industries with local raw materials, and as a reliable source of government revenue. Moro (1995) submitted that the agricultural sector constitutes one of the most important sectors of the Nigerian economy. Its importance stems from the abundance of agricultural resources and the high percentage of the active population 'engaged in agriculture. In addition to this, its contribution to the country's GDP as well as foreign earnings.

To buttress this point, Ajie (2008) submitted that agriculture provides human beings with some of their most basic needs. It outputs are food and raw materials. Without the food products, life can hardly be sustained; without the raw materials, the industrial sector of the economy, cannot fully develop. Therefore, no country can afford to neglect' its agricultural sector as it constitutes the bedrock for industrial take-off. To speed-up the pace of economic growth and development of a country, it is pertinent to increase productivity per man, per unit of land in the production of food stuffs and

agricultural raw materials. Put succinctly, the importance of agriculture lies in the fact that it provides food for the teeming population of an economy. Every human being needs food to stay alive. It is from agriculture that the basic food items like rice, beans, yam, etc. are produced. Apart from provision of food, agriculture provides agricultural raw materials for agro-based industries. Many industrial raw materials are agro-based. Without agriculture, some essential products like beverages, assorted types of clothes, shoes, bags, etc. cannot be produced as there would have been no materials for their production. Agriculture provides some of the foreign exchange earnings of a country export products like cocoa, groundnuts, etc, are sold outside Nigeria and foreign currencies obtained from their sales are useful to the country. We use such money to buy equipment and pay for our imports. Agriculture provides employment opportunities for people. Apart from self-employed farmer, many people get employed in agricultural sector for money wages. Agriculture creates market for agricultural implements: today, many farm implements have been developed and many farmers nowadays buy and use such implements. Without agriculture, producers of such products cannot find market for such products. The types of: agriculture practice in Nigeria include crop production, livestock faming, fishing and forestry.

Crop Production: This involves raising agricultural products from plants. These plant products are grouped as follows: Grains crop, which include rice, maize and wheat; legumes, which include beans, peas and groundnuts; oil seed crops, such as soya beans and palm fruits; tuber crops, like yams, cassava and potatoes; sugar crops, such as sugar cane and sugar beet; fiber crops, such as cotton; tree crops, such as orange and mangoes; nut crops, such as coconut; vegetables, such as melons, tomatoes and pumpkins; and forage crops, which are grown as food for animals.

Livestock Farming: In livestock farming, the farmers rear animals and process animal products for use by humans and animals. These animals include cattle, for beef and dairy products, and sheep, pig and goat for meat. In poultry farming, chicken meat and eggs are final products. Horses may be bred for recreation.

Fishing: In the past, fishing in Nigeria was often carried out using traditional methods of catching whatever fish could be caught in the seas and rivers. Today, fish production has gone a step further. Fish is now reared in fish ponds which consist of an excavated trench which also may either be laid with concrete or left in its natural state. A farmer may decide on erecting vertical walls to produce an enclosure. In all cases, young fish which are called fingerlings are stocked and fed in pond, until they are ready for harvest. In Nigeria, there are two main systems of fishing namely: inland or fresh water fishery, which involves capturing fish in fresh bodies of water such as rivers, lakes, streams and ponds. Deep sea fishery which involves capturing fish from sea and oceans-such fish are saltwater fish.

Forestry: Forestry is the study and management of forest and forest resources. Moreover, this is the kind of agriculture which deals with the felling of trees and processing the logs into timber and wood. It includes the regeneration of economic trees, through forestation programme which are designed to

replace what we take out of nature. Farmers plant and maintain the forest in order to produce further plants for timber and other wood products. In order to revamp the agricultural sector, the federal government of Nigeria had embarked on and implemented several agricultural policies and programmes some of which are abandoned, and some restructured while others are still in place. For instance, in 1973, the government established National Accelerated Food Production Programme (NAFPP) to boost food production in the country based on the green revolution concepts and experiences of India, Mexico, Pakistan and Philippians. Its main objective is to accelerate the production of six major food crops namely millet, sorghum, rice, maize, wheat and cassava. This was to be achieved through the introduction of high yielding varieties, use of appropriate fertilizers, agrochemicals, good storage and processing facilities, provision of credit as well as marketing outlets. The major components of the programme are research, extension and agro-services. In addition, several research institutes were mandated to develop improved crop varieties and were made popular through extension agents and the use of mass media. (Anyanwu, Oyefusi, Oaikhenam & Dimowo; 1997).

Also, in 1973 federal government established National Agricultural and Co-operative Bank (NACB) to boost food production for our growing population. Specifically, NACB aims at promoting growth in the quantity and quality of credit to all aspects of agricultural production. As reported by Anyanwu, Oyefusi, Oaikhenam and Dimowo (1997), NACB performance was impressive after ten years of operation, but despite the impressive performance of NACB, the quantity of loans granted to small-holder farmers has proved grossly inadequate.

Furthermore, in 1976, the Obasanjo regime launched Operation Feed the Nation (OFN) mainly to address the problem of rising food crisis, rural-urban migration and escalating food import bills. Specifically, the objectives of the programmes include increasing food production and eventually to attain self-sufficiency in food supply as well as encourage the section of the population which relies on buying food to grow its own food. According to Daneji (2011), the OFN programme attempted to mobilize the general public to participate actively in agricultural production and ensure self-sufficiency in food production. This programme gave encouragement and material assistance to the people in the form of technical advice and the supply of subsidized essential farm inputs such as improved seeds, fertilizer, pesticides, farm implements, livestock, livestock feed. OFN failed because of land use decree, increased food importation, inadequate human and material resources, and faulty administrative system (Anyanwu, Oyefusi, Oaikhenam & Dimowo, 1997).

The establishment of Agricultural Credit Guarantee Scheme (ACGS) Fund Act in 1977 (Decree No. 20) as amended on 13th June, 1988 was also an attempt by the government to encourage the flow of increased credit to the agricultural sector The ACGS came into operation on April 3, 1978 with the objective of providing "guarantees in respect of loans granted for agricultural purposes by any bank in accordance with the provisions of the Act" and with the aim of increasing the level of bank credit to

the agricultural sector. Another objective of the scheme was to minimize risks banks are exposed to, as a result of their lending activities to the agricultural sector.

In 1977, the government launched the Rural Banking Scheme to boost agricultural production in the country The rational for this include, among others, the fact that a network of rural banks would help to mobilize rural savings some of which would be invested in the agricultural sector The monetary authority in the various credit guidelines stipulated the percentage of deposits mobilized in the rural communities that should be lent to farmers in the rural areas In 1994 monetary and credit policy guideline, the ratio of commercial banks' rural lending to deposits mobilized in the rural communities was 50% (Okpara, 2017). In addition, the Rural Banking Scheme also aimed at facilitating the transformation of the rural economy and thus restrains the population drift from the rural to the urban centre, was not being vigorously implemented Furthermore, mere extension of the branches of existing ill-adapted banks into the rural areas falls short of a good model for "rural bank".

Moreover, in 1977, there was a reorganization of the existing market board system for export There was seven Commodity Boards, viz Cocoa, Rubber, Cotton, Groundnut, Grains (for Cereals) Root Crops (for Cassava, Yam and Cocoyam), and Palm Produce (for palm oil and Palm kernel) Commodity Boards. Their establishment was to promote both the production and marketing of their respective commodities Historically in Nigeria, the boards were to retain surplus revenue when world market prices were high and expend them in supporting domestic prices when they fell below the average. The scheme worked well at first but soon faltered since 4 the marketing boards were looked upon as revenue collecting agents for the government. Since the dismantling of the marketing boards following the structural adjustment reforms of the 1980s, these functions no longer exist.

In addition, various River Basin Development Authorities (RBDAs) were also established to boost agricultural output in the country. The development of River Basins was conceived in 1963 with involvement in the Lake Chad Basin and River Niger Commissions for countries bordering the Lake and the Niger River. But the concept was first tried in 1973 with the establishment of the Sokoto-Rima and the Chad Basin Development Authorities. Eleven others were established under Decree Nos. 25 and 31 of 1976 and 1977 respectively. In June 1984, the number of these river basins was increased to 18 under the new name of River Basin and Rural Development Authorities (old name being River Basin Development Authorities). The scheme became necessary because of persistent short rainy seasons in many parts of the country which has continued to restrict cultivation to single cropping pattern the year round. The objectives of River Basin and Rural Development Authorities include the development of surface and underground water resources for multi-purpose use, control and maintain dams, irrigation and drainage system and other works necessary for food production and human water need.

The then Shagari administration launched Green Revolution Programme (GRP). According to Todaro and Smith (2011), green revolution has to do with the boost in grain production associated with the

scientific discovery of new hybrid seed varieties of wheat, rice, and corn that have resulted in high farm yields in many developing countries. The objective of the scheme is centred at self-reliance in food production and the diversification of Nigeria's sources of foreign exchange. To achieve this objective, all constraints to increased production were to be removed, initiate new input procurement and distribution systems. Under this scheme, input subsidies and crop pricing policies were streamlined while constructions of rural physical infrastructures were embarked upon via massive federal funds allocation. The programme covered all area of agricultural production, food and export crops, livestock, fisheries and forestry.

Momentously, the government launched the National Agricultural Land Development Authority (NALDA) in 1991 to execute a national agricultural land development programme to moderate the chronic problems of low utilization of abundant farm land thereby increasing food production level of farmers through expansion of farmers' farm lands. The main target of the programme was the development of 30,000-50,000 hectare of land in each state during the 1992-1994 National Rolling Plan period. Also, it was to see to the placement of at least 7500-12500 farmers within the area developed such that each lives within 3km-5km radius of his farmland By the end of 1995, NALDA had developed a total of 16,000 hectares of land out of which 81.1% was cultivated with various crops (Anyanwu, et al; 1997).

As reported by Aderibigbe, Tewodaj, Tolulope, Chinedum, NEdet, Reuben, and Justice, (2014), the policy framework for agricultural development in Nigeria emanates from the 1999 constitution, the 2001 new agricultural policy thrust, the 2004 National Economic Empowerment and Development Strategy (NEEDS), the seven-point agenda of the Nigeria Vision 20:2020 plan, and the Agricultural Extension Transformation Agenda (AETA). These policy blueprints together provide insights on national priorities in agriculture, guiding policies, policy strategies, and responsibilities of the federal, state, and local governments in delivering public agricultural goods and services.

Furthermore, the Federal Ministry of Agriculture and Rural Development launched the Agricultural Extension Transformation Agenda (AETA) in 2011 under the Agricultural Transformation Agenda. The AETA is a road map for addressing critical challenges of agricultural extension and advisory services in Nigeria. The purpose is to transform agricultural extension into a participatory, demand-responsive, market-oriented, and information and communication technology (ICT) – driven service that provides for the extension needs of all actors along targeted commodity value chains.

A German economist Aldoiph Wagner (1835-1917). Adolph Wagner propounded the theory of increasing government activities. According to Wagner's thesis, which he wrote in 1880's there are tendencies for the activities of all layers of government to increase both extensively and intensively. Therefore, there is tendency for government expenditure to increase. That is, he suggested that the share of public sector in the economy will rise as economic growth proceeds, owing to the intensification of the existing activities and extension of new activities. He noted that increase in state

activities is as a result of social progress. He forecast an increase in the ratio of government expenditure as per capital income rises. Specifically, he observed a tendency for government expenditure to increase directly with the level of industrial output and therefore called for increased allowance for "social consideration" in the conduct of industry with anticipation of continuous expansion of the public sector. Wagner explained the development of public expenditure in its various categories such as expenditure on law and other (police services), justice, agriculture, education, health and welfare services, recreation and culture, information, among others to the development of the economy and its derivatives, also relevant are the changes in these expenditure categories mirrored by their income elasticity of demand. Wagner (1883) stressed on the growth of the economy as the fundamental determinant of growth of the public sector. As noted by Ezirim (2005), future expectations of concerted development of modern industrial economy would draw out rising political anxiety for societal development and/or fairness will lead to a rise social thought in the behaviour of industry. Thus, it is anticipated that a nonstop expansion of the government sector and its expenditure would occur. Policy makers and economic advisers use Wagner's law as the basis for their decision any time there is need for important economic decision making on expenditure (Okoh, 2015). Representing Wagner's law functionally, Y = f (N) where Y is government expenditure and N is national output. Furthermore, an increase in government expenditure is expected to impact positively on an economy which is in tandem with Keynesian economics. However, a careful examination of public expenditure in Nigeria revealed that government expenditure has been on the increase over years but rising government expenditure has not translated to meaningful improvement in the agriculture sector, as the country still records low yields in the agricultural sector, which has led to inadequate economic growth, high unemployment rate and poverty rate.

From 1890 to 1955 in United Kingdom Wiseman and Peacock conducted a study on expenditure made by government in United Kingdom. The outcome of the study was in tandem with that of Wagner. Although, the result made it clear that expenditure of the government will not necessarily increase in a horizontal and nonstop way, but in a pattern that can be described as 'jerks or stepwise fashion'. At times, unexpected needs will arise which will require the government to spend more. But the government has constraint of insufficient revenue. Therefore, it is the responsibility of the government and its inhabitants to find. ways to increase revenue in other to meet the increasing needs of the society by increasing expenditure. Therefore, an increase in government expenditure on agriculture is expected to boost agricultural output.

Some of the neoclassical economists who based their research on Solow (1956) growth model were of the view that government expenditure is detrimental to economic growth in the long-run.

It is as such because of the argument they brought forward. To them, government expenditure produces the crowding out effect and in times of budget deficit, taxes are raised which increases production costs and leads to increased price and low demand or the government results to borrowing. Also, government spending discourages private investments. Robert Solow and T.W. Swan introduced the

Solow's model in 1956. Their model is also known as Solow-Swan model or simply Solow model. In Solow's model, other things being equal: saving/investment and population growth rates are important determinants of economic growth. Higher saving/investment rates lead to accumulation of more capital per worker and hence more output per worker. In the absence of technological change & innovation, an increase in capital per worker would not be matched by a proportional increase in output per worker because of diminishing returns. Hence capital deepening would lower the rate of return on capital (Ewubare & Eyitope, 2015).

The essential improvement of en1ogenous growth theory over the previous models is that it explicitly tries to model technology rather than assuming it to be exogenous. More often than not, 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 imply

Before the publication of the work of J. M. Keynes in 1936, the General Theory of Employment, Interest, and Money, the accepted macroeconomic theory of the time (classical theory of income and employment) was based on the Say's law of market (named after Jean-Baptiste Say, 1767- 1832, a practical French business man who later became a Professor of Political Economy, the man who introduced the concept of an entrepreneur into economic theory and the division of the fundamental factors of production into three-land, labour, and capital) which states that "supply creates its own demand". Put differently, Say's Law is often summarized simply as saying that 'supply creates its own demand' It was framed in terms of a barter economy, but is believed to hold true for a money economy. What Say intended to convey by this law of markets was that 'the production of commodities was at the same time the creation of supply and demand in the market'. This meant that the production of goods was necessary to provide the means to buy goods. In other words, 'whatever the level of output, the income created in the course of producing that output will necessarily lead to an equal amount of spending and thus an amount of spending sufficient to purchase the goods and services produced'.

In this way, where output was below the full-employment level, it could be expanded without fears about the demand side. As long as there were idle resources that could be put to work, the very expansion of output resulting from utilization of such resources would create a proportional rise in income that would be used to purchase' the expanded output. Classical theory relied on Say's proposition or 'law' to ensure that aggregate demand would always be equal to aggregate supply; an increase in output automatically created an equal increase in spending that removed that increase in output from the market. Therefore, there is no need for government participation. But, the materialization of the 1930's Great Depression in the United States of America which, was characterized by widespread unemployment disproved the classical theory. In 1936 John Maynard Keynes mounted an attack on the classical theory and presented an alternative theory of the

determination of employment and output that explained why the forces of a market economy did not assure that aggregate demand would automatically be that which was necessary for full employment. Keynes basic proposition is that the equilibrium level of income and output in an economy depends on the economy's aggregate demand for output. If aggregate demand is not sufficient to call forth the level of output that requires the employment of all available workers and other factors for its production, unemployment results, an production (of goods and services) is below its potential. If aggregate demand is just sufficient, full employment results, and production is at its full potential. If aggregate demand is excessive, inflation results as well as full employment. Any level of output, ranging from that which calls for full employment of the labour force to that which imposes idleness on a large part of the labour force is a possible equilibrium level. Given this wide range of possible equilibrium levels, the actual equilibrium level in any time period is determined by the aggregate demand for that period. He argued that' there is no automatic full employment in the economy. It may be in equilibrium with less than full employment, and left on its own it may not move towards or attain the position of full employment (Akpakpan, 1987). While the classical argued for no government intervention, John M. Keynes (1936), a British economist and the father of macroeconomics challenged the idea of the classicalists and argued that there is need for government to intervene in the economy in other to stimulate aggregate demand. Keynes further stated that government or public expenditure is a fundamental determinant of economic growth. Keynesian theory expressed that the government expenditure is useful for achieving short-term stability and higher long run growth rate. Therefore, his theory prescribes for government interventions in the economy through fiscal policy (government spending) as this plays a crucial role in the development process of an economy. Meaning that, an increase in government expenditure will boost aggregate demand, resulting in a higher level of national income and through agricultural sector output. Therefore, government must increase investment expenditure in the agricultural sector. Strictly speaking, the Keynesians posits that government spending (GS) principally influences income and output growth. That is, $Y = f(GS)$; where Y is agricultural output growth and GS represents government spending variable. Thus, the theory helps to establish a link on how government spending on agriculture can actually affect agricultural output in Nigeria. Therefore, this study adopted the Keynesian framework/theory because government expenditure on agriculture will help to increase agricultural productivity to meet growing demand for foods, raw materials, foreign exchange, increasing supply of consumer goods and encourage expansion of small industry in the country.

The act of producing agricultural output involves transforming inputs into outputs. Consequently, production is possible only when there is input or factor with which to produce. Traditionally, such inputs are categorised in economics as land, labour, capital and entrepreneurship. Therefore, the rule that specifies the maximum amount of output that can be obtained from a given amount of inputs used in the production process is called production function. Mathematically, the production function specifying the maximum amount of output, Q brought about by certain inputs, $X_1...,X_n$, can be written as follows: $Q = f(X_1, X_2, X_3....X_n)$ (1).

The equation states that the maximum quantity of output, Q is produced by X_n, inputs (factors). An alternative way of interpreting the equation is to view it as a rule that specifies the minimum inputs, X1, which can be used for obtaining a given level of output, within the context of a given technology. The production function furnishes us with information as to how output levels change as a result of changes in input levels or technology. That is, how agricultural output will change as a result of changes in inputs levels - government spending on agriculture. Therefore, $Y = f(GS) \dots \dots \dots$ (1). Where Y is agricultural output and GS is government spending on agriculture. Furthermore, one of the production functions often employed by economists in most analytical and empirical work is Cobb-Douglas (CD) production function. Cobb-Douglas (CD) production function named after a one-time United States senator, Paul H. Douglas and a mathematician, Charles W. Cobb, who both collaborated to discover it in 1928, the Cobb-Douglass production function can be written as:

$Q AL_a K_\beta \dots \dots \dots$ (1). Where; Q, L and K are total output, labour and capital respectively. A stands for a shift parameter while c and pare positive constants that sum to unity.

2. REVIEW OF RELATED LITERATURE

Selvaraj (1993) assessed the impact of agricultural government expenditure on agricultural output growth using time-series data over the 1951-52 to 1988-89 periods and simple regression technique. The results indicated that the government expenditure policies are of vital importance for the growth of agricultural sector and any reduction in agricultural government expenditure adversely affects agricultural sector performance. It was also found that instability in agricultural government expenditure is inversely related to the growth of the sector.

Iganiga and Unemhilin (2011) examined the effect of federal government agricultural expenditure on the value of agricultural output in Nigeria. In the process, other determinants of agricultural output were examined. This includes total commercial credits to agriculture, consumer price index, annual average rainfall, population growth rate, food importation and GDP growth rate. The Cobb Douglas Growth Model, Descriptive Statistics and Econometrics Model were used to analyze the data. Co-integration and Error Correction methodology were employed to draw out both long-run and short-run dynamic impacts of these variables on the value of agricultural output. Federal government capital expenditure was found to be positively related to agricultural output. With a one-year lag period, it shows that the impact of government expenditure on agriculture is not instantaneous.

Elijah (2011) estimated the relationship between public expenditure, private investment and agricultural output growth in Nigeria over the period 1970-2008. The bounds test and Autoregressive Distributed Lag (ARDL) modelling approach was used to analyze both short-and long-run impacts of public expenditure, private investment (both domestic investment and foreign direct investment) on agricultural output growth in Nigeria. Results of the error correction model showed that increase in public expenditure has a positive influence on the growth of the agricultural output. However, foreign investment has insignificant impact in the short run.

Uger (2013) examined the impact of federal government's expenditure on agricultural sector. The ordinary least squares method of econometrics was used to analyze the data sourced from CBN Statistical Bulletin from 1991 to 2010. The result revealed a weak relationship between government expenditure and agricultural output. It was recommended that government should reinforce its budgetary allocations to the agricultural sector, ensure proper release of funds, monitor agricultural inputs distribution to farmers and create commodity markets.

Yusuf Adesope and Okoruwa (2013) analyzed the effectiveness of government annual budgetary allocation to agriculture and the role of monetary policy instruments in the growth of agricultural GDP. The method of analysis used was the OLS method of econometrics. The result of the analysis showed that Agricultural Credit Guarantee Scheme Fund, previous year GDP and Consumer Price Index contributed positively to the growth of agricultural GDP, other variables of interest like the interest rate, exchange rare, and government expenditure on agriculture contributed negatively to agricultural GDP growth.

Okezie, Nwosu and Njoku (2013) empirically analyzed the relationship between Nigeria government expenditure on the agricultural sector and its contribution to economic growth. The researchers employed the Engle-Granger two step modeling (EGM) procedure to co-integration based on unrestricted Error Correction Model and Pair wise Granger Causality tests. From the analysis, their findings indicated that agricultural contribution to GDP (Gross domestic product) and total government expenditure on agriculture are co-integrated. The speed of adjustment to equilibrium is 88% within a year when the variables wander away from their equilibrium values. Based on the result of granger causality, the study concluded that a very weak causality exists between the two variables used in this study. Therefore, the policy implication of these findings is that any reduction in government expenditure on agriculture would have a negative repercussion on economic growth in Nigeria.

Omigie, Rahji, Okoruwa and Adeoti (2013) explored the nexus amongst government agricultural spending and its inherent volatility level, total capital employed and turnover of the agricultural sector of the stock market and agricultural output in Nigeria. Data in the study were analyzed using square of mean-adjusted relative change volatility estimation method, co-integration and error correction model and two-stage-least squares regression technique. The result revealed that there is the existence of a long-run relationship amongst government agricultural spending, total capital employed and turnover of the agricultural sector of the stock market and agricultural output. Government agricultural spending is influenced by its lag (0.42) and agricultural output (-1.94). Total capital employed in the agricultural sector of the stock market is influenced by government agricultural spending (0.15). Total turnover of the agricultural sector of the stock market is influenced by the total capital employed in the sector and the volatility level in government agricultural spending (-0.03). Agricultural output is influenced by government agricultural spending (0.09) and total turnover of the agricultural sector of the stock

market (0.23). Government agricultural spending stimulated the development of the agricultural sector of the stock market, while its volatility is an impediment. The agricultural sector of the stock market is an effective window policy makers can exploit to increase agricultural output.

Ewubare and Eyitope (2015) examined the effects of government spending on the agricultural sector in Nigeria. The ordinary least square of multiple regressions, the Johansen co integration techniques, and the error correction model were used for the analysis. The results showed that government expenditure was positive and statistically significant. The deposit money banks loan was positive but statically not significant at 5% level. The coefficients of, gross capital formation for the lag two and three periods were rightly signed and statistically significant at 5% level.

Kareem, Bakare, Ademoyewa, Ologunla and Arije (2015) examined the nexus between federal government's expenditure on agricultural sector, agricultural output and economic growth of Nigeria using econometrics method. The results revealed that there is a fluctuating trend in government expenditure in agriculture over the years under review. The regression results showed about 16% of total variation in the dependent variable (Real GDP) has been explained by the explanatory variable (government expenditure) while about 21% of total variation in the dependent variable (Agricultural output) has been explained by the explanatory variable (government expenditure). Results also revealed a negative relationship between the public sector spending on agriculture agricultural output and economic growth. From the results, it was concluded that federal government spending on agricultural sector has significant impact on economic growth as well as agricultural output response in Nigeria.

Matthew and Mordecai (2016) investigated the impact of public agricultural expenditure on agricultural output in Nigeria for the period 1981 to 2014. The Augmented Dickey-Fuller test, Johansen Cointegration test, Error Correction Method (ECM) and Granger Causality test were employed as analytical tools in the course of the study. Agricultural output was explained by public agricultural expenditure, commercial bank loans to the agricultural sector and interest rates. The Johansen Cointegration test revealed that there exist a long-run relationship between agricultural output, public agricultural expenditure, commercial bank loans to the agricultural sector and interest rates in Nigeria. The results of the parsimonious ECM model showed that public agricultural expenditure has a significant negative impact on agricultural output while commercial bank loans to the agricultural sector and interest rate have insignificant positive impacts on agricultural output in Nigeria. The study concluded that the negative impact of public agricultural expenditure on agricultural output may have resulted due to discrepancies that existed between the amount allocated to the agricultural sector and the amount actually spent on the sector in the country.

Aina and Omojola (2017) examined the effect of government expenditure on agricultural sector performance in Nigeria between 1980 and 2013. A relationship was established between government expenditure on agriculture and agricultural production output. The model for the regression analysis

has government expenditure on agriculture, interest rate and exchange rate as the independent variables while agricultural production output is the dependent variable. Using econometrics method of Ordinary Least Square and Error Correlation Mechanism (ECM) methods, the short run analysis showed that there is a significant and positive relationship between government expenditure on agriculture and agricultural production output. The regression coefficient of interest rate impacted significantly on agricultural sector output and the coefficient of exchange rate is rightly signed. The long run dynamic result showed that the coefficient of government expenditure on agriculture variable is rightly signed as well as the check variables (interest and exchange rates). There exists a longrun relationship among the variables because the coefficient of ECM is rightly signed i.e. negative and significant.

Okpara (2017) examined government expenditure on agriculture and agricultural output on Nigeria economic growth for the period of 1980 – 2014. The study adopted time series econometrics analysis to determine government expenditure on agriculture and agricultural output on Nigeria economic growth. The result further revealed that the variables have long run relationship because of evidence of two cointegrating equations while the speed of adjustment of the ECM result is 90.9% per annum. The research concluded that government expenditure on agriculture and agricultural output significantly impacts on Nigeria economy

The other variables that influence agricultural output include Agricultural Credit Guarantee Scheme Fund (ACGSF) and Banks' Credits.

Agricultural Credit Guarantee Scheme Fund (ACGSF) and Agricultural Output
Nwosu, Oguoma, Ben-Chendo and Henri-Ukoha (2010) tried to review the Agricultural Credit Guarantee Scheme Fund (ACGSF), its roles since inception, problems and prospects in contributing towards agricultural development in Nigeria using political economy method. It was concluded that since credit is needed for enhanced productivity and agricultural development, the three tiers of government in Nigeria should give the scheme the necessary support and publicity so that farmers (particularly small farmers) can benefit from its laudable objectives. This will go a long way in ameliorating the seemingly dismal output of out farmers.

Sunday, Obot and Ubon (2012) examined the relationship between amount of loan guaranteed by the Agricultural Credit Guarantee Scheme Fund (ACGSF) and some key macroeconomic variables in Nigeria. Augmented Dickey-Fuller unit root test and improved ADF-GLS unit root test were employed. The short-run and long-run elasticities of amount of loan guaranteed by ACGSF with respect to some key macro-economic fundamentals were determined using the techniques of co-integration and error correction models. The empirical results revealed that in the long run, the coefficients of interest rate charged by commercial banks and value of oil revenue has a significant negative and positive relationship respectively with the amount of loan guaranteed by the ACGSF in the country. Whereas in the short run, the coefficients of the previous amount of loan guaranteed and value of oil revenue as well as the real GDP has a positive association with the current amount of loan

guaranteed by ACGSF while the external debt has a negative association. The results were further substantiated by the variance decomposition and impulse response analysis of the dependent variable with respect to changes in the explanatory variables. The findings call for appropriate short and long term economic policy packages that should focused on the stabilization of the identified significant macroeconomic shifters of amount of loan guaranteed by ACGSF in the country. Special attention should be given to the interest charged on agricultural loan by participating banks.

Atagana and Kalu (2014) focused on the effort to make empirical verification on variables like loan guarantee (AC), number of farmers benefited (NF), Agricultural Produce (AO) and Non-oil export (OE) and their impact on GDP using multiple regression method. The results showed that variables, such as guaranteed loan, number of benefiting farmers, agricultural produce indicate positive sign and are significant in growth of GDP at 5% level of significance: The findings revealed that it is imperative to increase the number of farmers' beneficiary to agricultural loan scheme and agricultural produce if visible impact can be made on GDP from the sector. This is because the real sector economy has been neglected in Nigeria at the expense of the oil sector for several decades.

Enenche, Ohen and Umeze (2014) examined the effect of Agricultural Credit Guarantee Scheme Fund (ACGSF) on income generation and poverty alleviation among rural farmers in Benue state. Results of the Stochastic frontier and the inefficiency model showed that the variance parameters for $\partial 2$ and y were 0.2237 and 0.5209 which was significant at 1 percent level. The sigma squared indicated the goodness of fit and correctness of the distributional form assumed for the composite error term while the gamma Y indicates that the systematic influences that are unexplained by the Production Function and the dominant sources of random errors. This showed that the inefficiency effects make significant contribution to the technical inefficiencies of ACGSF beneficiaries.

Oparinde, Amos and Adeseluka (2016) studied the influence of Agricultural Credit Guarantee Scheme Fund on fishery development in Nigeria. Secondary data between 1981 and 2012 were collected on relevant variables and analyzed using Descriptive statistics, Growth function and Regression analysis. The results of the analysis showed that fishery sub-sector was the least financed in the agricultural sector of the economy. This is reflected in low contribution of fishery sub-sector to Gross Domestic Product (GDP) due to the fact that the required, importance is not given to the sub-sector as it is poorly financed by ACGSF. The results further showed that volume of ACGSF loan to fishery sub-sector and agricultural sector had significant influence on the GDP contribution from fishery sub-sector. In conclusion, fishery sub-sector has been experiencing poor finance from Agricultural Credit Guarantee Scheme Fund.

Akaninyene and Sunday (2017) examined the impact of Agricultural credit Guarantee scheme fund (ACGSF) on Agricultural Sector Development in Nigeria. Secondary data were sourced from Central Bank of Nigeria Publications and Statistical Bulletin. Multiple linear regression of ordinary least square (OLS) model was adopted to establish the relationship between dependent and independent

variables. Findings revealed a positive and significant relationship between ACGSF and the agricultural sector development evaluated by the sustained rise in its contribution to GDP. The study also revealed that the scheme had given more funds and impacted more on the crop sector over the livestock and fishery sector.

Oyeronke and Bolarinwa (2017) assessed the performance of the Agricultural Credit Guarantee Scheme Fund in to providing a guarantee on loans granted by banks to farmers for agricultural production thereby developing the agricultural sector in Nigeria using political economy method. While the supply of credit to farmers by financial institutions has improved since the intervention of the Central Bank of Nigeria who has increased the capital base of the ACGSF, findings revealed that small-scale farmers constituted a low percentage (2 1.4%) of the total number of farmers that received loans under the ACGSF. Also, the bulk of the credit fund is directed towards production of the food crop sector.

Olorunsola, Adeyemi and Valli (2017) investigated the relationship between credit to agriculture and agricultural output in Nigeria by means of nonlinear autoregressive distributed lag (NARDL) model using a time series data from 1992Q1 to 2015Q4. Results showed no evidence of asymmetry in the impact of credit to output growth in the agricultural sector (positive and negative changes) in the short-run, but different equilibrium relationships exist in the long-run. The dynamic adjustments showed that the cumulative agricultural output growth is mostly attracted by the impact of the positive changes in credit to agriculture with a lag of four quarters of the prediction horizon. This calls for the need for a policy on moratorium or suspension on credit administration to agricultural sector.

Banks' Credit to Agriculture and Agricultural Output

Ojiegbe and Duruechi (2015) evaluated the impact of these agricultural loans on food production, the problems and prospects. Data for the study were sourced through secondary means and hypotheses formulated in order to attain the objective of the research. The data were analyzed with SPSS (multiple regression) and formulated hypotheses tested with F-ratio and student t-test. Findings revealed that agricultural loans have significant and positive impact on food production in Nigeria.

Agunuwa, Inaya and Proso (20.15) examined the impact of commercial banks' credits on agricultural productivity in Nigeria. The statistical tool of analysis is the Ordinary Least Squares (OLS) techniques. The result revealed a positive relationship between commercial banks' credit and agricultural productivity. Meanwhile, there is a significant positive relationship between government spending and agricultural productivity in Nigeria.

Nnamocha and Eke (2015) investigated the effect of Bank Credit on Agricultural Output in Nigeria using the Error Correction Mode (ECM). A yearly data (1970-2013) obtained from the Central Bank of Nigeria was used for the analysis. The analysis showed that all the variables were integrated of order one I (1) and long-run relationship existed among them. However, following the empirical findings in

this study, it showed that, in the long-run bank credit and industrial output contributed a lot to agricultural output in Nigeria, while; only industrial output influenced agricultural output in the short-run.

Awotide, Abdoulaye, Alene and Manyong (2015) examined the impact of access to credit on agricultural productivity in Nigeria using the Endogenous Switching Regression Model (ESRM). The first stage of the ESRM reveals that total livestock unit and farm size are positive and statistically significant in determining the farmers' access to credit. The second stage reveals that total livestock unit and farm size are negative and statistically significant in explaining the variations in cassava productivity among the famers that have access to credit, while household size, farm size, and access to information assets are negative and statistically significant in explaining the variation in cassava productivity among the farmers without access to credit. Access to credit has a significant positive impact on cassava productivity.

Igyo, Simon and Orlumun (2016) analyzed the impact of the Deposit Money banks', credit on investment in Nigeria. Time series data for thirty one year period 1981 to 2012 were collated from secondary sources of the central Bank of Nigeria (CBN) statistical bulletin and was analyzed through Ordinary Least Squares (OLS) regression technique with the aid of E-view to test the hypotheses formulated in 4ne with the objectives of the study while the unit root, Variance Inflation Factor (VIF) and Heterosckedasticity white Test were used for data stationarity and diagnosis. In order to achieve the objective of this study, Deposit Money banks credit to the private sector (DMBC) and the Lending Rate of the Nigeria economy are used as explanatory variables while investment (INV) is the dependent variable. The empirical results of this study shows that both total Deposit Money banks credit and Interest rate exert a positive and significant impact on investment in Nigeria. However the result of the interest rate is at variance with the a priori expectation. Considering the empirical results, the study concludes that Deposit Money Banks' credit to the private sector should be sustained as it is a viable source of finance to the private sector of the of the Nigerian economy.

Nwokoro (2017) investigated the relationship between Banks' Credit and Agricultural Sector Performance in Nigeria from 1980 to 2014. From the empirical analysis made using the Ordinary Least Square (OLS), Error Correction Modeling (ECM) and other properties substantiated to know the impact (significance) of Banks' Credit as well as Interest Rate, Foreign Exchange Rate, Government Expenditure on Agriculture & Money Supply on Agricultural output in Nigeria: all the variables were stationary at first difference, there also exists both long run and short run equilibra relationship between the dependent and the independent variables. The study found out that apart from interest rate that has a negative but significant relationship, Banks' Credit to Agriculture (BCRA), Foreign Exchange Rate (FREX), Government Expenditure on Agriculture (GEXA) and Money Supply (MSPL) have a positive and significant relationship with Agricultural Gross Domestic Product (AGDP).

Olowofeso, Adeboye, Adejo, Bassey and Abraham (2017) investigated the relationship between credit to agriculture and agricultural output in Nigeria by means of nonlinear autoregressive distributed lag (NARDL) model using a time series data from 1992Q1 to 2015Q4. Results show no evidence of asymmetry in the impact of credit to output growth in the agricultural sector (positive and negative changes) in the short-run, but different equilibrium relationships exist in the long-run. The dynamic adjustments show that the cumulative agricultural output growth is mostly attracted by the impact of the positive changes in credit to agriculture with a lag of four quarters of the prediction horizon.

Ogbuabor and Nwosu (2017) examined the impact of deposit money bank agricultural credit on agricultural productivity in Nigeria using an error correction model and annual time series data for the period 1981-2014. The results indicate that an equilibrium relationship exists between the variables. In addition, we find that deposit money bank's agricultural credit impacts positively and significantly on agricultural productivity in the long-run, but this impact is quite negligible in the short-run. We also find that agricultural land and labour force impact negatively on agricultural productivity both in the long-run and short-run. However, the impact of climate change variables, namely annual rainfall and average temperature remained negligible throughout.

3. EVALUATION OF LITERATURE REVIEWED

The systematic examination of the previous work done that are related to this present research revealed that, a number of studies have been carried out on different aspects of this subject using various measures to examine the relationship between government spending and agricultural output in Nigeria. However, the studies have provided mixed results. While the studies of Elijah (2011), Ewubare and Eyitope (2015), Okpara (2017), Ama and Omojola (2017) revealed that federal government agricultural expenditure exerts a positive and significant impact on agricultural output in Nigeria; Matthew and Mordecai (2016) discovered a negative and significant impact of federal government agricultural expenditure on agricultural output in Nigeria. The difference in empirical findings on the impact of government agriculture expenditure on agricultural output in Nigeria is of serious concern and the above state of affairs raised a pertinent question: what is the relationship between federal government agricultural expenditure and agricultural output in Nigeria? This question begs for an answer and this study therefore sought to appeal to empirical evidence to resolve this question.

Generally, most existing studies on public expenditure policy focused mainly on macro- economy rather than the agricultural sector, or they are restricted to investigating the effectiveness of specific public programs such as agricultural research or development of irrigation systems. Strictly speaking, most studies on the impact of government spending on agricultural output in Nigeria add, up government capital and recurrent spending on agriculture together without separating them in related terms, similar studies have lost touch on current realities of the government capital expenditure on agriculture and government recurrent expenditure on agriculture. Thus, the study stands out to add to wherever scarce studies already existed in this research area by examining the impact of government spending on agricultural output in Nigeria from 1980-2016. The work is apt and necessary because it

examines the pattern of government expenditure on Agriculture in recent years. The recommendations of this study will be of essence to policy makers and to the government as it suggests ways in which agricultural productivity can be improved in Nigeria. These recommendations if implemented will bring a boost to the agricultural sector and will also go a long way to improving the standard of living in the country and at the same time contribute to sustainable economic development in the country. The paper is also essential to academicians as it adds to the number of existing literature in the subject area.

4. RESEARCH METHODOLOGY

This study was carried out in the Federal Republic of Nigeria. Nigeria has a land area of 924,000km^2 and a population of 140,003,542 million (National Population Commission, 2007). The country lies on the geographical coordinates of 10º 0' 0" N, 8° 0' 0" E. The climate is semiarid in the north and becomes increasingly humid in the south, with mean annual temperature ranging from 280c - 310c in the south. Three broad ecological zones are commonly distinguished: the northern Sudan savannah (50-1000 mm), the guinea savannah zone or middle belt (1000-1,500 mm) and the southern rainforest zone (1,500-4,000 mm). In the north, rainfall lasts from May to September. with a peak in August, while in the south, rainfall is bimodal, increasing steadily from January and reaching its peak in September. About two thirds of the area cropped is located in the north with the rest equally divided between the middle and southern zones (African Development Bank, 2006). Over 60 per cent of the country's population lives in rural areas. The average population density of 118km^2 masks the considerable differences that exist between the densely populated south west of Nigeria, where much of the urban population live, and the less concentrated north. The economy is characterized by a large rural, mostly agricultural based traditional sector and a smaller, largely urban, more capital intensive sector. Although the country relies heavily on the petroleum sector which generates over half of government revenue and more than 90 per cent of foreign exchange earnings, agriculture continues to play a focal role in the economy. Prior to the oil boom (1970s and l980s), Nigeria was a major exporter of a range of agricultural commodities. Nigeria now has to Import large quantities of food with wheat and rice being the major crops imported. Mixed small scale farming is the predominant form of production and between 90 to 95 per cent of the total output is accounted for by households that cultivate about 2ha (0.5ha in the south and over 4ha in the north) of land. Deficiency of annual rainfall is the main constraint to agriculture in the north but, more importantly, the distribution in space and time and dependability of the rainfall is a constraint over most of the country (African Development Bank, 2006). Nigeria is endowed with vast and largely untapped natural resources, including such minerals as petroleum, limestone, tin, columbite, kaolin, gold and silver, coal, lead, zinc, gypsum, clay, shale, marble, graphite, iron-ore, stone, zircon and natural gas The country boasts of several rivers, such as, River Niger (the third largest in Africa), River Benue (major tributary of the Niger), aside from Anambra, Imo, Benin and Ogun. The nation has Abuja as the Federal Capital and is currently made up of 36 States. The Currency of the country is naira. Prior to July 1986, Nigeria operated more of a mixed economy in which government owned and ran most public enterprises, as well as mining, iron and steel. However, with the introduction of the IMF-World Bank backed SAP in July 1986, the

nation is more or less capitalistic with major public enterprises either privatized or commercialized. Generally, alleviation of pervasive poverty and ensuring sustainable food security are overarching government objectives and are to be pursued through greater emphasis on agriculture and rural development.

The data for the accomplishment of the objectives of this study were secondary time series data, generated from the Central Bank of Nigeria Statistical Bulletin of various issues. It covered the period 1980-2018

Analysis of objective one

An Autoregressive Distributed Lag (ARDL) method of econometrics was employed as the estimation technique to analyze the specific objective one. Moreover, an econometric model aimed at capturing the relationship between government agricultural spending and agricultural output in Nigeria, in line with the conceptual, theoretical and empirical literature reviewed was developed. Specifically, this work adapted the model of Ewubare and Eyitope (2015) but with slight modification. That is, the model was cast in agreement with that of Ewubare and Eyitope (2015), whose model is in the form AGR= F (GEA, DBA, GCF). Where; AGR is agricultural production, GEA is government expenditure in agriculture, DBA is deposit money bank loan to agriculture and GCF is gross capital formation. In this current study, the functional relationship' for objective one is specified below:

AGO = f (GCEA, GREA, BCA, ACGSF)

$$AGO = a_o + a_1 GCEA_t + a_2 GREA + a_3 BCA_t + a_4 ACGSF + U_t \text{…………………} (3.1)$$

Where:

AGO = Agricultural Output: Contribution of Agriculture to Gross Domestic Product at 1990 Constant Basic Prices (₦' million)

GCEA = Federal Government capital Expenditure on Agriculture (₦' million)

GREA = Federal Government Recurrent Expenditure on (₦' million)

BCA = Commercial Banks' Loans and Advances to Agriculture (₦' million)

ACGSF = Cumulative Loans Guaranteed under Agricultural Credit Guarantee Scheme Fund (ACGSF) operations from inception-value group basis (₦' Thousand)

Apriori Expectation: On the apriori: GCEA, GREA, BCA and ACGSF > 0.

Analysis of Objective Two

Objective two was implemented by normalizing the estimated coefficients of the variables using $\frac{si}{sy}$ which serves as correction of scale $\frac{si}{sy}$ (Snedecor and Cochran, 1967), where; S_i is the standard deviation of the variable whose regression coefficient is being standardized, whereas S_y is the standard deviation of the dependent variable. For example: using GCEA, $\alpha_1 \frac{\text{STD of GCEA}}{\text{STD of }\Delta\text{CEA}}$ (a) or $\alpha = \frac{si}{sy}$ (a). The regression coefficients are standardized in order to make them unit free and comparable.

Serial Correlation Test

The detection of Serial Correlation was done using Breusch-Godfrey Serial Correlation LM Test.

Unit Root Test

The unit root test encompasses testing the order of integration of the individual series in a model. Moreover, to avoid spurious regressions which may arise as a result of carrying out regressions on time series data, these data were first subjected to stationarity test by using the Augmented Dickey Fuller (ADF) test. The ADF test was done with the following hypotheses: Ho: Variable contains unit root and hence is non-stationary. Hi: Variable does not contain unit root and hence is stationary. The Augmented Dickey Fuller (ADF) method that was employed is based on the structure of the equation below:

$$AGCEA_t = \alpha_0 + \alpha_1\ GCEA_{t-1} + \Sigma\alpha_1\ \Delta AGCEA_1 + \delta_t + U_t \qquad \text{……………..} \quad (3.3)$$

constant, n is the optimum number of lags in the independent variables and U is random error term. If we cannot reject the null hypothesis H = 0, then we conclude that the series have a unit root, and are non-stationary. A series is stationary if integrated at order 1(d) for instance, if a series is integrated at order zero, I(0) it implies 'stationarity at levels. At order one, I(I), it means stationarity after first differencing.

5. ESTIMATION TECHNIQUE

Autoregressive Distributed Lag (ARDL) model was employed as the estimation technique. This is because; the ARDL helps to showcase the short-and long-term relations between the government spending variables and agricultural output variable in the model. The unit root test via the ADF test precedes the ARDL test (i.e., ARDL Cointegration, Long Run and Short run forms) in order to test for stationarity of the variables. If the variables are integrated of order (0) and (1), then this study also checked for cointegration via ARDL Bounds testing approach. The ARDL cointegration approach was developed by Pesaran and Shin (1999) and Pesaran et al. (2001). The advantages of this technique over the traditional cointegration techniques include, ARDL cointegration requires small sample size, it provides two set of critical values, low and upper value bounds for all classification of explanatory variables into pure I (1), purely 1(0) or mutually cointegrated. Certainly, these critical, values are generated for various sample sizes. Another merit of the ARDL model otherwise known as Bounds Testing is that it accommodates possible structural breaks that could undermine the existence of a long run association between the dependent variable and the independent variables(s). In addition, the Johansen's procedure requires that the variables should be integrated of the same order, whereas ARDL approach does not require variable to be of the same order. ARDL approach provides unbiased long-run estimates with valid t-statistics if some of the model repressors are endogenous and it provides a method of assessing the short run and long run effects of one variables on the other and as well

separate both once an appropriate choice of the order of the ARDL model is made. Therefore, the ARDL models for this study are presented thus:

$$\Delta AGO_{t,j} = C_0 + C_1 AGO_{t-1,j} + C_2 GCEA_{t-1,j} + C_3 GREA_{t-1,j} + C_4 BCA_{t-1,j}$$

$$+ C_5 ACGSF_{t-1,j} + \sum_{i=1}^{n1} \alpha_{1i,j}\Delta AGO_{t-1,j} + \sum_{i=0}^{n2} \alpha_{2i,j}\Delta GCEA_{t-1,j}$$

$$+ \sum_{i=0}^{n3} \alpha_{3i,j}\Delta GREA_{t-1,j} + \sum_{i=0}^{n4} \alpha_{4i,j}\Delta BCA_{t-1,j} + \sum_{i=0}^{n4} \alpha_{5i,j}\Delta ACGSF_{t-1,j} + \mu_t \quad ………. (4)$$

Where; AGO = Agricultural Output, GCEA = Government Capital Expenditure on Agriculture, GREA = Government, Recurrent Expenditure on Agriculture, BCA = Banks' Credit to Agricultural Sector and ACGSF = Agricultural Credit Guarantee Scheme Fund.

6. RESULTS AND DISCUSSION

The broad purpose of the research was to examine the effect of government spending on agricultural output in Nigeria from 1980-2016. Moreover, the study utilized data on government capital expenditure on agriculture, government recurrent expenditure on agriculture, banks' credit to agricultural sector and Agricultural Credit Guarantee Scheme Fund from CBN Statistical Bulletin. The data set used for the analysis is attached in appendix.

Unit Root Test Results

To avoid spurious regressions which may arise as a result of carrying out regressions on time series data, we first subjected the data to stationarity test by using the Augmented Dickey Fuller (ADF) test.

Table 1: Augmented Dickey-Fuller Unit Root Test (1980-2016)

Variables	ADF Test Statistic @ Level	ADF Test Critical Value 5% (level)	Order of Integration	ADF Test Statistic @ 1st Difference	ADF Test Critical Value 5% (1st Diff.)	Order of Integration
GREA	-4.350628	-3.540328	Stationary	-	-	1(0)
AGO	-6.149492	-3.540328	Stationary	-	-	1(0)
BCA	-1.562850	-3.580623	Not Stationary	-4.236674	-3.587527	1(1)
GCEA	-1.483013	-3.548490	Not Stationary	-10.23413	-3.548490	1(1)

ACGSF	1.658920	-1.951000	Not Stationary	-2.532955	-1.951332	1(1)

Note: GCEA, GREA, ACGSF, AGO and BCA as earlier defined
Source: Authors' Computed Result from (E-views 9.0)

The stationarity test result presented in Table 4.1 shows that at 5% level of significance, the variables were stationary. For instance, GREA and AGO were stationary at level 1(0). While GCEA, BCA and ACGSF were stationary at first difference 1(1). That is, they became stationary at first difference (integrated of order one). Given that the variables were integrated of order 1(0) and 1(1). The requirement to fit in an ARDL model to test for long run relationship is satisfied.

Model Estimation Results Table 2 ARDL Bounds Test for Co-integration

Model		**F-Statistic** = 5.165551
F(AGO, GCEA, GREA, BCA and ACGSF)		K = 4
Critical Values	Lower Bound	Upper Bound
5%	2.86	4.01

Source: Authors' Computed Result from (E-views 9.0)

The result of the cointegration test, based on the ARDL bounds testing approach, is presented in Table 4.2. From the ARDL bounds test result, it is clear that there is a long run relationship amongst the variables (AGO, GCEA GREA, BCA and ACGSF). This is because the computed F-statistic of about 5.165551 is higher than the upper critical bounds at 5% critical values. Therefore, the study rejects the null hypothesis of no co-integration at 5% significance level for the agricultural output model. Following the establishment of long-run co-integration relationship among the variables, the long-run and short-run dynamic parameters for the variables were obtained.

Error Correction Test Results

Table.3 Estimated AROL Long Run Coefficients. Dependent Variable: AGO ARDL (3, 2, 3, 3, 0)

Regressors	Coefficient	t-Statistic	P-Value
LOG(GCEA)	-0.191860.	-1 .247032	0.2284
LOG(GREA)	-0.038771	-0.487735	0.6316
LOG(BCA)	0.378497	2.815075	0.0115
LOG(ACGSF)	0.118918	1.924400	0.0703

Source: Authors' Computed Result from (E-views 9.0)

The estimated ARDL long run coefficients of government capital expenditure on agriculture and government recurrent expenditure on agriculture have negative relationship with agricultural output. This does not conform to appriori expectation. The result also revealed that banks' credit to agricultural sector and agricultural credit guarantee scheme fund have positive relationship with agricultural output. This conforms to appriori expectation. Furthermore, government capital expenditure on agriculture, government recurrent expenditure on agriculture and agricultural credit guarantee scheme fund are not significant at five per cent level. Only banks' credit to agricultural sector is statistically significant at five per cent level.

Table 4.: Error Correction Representation for the Selected ARDL Model ARDL (3, 2, 3, 3, 0)

Regressors	Coefficient	t-Statistic	P-Value
LOG(GCEA)	-0.279464	-2.208851	0.0404
LOG(GREA)	0334717	3.346949	0.0036
LOG(BCA)	0.528527	1.646414	0.1170
LOG(ACGSF)	0.186421	1.655386	0.1152
ECM (-1)	-1.567638	-4.945920	0.0001
R-squared = 0.898831 Adjusted R-squared = 0.814524	F-statistic = 10.66137 Prob (F-statistic) = 0.000005	Akaike info criterion = 0.938222 Schwarz criterion 1.656509	Durbin-Watson stat = 1.785671

Source: Authors' Computed Result from (E-views 9.0)

Table 4.4 shows the result of the short-run dynamic coefficients associated with the long-run relationships obtained from the ECM equation. The error correction term in the model has the right sign (i.e., negative) and statistically significant. This indicates it adjustment from short run equilibrium to long-run equilibrium in the dynamic model. This imjflies that deviations from the long-term agricultural output adjust quickly to long run equilibrium. The Durbin Watson (DW) value of

1.785671, which is approximately 1.8, suggests lesser level of autocorrelation. The F- statistics also shows that the regression is statistically significant at 5 per cent level.

Moreover, coefficient of government capital expenditure on agriculture has negative relationship with agricultural output. This does not conform to appriori expectation. The result also revealed that government recurrent expenditure on agriculture, banks' credit to agricultural sector and agricultural credit guarantee scheme fund have positive relationship with agricultural output. This conforms to appriori expectation. Furthermore, government capital expenditure on agriculture and government recurrent expenditure on agriculture are significant at five per cent level. However, banks' credit to agricultural sector and agricultural credit guarantee scheme fund are not statistically significant at five per cent level.

Furthermore, the relative importance of the explanatory variables (i.e., government capital expenditure, government recurrent expenditure, banks' cre4it to agricultural sector and agricultural credit guarantee scheme fund) in explaining agricultural output in Nigeria may be determined by multiplying their regression coefficients (ignoring signs) by the quantity si/sy which sserves as correction of scale - (Snedecor and Cochran, 1967; and Ukoha, 2000), Si is the standard deviation of the variable whose regression coefficient is being standardized, whereas Sy is the standard deviation of the dependent variable. The regression coefficients are standardized in order to make them unit free and comparable. The results obtained are shown in Table 4.5.

The analysis reveals that the most important variables that affect agricultural output on the basis of the magnitude of the standardized regression coefficients are government recurrent expenditure on agriculture and government capital expenditure on agriculture.

Table: 5. Relative Importance of the Explanatory Variables

Explanatory Variables	Standardized Estimate	Rank
Government Recurrent Expenditure on agriculture (GREA)	1.188208	1
Government Capital Expenditure on agriculture (GCEA)	0.588820	2

The significant variables (i.e., government recurrent expenditure on agriculture and government capital expenditure on agriculture) are positively and negatively related to agricultural output respectively. Thus, the standardized regression coefficients show that one per cent increase in government recurrent expenditure on agriculture will result in 1.188208% increase in agricultural output. This conforms to appriori expectation. However, one per cent increase in government capital expenditure on agriculture will result in 0.588820% decrease in agricultural output. But this does not conform to appriori expectation.

Post Estimate Tests

The diagnosis tests were employed to examine the reliability of the estimated model for prediction or policy purposes. Specifically, serial correlation LM test ahd normality tests were applied as post-estimate tests. The post estimate tests reveal that the ARDL model passed all the diagnostic tests considered. The results of these tests are reported T able 4.6 below.

Table.6: Ramsey Test, Serial Correlation LM Test and Heteroskedasticity Test Results

Test	F-Statistic	t-Statistic	Obs R-Sguare	Prob. Value
Breusch-Godfrey Serial Correlation LM Test	0.576406	-	2.285082	Prob. F(2,16) 0.5732
Normality Test	Jarque-Bera Statistic = 5.471035	-	-	0.064860

Source: Authors' Computed Result from (E-views 9.0)

7. SUMMARY, CONCLUSION AND RECOMMENDATIONS

This study empirically examined government spending on agricultural output in Nigeria from 1980-2016. Therefore, the broad purpose of the research was to examine the effect of government spending on agricultural output in Nigeria from 1980-2016. The study examined the concept of government spending and agriculture. Moreover, to achieve the objectives of this study, I utilized data on government capital expenditure on agriculture, government recurrent expenditure on agriculture, banks' credit to agricultural sector, agricultural output and agricultural credit guarantee scheme fund from CBN Statistical Bulletin and employed an Autoregressive Distributed Lag (ARDL) method of econometrics to analyze the data.

The findings from the study are as follows:

i. There is a significant relationship between government capital expenditure on agriculture and agricultural output in Nigeria.

ii. There is a significant relationship between government recurrent expenditure on agriculture and agricultural output in Nigeria.

iii. There is no significant relationship between Banks' Credit to Agricultural sector and agricultural output in Nigeria.

iv. There is no significant relationship between Agricultural Credit Guarantee Scheme Fund and agricultural output in Nigeria.

v. It further revealed that government recurrent expenditure on agriculture and government capital expenditure on agriculture ar the most important variables that affected agricultural output on the basis of the magnitude of the standardized regression coefficients.

CONCLUSION

The study on government spending on agricultural output in Nigeria from 1980-2018 is essential. This is because government spending plays an important role in improving the performance of agricultural sector. The study made used of data on agricultural output, government recurrent expenditure on agriculture, government capital expenditure on agriculture, banks' credit to agricultural sector and agricultural credit guarantee scheme fund from CBN Statistical Bulletin and employed an Autoregressive Distributed Lag (ARDL) method of econometrics to analyze the data. The findings revealed that government recurrent expenditure on agriculture and government capital expenditure on agriculture are statistically significant at 5 per cent level. That is, government recurrent expenditure on agriculture and government capital expenditure on agriculture have significant relationship with agricultural output. It further reveals that the most important variables that affect agricultural output in Nigeria, in ascending order of importance are government recurrent expenditure on agriculture and government capital expenditure on agricultural output based on the basis of the magnitude of the standardized regression coefficients. The findings imply that policies that promote increase in government recurrent expenditure on agriculture and government capital expenditure on agriculture will increase agricultural output. The results of the study also have important implications for policy attention; showing the preference order in policy attention.

8. Recommendations

Based on the findings of the study, the following recommendations were made:

i. Government should increase capital expenditure on agricultural sector and establish effective monitoring agencies to ensure that the amount allocated to the agricultural sector is actually and judiciously spent on building assets of a lasting character, like construction of canals, dams, water storage, roads and railway lines, public building of various kinds, ports, etc. in order to boost agricultural output.

ii. Government should make adequate recurrent spending on agricultural administration, supervision and regulation; agrarian reform; food control; farm price and income stabilization programs; extension, veterinary, pest control, crop inspection, and crop grading services; production and dissemination of general and technical information on agriculture, etc.

iii. Credit should be provided to serious minded farmers to help them alleviate the capital need for inputs and also create incentive for adopting improved technologies.

iv. Government should provide guarantees in respect of loans granted for agricultural purposes by any bank in accordance with the provisions of Agricultural Credit Guarantee Scheme (ACGSF) Fund Act to minimize risks banks are exposed to, as a result of their lending activities to the agricultural sector and to increase the level of banks' credit to the agricultural sector. To achieve this, the government should strengthen the Agricultural Credit Guarantee Scheme by meaningful budgetary allocation in

order to enhance its capital base significantly. In addition, the Agricultural Credit Guarantee Scheme (ACGS) should improve on its conditions for credit guarantee in order to make agricultural financing attractive to commercial banks.

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