THE EFFECT OF

GOVERNMENT EXPENDITURE

ON NIGERIAN AGRICULTURAL

SECTOR:1977-2006

BY
BUHARI NAFISAT
Msc/Soc.Sci/33340/2003-4
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DECLERATION

I hereby declare that this thesis is based on a research conducted by me. It has not been presented for the award of a higher degree.

BUHARI NAFISAT

CERTIFICATION

This thesis entitled “The Effect of Government Expenditure on Nigerian Agricultural Sector (1977-2006) by BUHARI NAFISA has been carefully read and approved of having met the regulation governing the award of a MASTER OF SCIENCE degree in Economics at the Ahmadu Bello University, Zaria, and is accepted for its contribution to scientific knowledge and literary presentation in the social sciences.

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Prof. P.S Aku Date

(Internal Examiner)

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Dr.Mike Duru Date

(Internal Examiner)

---------- ----------

(External Examiner) Date

---------- ----------

Prof. S.A. Nkom Date

Dean Post graduate School

DEDICATION

I dedicate this thesis to Allah (SWT) the beneficient, the merciful, the living and the eternal. The living before all living, the living after all living, and the source of my strength and aspirations.

The thesis is also dedicated to the memory of my late parents.

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In the name of Allah the Beneficent, the Merciful. All praise to him who command, “BE’’ and it is.

There is no doubt that undertaking this thesis requires not only the knowledge and ability of one, but also the immense contribution of others intellectually, financially and morally.

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ABSTRACT

Investment in Nigerian agriculture in terms of government expenditure is a sine qua non for increased output and agricultural development in general. However, in over three decades of public expenditure programming, the goal of food security in agriculture remains elusive and the development outlook continues to be precarious. While several attempts were made by the government by introducing several measures and policies, the impact of government agricultural expenditure output has not been substantial over the years.

An attempt is made in this thesis to examine the effect of government expenditure on output using an ordinary least square estimation technique for the period 1977-2006, and also to investigate the parameter constancy using a chow break point test. The breakpoint test confirms that there are differences in the performance of the agricultural GDP (output) within the pre-SAP and the with-SAP eras. As a result of this, the study estimated for each period to determine their level of performances, and their aggregated value was evaluated in order to see the effect of government expenditure on agricultural output. The results show that agricultural output does not respond significantly to government expenditure on agriculture. It confirms that the government contribution to agriculture is not enough for its development.

It is therefore suggested that the unique role of agriculture is recognized so that the sector can obtain its right share of government expenditure.

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CHAPTER ONE

1.1 INTRODUCTION

The importance of the agricultural sector in any developing economy is generally well known. This is because it is expected to satisfy the bulk, if not the entire food requirement of the country, supply most of the agricultural raw materials needed by the manufacturing sector, provide adequate employment and income to farmers as well as earn substantial foreign exchange, for the execution of capital projects for developmental purposes.

As such, government expenditure, which is a public sector investment, in agriculture is crucial for the transformation of the sector and realization of development policy objectives. Therefore public expenditure can be described to mean the cost or expenses the government incurs for its own maintenance and for the society, with expanding state activities.

Agriculture as a sector is an instrumental factor for the development of the economy, as it sustains the livelihood of about 75 percent of the population, and according to World Bank estimates, increased at an annual rate of 2.9 percent in 1990-98 (Opportunities in Nigeria's Agricultural Sector, 2005).

Over the years, inadequacy of agricultural infrastructure has hindered progress in agricultural development. While the use of such devices such as modern diggers, ploughs (instead of hand hoes), and non-harmful chemicals for containment of weed, fertilizers, etc. are unaffordable by most of the small-scale farmers.

Therefore, government expenditure on agriculture especially in the area of development of infrastructure, such as irrigation, input distribution, construction of feeder roads, research and extension, are important. These investments have been left to the government, not just because of limited number of private investor willing to take part in the investment in the sector but due to the strong believer of the government that the availability of such infrastructure and improved technology will contribute immensely to the realization of the expected gains in productivity and output growth in the sector.

Despite these, the performance of the sector has generally been considered unsatisfactory especially following the 1971-73 droughts and 1975 Rosette virus epidemic (Ukpong, 1993). The expected significant contribution was made towards the attainment of several national economic and social goals. The resultant effect is the huge importation of food, made possible by the enhanced crude oil export earnings, but which served as a disincentive to serious domestic farming.

In line with the anticipated contribution agriculture makes to the overall development of the Nigerian economy, several measures were designed in the years preceding the Structural Adjustment Programme (SAP) to stimulate the growth and development of the sector. Such measures included subsidized/low interest rate policies of the 1970s and early 1980's, establishment of specialized institutions to lend solely to the sector, funding agricultural production directly through budgetary allocation and by

establishing agricultural oriented institutions and progammes such as Nigerian Agricultural Credit Bank (NACB), Agricultural Credit Guarantee Scheme Fund (ACGSF), Agricultural Development Programmes (ADPS), River Basin Development Scheme (RBDS) and Operation Feed the Nation(OFN). Following the adoption of SAP in 1986, Commodity Boards were abolished in order to provide productive incentives to the farmers through increased producer prices.

Also, with the full compliant of the idea of SAP, that is expenditure reduction or withdrawal of government participation, government disengaged from direct investment in agricultural production. The sector also witnessed changes in pricing policies and marketing institutions. All these are aimed at promoting competition and efficiency in the sector. The reason for policies of both prices liberalization and disinvestments is to modify the structure of financial allocation to the sector. Although, government had taken several measures to facilitate the flow of credit to agriculture, administrative delays often cause credit to reach many farmers after the planting seasons thus providing an opportunity for loan diversion to unproductive activities, leading to eventual poor repayment. It is not surprising therefore; that the problems of inefficient supply of agricultural inputs such as fertilizer, agricultural chemicals and improved seeds has continued to slow down the tempo of agricultural development.

As such, total agricultural output as measured by aggregate index of production, declined in pre-SAP years. For example, high rates of total output

declines recorded were -15.0, -6.1, -5.5, -0.2 and –1.5 per cent for the years 1975 to 1979. Production also dropped by –0.5 percentage points in each of the years 1982 and 1983(Ukpong, 1993).

Also, in the period 1970-82 annual production of major export crops such as cocoa, rubber, cotton and groundnuts fell by 43, 29, 65, and 64 percent respectively (Olomola, 1998). While, the average growth rate is the value of agricultural exports increased astronomically in 1986 to 1990 sub-period by 70.5 percent due to initial impact of SAP. It remained a little lower but still high in the 1991/95 sub-periods by 68.5 percent, again due to the effect of SAP but became relatively low in the 1996/2000 at 18.2 percent as the effect of SAP wore off (Manyong, 2003).

Despite decade of public sector contribution to agriculture, there were evidences of unstable or fluctuating trends. In this research, efforts has been made to find out what is responsible for the downward trend in the contribution of agriculture to food supply, Gross Domestic Product (GDP), foreign exchange earnings and raw materials. Also, why there has been mixed result from the financing policies and programmes of government for agriculture in Nigeria.

1.2 STATEMENT OF RESEARCH PROBLEM

The Nigerian agricultural sector had traditionally been expected to fulfill such roles as providing food for the growing population, generate foreign exchange earnings, employ part of the labour force and provide income for the farming households.

While the role of government public expenditure was to accommodate the expanding economic development or stimulate and induce expansion in the growth rate of the economy. This is because it is usually expressed in budgetary statement and has been a powerful tool for shaping the economy along growth path and to a considerable extent influences resources allocation in the private sector.

Therefore, government expenditure to Agriculture is the realization by government, of the numerous contributions a highly developed agricultural sector could make to the development of the Nigerian economy. But a successful attempt by the government to bring agriculture to its pre-oil boom glory could not be achieved.

Some very critical factors that constrain agricultural output include:

a. The Nigerian system of agriculture is based on numerous peasant farms. The peasant farmers, each working a tiny parcel of land with hand hoe and machete, are responsible for about 90 percent of all food production. Therefore, a major factor which undermines agricultural growth in Nigeria is the low level of application of modern farming technology, including inadequate cultivation of high yielding seeds and seedlings.

b. Another factor, which was believed to constrain output, was low producer prices (set through administrative fiat by marketing boards) and it was a disincentive to the farmers.

c. While another related factor is natural disasters such as droughts, floods, landslides, animal and plant diseases and pest, which rendered agricultural

activities risky. The drought of 1971-72 and floods in the north in 1992 were disastrous to hundreds of farmers. Diseases owing to insufficient availability and high cost of drugs and vaccines wiped out several poultry farms in the country.

This results in food shortages, hence price increases which are counter by import at low price levels. It further promotes rural/urban migration. This explained the current state of the agricultural sector.

In this situation, the research questions asked are-:

a. Since the output of the agricultural sector is believed to depend on government expenditure.

i Why then has the agricultural performance in Nigeria not taken a positive turn around?

ii Why has the allocated funds to small-scale farmers not made any significant change on the output of the sector?

b. How have the other factors affected the output of the sector?

1.3 OBJECTIVES OF STUDY

It has become imperative to study government expenditure on agriculture in order to ascertain the extent to which its allocation to agriculture has contributed to its output, and the GDP of the Nigerian economy as a whole. The purpose of the research is to;

i. Determine the relationship between government expenditure on agriculture and the agricultural sector output.

ii. Examine the impact of government expenditure policy on agriculture, within the pre-SAP and with-SAP periods, so as to determine the effect of the structural change on its performance if any.

iii. To make policy recommendations.

1.4 JUSTIFICATION OF STUDY

The agricultural sector has the potential to provide employment opportunities, it has the potential to eliminate hunger, and provide alternative foreign exchange for the Nigerian economy.

This study is necessitated by an attempt to analyze the effect of government agricultural expenditure on agricultural output. For decades peasant farmers have been flocking to urban to centers in search of employment opportunities with the government policies and programmes, many are realizing that farming offers better life

By increasing the scope of the study, and also complimenting it by testing for the structural change, the study will be able to determine the effectiveness of the government public expenditure within the pre-SAP and with-SAP eras.

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1.5.1 HYPOTHESIS

Ho: E = 0 There is no relationship between government agricultural expenditure and agricultural sector output in Nigeria

H_1: E ≠ 0 There is a relationship between government agricultural expenditure and agricultural sector output in Nigeria

If we are to accept the null hypothesis that means Ho : E = 0, which means there is no relationship between the public expenditures and the agricultural sector output. The research has therefore proffered solution as to how government can make contribution to the development and progress of the sector, so as to achieve food security.

1.6 SCOPE AND LIMITATION

The scope of this study is necessarily limited to the period 1977-2006; it was within this period that the Nigerian government initiated and executed the agricultural policies and programmes which were also due to the available resources derived from the crude oil and it also marked the period when the government withdrew its subsidy on the agricultural sector.

It should therefore be acknowledged that the data used are derived from the Statistical Bulletin, National Office of Statistic, Journals, etc, and they are used to portray the significance or importance of government expenditure on agricultural output in Nigeria.

1.7 OUTLINE OF CHAPTERS

Chapter one contains the introduction to the research study, the statement of research problem, justification of the research, objectives of the research, hypothesis, methodology, scope and limitation and the organization of research work.

Chapter two presents the general introduction, literature review, and theoretical framework, empirical studies, agriculture in the Nigerian economy, specialized agricultural credit and allied institutions and the importance of public expenditure on agricultural sector.

Chapter three contains a review of agricultural policies in Nigeria.

Chapter four specifies and estimates the model for the research work.

Chapter five contains the results and discussion

Chapter six contains the summary, conclusion and recommendations.

CHAPTER TWO

2.0 LITERATURE REVIEW

2. 1 DEFINITION OF TERMS

Government Agricultural Expenditure: This is taken to be Federal Government Capital Expenditure into 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

Agricultural Output: In this study agricultural output is taken to mean the value of agricultural GDP of the four sub-sectors (crops, fisheries, forestry, and livestock) of the economy.

Rainfall: This is the average rainfall in each year

Price of Agricultural Output: This is expressed as the all item component of the consumer price index.

2.2 GENERAL INTRODUCTION

In recent years, there has been renewed interest about the size of government expenditure in agriculture. Such interest was centered on the implication of the expansion of government public expenditure for economic activity. Such expansion, it is argued, would increase aggregate demand and would increase the ability of market forces to function in the allocation of resources (Lerme, 1984; Abizadeh and Basilevsky, 1990).

Public expenditure refers to the expenses, which the government incurs for its own maintenance and for the society, by expanding state activities. It is

becoming increasingly difficult to classify the portion of public expenditure that includes the maintenance of government and those that go into benefiting the other sectors of the economy. Although, public expenditure is found to be continually increasing over time in almost all countries and with unprecedented growing importance in National economy especially in developed countries (Steven et al, 1994).

Some government expenditure are in return for goods and services that account as part of recurrent output while some represent sacrifice for future benefit. From here the different types of expenditure will have to be identified, and they are subdivided into two;

A. Recurrent expenditure and,

B. Capital expenditure

Recurrent Expenditure: are spending on running costs or for day-to-day running of government affairs such as payment of workers' salaries/ remunerations, spending necessary to maintain existing levels of government services.

Capital Expenditure: on the other hand, are those that are capital stock augmenting that is, spending on the construction of feeder roads, irrigation, pipe borne water, etc .They represent project and sacrifices for future benefit.

Government Agricultural Expenditure is part of public expenditure. Various attempts have been made, to provide theoretical explanation of public expenditure. Some of these theoretical attempts have been provided below.

2.3 THEORETICAL FRAMEWORK

The Wise-man Peacock Hypothesis: The Displacement Effect Theory.

The Wiseman- Peacock Hypothesis was propounded in 1961 in the authors' study of U.K. economy (1890-1955). They concluded that public expenditure did not increase in a smooth and continuous manner but in jerks or step-like fashion (Bhatia, 1985).

It must be borne in mind that they were emphasizing the recurrence of abnormal situations of wars and depressions, which caused sizeable jumps in public expenditure and revenue. The reason according to Bhatia was that, as the economy advanced, the structural changes therein suggest regular and competent increments in revenue and public expenditure. Thus, public expenditure exhibits the tendency to grow on account of a systematic expansion of the public activities as also an increase in their intensity and quality.

Martin and Lewis (1956), are of the opinion that the level of income is not a determining factor of a nation's expenditure especially its basic expenditures, but rather, its prevailing conception of the role of the state in socio-economic development.

Wagner's Law of Expanding State Activity.

Adolf Wagner (1835-1917), was a German economist who based his law of increasing state activities on historical fact. He opined that, there are

inherent tendencies for the activities of different layers of government (that is, central and state government) to increase both intensively and extensively (Bhatia, 1985). That is, there is a functional relationship between the growth of an economy and the growth of the government activities (expenditure). So that, the government sector, grows faster than the economy.

The implication of the argument of Wagner is that growth in expenditure is derived from the growth in state activities. This is in itself the consequence of social progress of the society. This gives rise to the fact that Wagner's law is really a law of increasing state activity to the extent that such increased activity is inevitable accompaniment of social progress. And only to that extent are increased expenditures inevitable.

F.S. Nitti (1903), supported Wagner's thesis and concluded with empirical evidence. He believed that the law was not only applicable to Germany but to various governments irrespective of their levels (that is, central or state), intentions (peace and war like) and size.

Bird (1971), also supported Wagner's idea, by observing that as per capita income increases, government spending as a proportion of aggregate output would increase. The income elasticity of aggregate output of public spending would exceed unity. Bird, specified the necessary conditions for the operation of the law.

i. Rising per capita income

ii. Technological Institutional change; and

iii. Democratization of the polity

On the part of O. Teriba (1967), in his work on western Nigerian public expenditure (1949-1962), he made an observation that there are certain forces influencing public expenditure growth in that region. He further stressed that socio-political pressure, coupled with an era of financial buoyancy are the main explanatory factors in the rise of public expenditure in the region.

In their study of public finance and economic transition, Barbone and PolacKova (1993), found that other factors such as population, educational level attainment, age structure and general economic conditions are important determinants of the level of government expenditures.

While in the analysis of the secular growth of government expenditure in India (1872-1966) Reddy (1970), observed that the derivation of influences of population growth and price changes did not negate the common believe about expenditure, namely; that government expenditure increases at a faster rate than GNP. He found the income elasticity of demand for government expenditure to be far in excess of unity. He also found that the proportion of government expenditure in national income witnessed similar fluctuations in Japan, Germany and United Kingdom in the period 1890-1955.

Olowononi (1978) stressed the role of increase in the state revenue due to transfers from federal government as very important when considering the basis for public expenditure, and that the rapid growth in public expenditure is associated with the government commitments to social, economic and administrative services. He contended that as government involvement increased in providing social services such as public health, education,

agriculture, housing and community development in recent years, there is also increase in grants -in -aid to the government.

Goffman and Mahar (1971), confirmed that there was positive relationship between income and the level and composition of public expenditures. Their findings supported the Wagnerian expectation, that "Pressure for social progress and the resulting changes in relative spheres of private and public economy" would give rise to increased need for law enforcement, state participation and material production and social services, such as education public health, subsidization of fertilizer, and so on.

In post revolutionary Mexico, Reynolds (1971), in his research work found that Mexico's public expenditure policy has been successful in increasing the rate of capital formation and growth in both agriculture and industry. He found that fiscal restraint has been responsible for the impressive performance. He also found that the share of public expenditure in aggregate demand did not change importantly since 1940. Yet year-to-year fluctuations were considerable. Moreover, change in the composition of public expenditure probably had a net distributing impact on economic stability in Mexico owing to the differing influence of individual components of government spending on the private sector.

Finally, Tailor (1988), explained the role of government expenditure, by stating that if public spending and private spending are truly complementary, then government projects, and spending would induce entrepreneurs to enhance private investment, hence, ensuring growth in the economy.

2.4 EMPIRICAL ANALYSIS

Even though Wagner was not the first to originate the hypothesis concerning his law, he was the first to attempt to use empirical evidence to support it. Various studies have utilized a single independent variable in a regression equation to test the validity of the law, while others have included more than one independent variable. The studies have also varied in terms of the definition of variables, proxies used, choice of variables and techniques of estimation. These studies can be empirically reviewed as follows;

Musgrave (1959), regressed nominal spending with gross domestic product (current prices or deflated by GDP deflator) as distinct from general postulation where it is expected that if the ratio of government expenditure to output (G/GDP) increases as the ratio of output to population (GDP/N) increase, the elasticity value for the relationship would exceed zero.

Gupta (1982), used the double logarithmic function fitted at different sub-periods, with per capita total government expenditure and Gross National Product (GNP) as dependent and independent variables, respectively to test, among others whether a social upheaval is associated with a change in the "income elasticity" of government expenditure, and if such a change was observed whether it was statistically significant. His conclusion was that significant change in income elasticity was associated with each major upheaval and no generalization could be made about the direction of change.

The study by Hemning and Tussing (1974), used indirect least squares (ILS) to examine income elasticity estimate of demand for public expenditure

in U.S; and even though it showed some improvements by eliminating the bias associated with regression, it was still subject to simultaneous bias.

Ganti and Kollori (1978), deviated from the ordinary least squares (OLS) and system estimation procedure and cast their model in the mold of Zellner's (1970) reformulated errors-in-variable frame work, called regression models containing unobservable independent variable and derived, directly, efficient estimates of the gross private expenditure elasticity of government expenditure before deriving the income elasticity of government expenditures. They claimed their estimates showed improvement over ILS and concluded that there was evidence in favour of Wagner's hypothesis.

Abizadeh and Grey (1985), used panel data for 55 countries, divided into three groups according to their level of development, from 1963-79. Using 5 regressors, they upheld Wagner's law for the wealthier groups, but not for the poorest ones.

In recognition of the fact that no unique tests of Wagner exist, Henrekson (1913), tried to solve this problem by first looking at the stationarity of the variables used. In particular, he tested Wagner's law using the interpretation that government civilian expenditure (GE) reflects better GDP per capita. Using Swedish data from 1861-1990, he concluded that the two variables are not co-integrated and thus, constant elasticity estimate could not be obtained from the relationship, and as such Wagner's law was a spurious relationship.

The question here is, does Wagner's law hold for a developing country like Nigeria?

In the study of public expenditure on agriculture in less developed countries, FAO (1984) classified expenditure on agriculture as expenditure on development programmes, research and training, and concluded that there were two categories of public expenditure. They are current and capital expenditure, which are the main components of public expenditure. They used a cross sectional data to explain the behaviour of public expenditure on agriculture.

In his study of the patterns of current expenditures in Nigeria for the period 1950-1978, Omuruyi (1988), found out that total expenditure and the social and economic services' functions are positively and significantly related to the level of economic development. The result and conclusion of his study was that per capita income variable alone is an inadequate proxy for economic development in relation to all the expenditure functions used in his study. The correlation between per capita income and some expenditure functions was poor, indicating that such functions need better proxies to relate them to development.

Elias (1982), presents estimates of aggregate public expenditure in agriculture and its components for nine developing countries (Latin American States). He analyzed the trend and variability in the expenditures both in absolute terms and in comparison with the total government budget, the gross domestic and the value added of the agricultural sector. The production

function techniques were later used to evaluate the effects of government expenditures on agricultural output.

Also, Fan et al (2004), using a multi equations model, the marginal returns to different type of government spending in agricultural growth and poverty were estimated. The marginal impact and elasticity of different types of government subsidies and expenditures on agricultural growth and rural poverty were calculated for four decades for India. They provided evidence supporting the central hypothesis developed in their project for India. Their result rejected the alternative hypothesis that fertilizers and credit subsidies, for example, depressed agricultural growth and poverty reduction in the early stages of agricultural transformation. The results show generally high benefits from investment in roads, education, and agricultural R&D and credit subsidies. These findings demand a fundamental reassessment of policies espousing state withdrawal from markets in poor agrarian economies.

Essien (1999), using three different interpretations of Wagner's law, in an attempt to verify them and hence derive income elasticity, of government expenditure used a single equation, simple regression model. The test could not establish causality. The result confirmed the heuristic view that growth of government would be unlikely to cause growth of income, a view confirmed by co-integration result. He therefore concluded by saying, any policy of expanding government consumption expenditure based on growth in income, in the long run, would be misleading.

Selvaraj (1993), employ a neo-classical production function of the Cobb-Douglas in an attempt to determine the impact of government expenditure on agriculture and the performance of agricultural sector in India. The elasticity of the government expenditure on agriculture indicates 10.0 percent increase in government expenditure would induce 7.2 percent increase in agriculture production. The results clearly show that government expenditure policies are important determinants of the performance of the agricultural sector.

Finally, Okene (2001), in his work on the impact of government budgetary expenditure on agricultural output in Nigeria adopted a single equation regression model to verify the relationship between agricultural output and policy instrument in Nigeria and he concluded that government expenditure on agricultural output is statistically significant. Thought funds allocated to the agricultural sector in the budget do not commensurate with the trend of expenditure in the economy.

From the studies so far reviewed, most of them dwelt on aggregate expenditure and GDP. For instance, Gupta (1969) and Musgrave (1995), made use of aggregate expenditure and GDP. While for some, the time series properties were investigated, for instance, Olomola (1998), Essein (1999) and Okene (2001).

Some of the studies also used modern econometrics techniques of co-integration and error correction model and carried out the time series properties of the data. Most of the studies attempted getting the feedback mechanism for

co-integrated variable using error correction model. But from the forgoing, the challenge therefore is not to disaggregate both the expenditure and GDP variables, but to examine the relationship between public expenditure on agriculture and agricultural GDP (output) in Nigeria and to investigate the influence of public expenditure on agricultural output during the pre-SAP period and the with-SAP period by testing for the structural stability.

2.5.1 AGRICULTURE IN NIGERIAN ECONOMY

Nigeria has the historic glory of being a major exporter of agricultural produce in the 1960s, but changed to net importer of food during the "oil boom" of the 70s. From then till now, Nigeria as a nation has not been able to produce enough food for her teeming population. For example, food import was N6, 085.1 million, N12, 597.2 million and N13, 193.2 for 1991, 1992 and 1993 respectively (C.B.N, 1995).

Noticeably, Nigeria is not unaware of this unwelcomed phenomenon to counteract this unwholesome development. A catalogue of policies has been prescribed with the hope of turning things around. Such policies have included input subsidies (mostly fertilizer) at certain periods, intention towards mechanized farming, creation of agricultural research institutes, agriculture credit schemes and even the land use Decree of 1978. In all, one thing remains observable, that is, Nigeria up till now depends on subsistence farmers for food supply.

Agriculture by definition can therefore be said to involve 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 involved forestry, fishing, processing and marketing of agricultural productions. Essentially it is composed of crop production livestock, forestry and fishing.

The role of agriculture in transforming both the social and economic framework of an economy cannot be overemphasized. It is a source of food and raw materials for the industrial sector. It is also essential for expansion of employment, of income distribution, of poverty and improvement of income distribution for speeding up industrialization and easing the pressure on balance of payment (Nwankwo, 1980).

It provides the means of livelihood for over 70 percent of the population. It is a major source of raw materials for the agro-allied industries and a potential source of the much-needed foreign exchange (World bank, 1988, Okumadewa, 1997). In effect, it has been the main source of gainful employment, from which the nation can feed its teeming population, a regenerative source of providing the nation's industries with local raw materials and as a reliable source of government revenue.

Only decades ago, Nigeria was able to produce substantial amounts of food to feed itself. Now it has to import massive amounts, while constraints, especially inadequate storage facilities and bad rural road networks, further reduce delivery of agricultural output. Thus, post-harvest loss is substantial and it is currently estimated at about 45 percent of farm gate output (FGN, Vision 2010).

It is a standard tenet of development economics that agriculture share of GDP declines as economies grow.Yet for most poor countries, this growth process can only be sustained by substantial continued increases in agricultural productivity (Timmer, 1988).

The disturbing performance of Nigerian agriculture could be seen as the food import bill continued to rise in value of N1.44 in 1980 to N3.47 billion in 1990 and then to ₦113.63 billion in 2000.While in terms of relative total importance, food imports as a percentage of total imports declined from 14.2 percent to 3.5 percent in 1991 and rose to 11.8 percent in 2000, {CBN, (1997), (2000)}. Incidentally, food imports were low during the period of Structural Adjustment Programme (SAP) 1987-93. However the gain from SAP in terms of reduction of food import was lost from 1995. Since then food importation took an upward turn. In essence, it is said that agriculture's contribution to the national economy has not been sustained.

Flow of credit to the agricultural sector is an indication that funds are available for the sector to invest and grow. The nominal flow of guaranteed credit under ACGSF has increased astronomically. But when expressed in real terms (that is. in 1985 constant prices), there was a sharp decline over the sub-periods, from about N44.2million in the 1981-85 sub-period to about 36.5 million in the 1986-90 sub-period and to only about 5.6 million in the 1996-2000 sub-period (Manyong, 2003).

The total flow of the entire banking system depicted a similar trend, with high and increasing flow in nominal terms but a decline over the sub-periods in

real terms. But more significantly, the share of total bank credit going to agriculture first increased rapidly from about 8 percent in the 1981-85 sub-periods to a peak of about 18 percent in 1991-95 sub-periods, before declining to only about 10 percent in the 1996-2000 sub-periods. This pattern of movement was a reflection of government priority for agriculture and, more importantly, the degree of compliance of the banking system with agricultural credit guidelines (Manyong, 2003).

In terms of production, this was generally very low but there was an indication of positive growth rate in staple crops, livestock, forestry and the sector aggregate production. Fisheries sub-sector displayed highly fluctuating growth rates. The production growth performance of the sector was, on the whole, poor in the 1981-2000 period; showing 5.07 percent except in the 1986-90 sub-period, where it showed 12.2 percent due to the relatively efficient implementation of Structural Adjustment Programme(SAP) in that sub-period (Manyong, 2003).

The trend in guaranteed credit to agriculture under ACGSF showed high nominal growth rates but a negative real growth rate as earlier indicated. While the rate of flow of bank credit was higher for the economy as a whole, as indicated by the higher annual rate of increase in the amount of total bank credit flowing into agriculture than flowing into the economy as a whole, except in the 1996-2000 sub-period.

The relative rate of increase in the food-item consumer prices index was generally lower than that of all items (food and non-food). This is an indication

of relative food prices stability in the economy. The rates of both food and non-food consumer prices also rose between the 1981-85 sub-period and the 1991-95 sub-period. Although the rate of increase was lower for food items, in 1996-2000 sub-periods, the rates of increase in both food and non-food consumer prices declined dramatically, but the rate of decline was higher in food than for non-food consumer prices. On the whole, the rate of inflation in food prices was lower than the rate of non-food prices in the entire 1981-2000 periods, an indication of a relatively stabilizing food security situation in the country (CBN, 2003).

It is important to note however that the development of agriculture is necessary to ensure that more food is produced and made available to non-producers at reasonable prices.

2.5.2 SPECIALISED AGRICULTURAL CREDIT AND ALLIED INSTITUTIONS.

In addition to the commercial and merchant bank, government established a few specialized institutions for the promotion of credit to agriculture, among other functions. These include the Nigerian Agricultural and Cooperative Bank (NACB) and the Nigerian Agricultural Insurance Company (NAIC)

(a) Nigerian Agricultural and Cooperative Bank (NACB)

The NACB was established in1972 primarily for direct and on lending of funds to agriculture. This function distinguished NACB from the commercial and merchant banks, which provided credit to agriculture mainly in line with prescribed policy guidelines. Several studies have reviewed the

performance of NACB since inception. The dominant conclusion has been that a loan disbursement by NACB has been less satisfactory. For example, Balogun and Otu (1991), noted that NACB'S credit administration was characterized by wide divergence between loan approvals and disbursements. Also, most of the funds allocated by NACB came from the federal government, meaning that the long-term survival of this institution had always rested squarely on loan recovery. According to various annual reports of the CBN, especially CBN (1998), project funding by NACB was #318million in 1985, peaked at #5,104million in 1994 and declined to # 2,334million in 1998. Further analysis of the same report shows that the NACB loans as percentage of the total loans to the agricultural sector from all sources, was 18.2 percent in 1985, 24.1 percent in1992, 1.9 percent in 1997 and 1.7 percent in1998. On sub-period basis, it is noted that the NACB loans as percentage of the total loans to the agricultural sector averaged 10.4 percent per annum during the 1995-98 sub-periods. This largely suggests a major decline in the agricultural loan disbursement performance of the NACB during this period.

As of October, 2000 the NACB merged with the former Peoples Bank of Nigeria (PBN); and the risk assets of the Family Economic Advancement Programme (FEAP) to become the single largest development finance institution in Nigeria; with a new name of: The Nigerian Agricultural, Cooperative and Rural Development Bank (NACRDB). The NACRDB is dedicated primarily to agricultural financing at both the micro and macro levels, as well as micro financing of small and medium scale enterprises.

(b) Nigerian Agricultural Insurance Company (NAIC)

The Nigerian Agricultural Insurance Scheme (NAIS), under the management of the Nigerian Agricultural Insurance Company (NAIC), was launched in December 1987. The expected essential linkage between NAIS and agricultural financing was that prospective loan beneficiaries would first obtain insurance cover (Ezeugoh, 1991). This was to encourage lenders to fund agriculture without fear of loss in the event of some peril, while ensuring that lenders themselves were protected under the ACGSF guidelines.

In practice, however, the expected linkage between the ACGSF and NAIS has not been achieved satisfactorily. The poor credit-insurance linkages have been traced to a number of problems. One of the problems relates to rampant loan default among borrowers (farmers). The factors, which have contributed to loan default among the Nigerian farmers, are diverse but are somewhat classifiable. First are the factors that are beyond the farmers' control, such as drought, diseases' and flood (ACGSF, 1980). The second group of factors relate to the lenders .In a series of annual reports by the ACGSF, it has been stated that default in loan repayment can be traced in parts to delays in the processing of farmers' loan application (ACGSF, 1978); infrequent visits to loan beneficiaries (ACGSF, 1980); granting of inadequate loans, enforcement of unrealistic repayment schedules and improper evaluation of funded projects (ACGSF, 1983); and irregular disbursement of approved loans (ACGSF, 1985). The attitude of farmers has also been cited to constitute the third set of factors

in agricultural loan default .These include incidence of loan diversion to non-farm activities or direct consumption, neglect or abandonment of farms for alternative opportunities (ACGSF,1980);absenteeism ,insincerity and poor farm management (ACGSF,1981;1982).Loans repayment problems which are traceable in part to government include inadequate provision of inputs, infrastructure and extension services, as well as inconsistencies in agricultural policies(ACGSF,1983).Factors which cannot really be blamed on any one in particular include poor health of farmers and the spread of farmers over a wide area of land, which increase the cost of loan administration and recovery.

Commercial banks on their part have cited the enforcement of cumbersome procedures for default claims settlement by the CBN as the major factor in the recent low participation in the scheme (Usman, 2000). However, CBN (1989) maintains that the inability to verify some of the default claims by lenders (bankers) has largely accounted for the delay in loan default claims settlements.

The crucial point here is that the absence of an active linkage between lending to agriculture, agricultural insurance and default claims compensation has done immense harm to agricultural credit lending in Nigeria.

2.6.1 IMPORTANCE OF PUBLIC EXPENDITURE ON AGRICULTURE.

The positive growth rate of federal expenditure on Agriculture in 1981-85 is not unconnected with the priority given to agriculture by the civilian

regime that was in power up to December 1983 and which was upheld by the immediate military successor. However, the true priority rating of public expenditure has to be based on the share of agriculture in total government expenditure relative to other sectors. And viewed from this context, the overall commitment of the government to agricultural funding is far from being satisfactory.

Expenditure on agriculture by the federal government of Nigeria during the period 1981-85 for recurrent expenditure averaged N46.02 million and reached an all time high of N61.37 million in 1986-96. However, capital expenditure on agriculture followed an increasing trend only during the pre-SAP era of an average N316.11 Million, but fell drastically to an average of N162.11 million in 1986-96 while the share of capita expenditure dropped to 71 percent in 1986-96 (CBN Annual reports and statement of Accounts).

The assessment of the importance of public expenditure on agriculture involves total government expenditure and agricultural GDP. When looking at the ratio of agricultural expenditure to total expenditure, it shows the degree of commitment of the government to agricultural financing. The ratio, which has been fluctuating considerably especially prior to the introduction of SAP, peaked in 1981-85 and fell remarkably during SAP period. The declining trend between 1986 and 2000 is an attestation to the strict compliance with the expenditure reduction policy in the agricultural sector under SAP (Manyong, 2003).

In a research conducted by (Ojo et al, 1981), they are of the view that expenditure is used by the government to relax the financial constraints faced by the farmers. These may result directly or indirectly to increased financing for the agricultural sector. As a source of agricultural financing which the government has actively promoted, is a package of financial and fiscal incentives, such as those given to commercial and merchant banks to increase their funding of the agricultural sector. Others are through agencies like Agricultural Credit Guarantee Scheme Fund (ACGSF)

Handa (1970), believed that budgeting measure could be used to stimulate agricultural development, in the form of capital and recurrent expenditure, which are annually estimated. These funds can be used to develop irrigation systems farm segment, agricultural development projects, provision of infrastructural facilities, provision and expansion of extension services pest control, improvement of seed varieties. etc.

According to Shaib et al (1996), he recorded that the period 1920-1980, however, witnessed the greatest investment by government. The World Bank assisted Agricultural Development Programmes (ADPS) were established, together with eleven River Basin Development Authorities (RBDA's) National Accelerated Food Production Programmes (NAFPP) and the general development of agricultural infrastructure to prevent the agricultural production from declining.

While Abdullahi (1999), argued that the reason why the agricultural sector has witnessed very little growth is that budgetary provisions, have not

improved in relative terms. Allocations have remained well below 10 percent and a far cry from 20-25 percent recommendation by the Food and Agricultural Organization (FAO) for developing countries.

From the assessment, under SAP, the curtailment of government support for agriculture was clearly demonstrated by a number of policies, including desubsidization, privatization and commercialization of some agricultural parastatals, as well as the return of agricultural marketing institutions, which contributed, markedly to the sharp reduction in capital expenditure to agriculture. Paradoxically, agriculture has experienced a heavy loss in capital allocation at a time when much was being expected of it for increased supply of food and export commodities as well as industrial raw materials.

2.6.2 Trends in Agricultural Financing

Generally, total credit to the agricultural sector showed increasing trend from 1990 to 2001. Total credit, which stood at N722.9 million in 1980, had increased to N6, 932.4 million by 1990 and to N50, 493.59 million by 2001.

However, the annual growth rate of credit to the sector trended downwards. It rose from 21.9 percent in 1990 to a peak of 54.4 percent in 1993 and declined thereafter until 1998. In 1990, the public sector contributed 24.0 percent of the total credit while the private sector accounted for the balance of 76.0 percent. This trend continued until 1993 when the public sector accounted for about 28.0 percent of the total credit. Thereafter, the composition of total credit was reversed, with the share of the public sector declining to 18.0, 14.0,

7.0 and 3.0 percent in 1994, 1996, 1999 and 2000 respectively. The declining trend was traceable largely to the non-mobilization of savings by the specialized credit institutions, coupled with the reduction in government subventions. Similarly, capital budgetary allocation to the sector, which stood at 11.5 percent of total capital expenditure in 1989, had declined to 6.7 percent by 1990. The downward trend continued to 2001.where the capital expenditure to agriculture as a percentage of the total stood at 1.3 percent.

2.6.3 The Agricultural Production Gap

In the 1990s, policy measures were initiated and strategies designed to propel agricultural development, targeting the year 2000 and beyond. The discussion of the output targets set and a detailed analysis of the level of achievement, so far, is presented below:

i. The Crop Output Gap

Food crop constitutes the largest component of the crop sub-sector of Nigeria's agricultural sector. They are categorized broadly into cereals, pulses, roots, tubers and plantain, oil seeds and nuts, vegetables and fruits, sugar and beverages. The target date for self-sufficiency or, at least, self-reliance in respect of most food crop was set at 1992.It was expected that the target output set for various food crops would provide each Nigerian with at least 2,100 calories and 60grammes of protein per day. To achieve the stated policy targets, commodities such as legumes, tubers, and fruits were expected to record annual growth rates of about 5 percent or more. Also, millet, sorghum, cassava and leafy vegetables were expected to record output growth rate of 6 to

8 percent, while maize, rice, wheat, soyabeans, and sugarcane output, were expected to grow by over 10 percent annually.

Analysis of Nigeria's food crop production shows that, of the seven-food crop for which comparative data are available, only four exceeded stipulated target, while three recorded a negative variance between actual and projected output during the period 1990 and 2000. From the foregoing, it is clear that there was a short fall in food crop production between 1990 and1999. This implies that the self-reliance target was largely unmet during the period. Also, the estimated nutritional intake of Nigerians stood at 2000.5 kilo calories per output per day in 1995, compared to the 2100-kilo calories projected for 1992, and the 2450-kilo calories minimum requirement per day recommended by the Food and Agricultural Organization (FAO).

Further analysis shows that staples that exhibited moderate growth in output as the production index of staples grew consistently from 1990 to 2001, recording an average growth of 5.8 percent during the period. This was slightly above the minimum growth target of 5.0 percent set for the various food crops in the policy document, but much below the upper target of 10.0 percent. All the staples exhibited consistent growth in output except cassava whose output fell in 1999, but grew from 2000.

ii. The Livestock Output GAP

For the purpose of planning for self-sufficiency in livestock production, output in the sector was categorized into short term, and long term. Livestock, whose sufficiency level could be conveniently attained within five years, were

classified as short term while those that would require at least 15 years were categorized as long term. Thus, the target years for the two classes of livestock products were set at 1992 and 2002 respectively.

The demand and supply projection for the live stock sub-sector in the policy document were limited to five livestock products, namely: beef, poultry products, goat meat, mutton and pork. The five livestock products are categories under short-term (poultry meat, goat meat, mutton, pork, and beef). There were substantial negative variances between actual and projected output levels.

The agricultural production index shows that livestock output recorded a growth rate of 2.2 percent between 1990 and 2001, a much lower figure than the expected growth rate of 19.05% stipulated in the policy document for various livestock species. At the current level of production, the protein intake of Nigerians will continue to remain much below the stipulated minimum requirement.

iii. The Fisheries Output Gap

The target set for fish supply from domestic sources was 958,397 tonnes, with a growth rate of 7.05% annually. Even though, the level of fish supply has been on the increase between 1990 and 2000, it has consistently been much lower than the demand for it, hence the deficit recorded over the years. The deficit, which stood at 848.16 thousands tonnes in 1990, fluctuated upwards and peaked at 1,191.4 thousands tonnes in 1995 before declining to 403.0 thousand tonnes in 2000. However, this growth rate, which stands at 2.0

percent per annum, is too low to compensate for the substantial negative variance between actual and projected outputs, there-by, negating the objectives of self-sufficiency in fish production. Anticipated growth rate of this sub-sector has not been achieved, suggesting that the current production practices may not be capable of achieving the desired production targets.

CHAPTER THREE

3.0 A REVIEW OF SOME MAJOR AGRICULTURAL POLICIES IN NIGERIA

3.1 GENERAL INTRODUCTION

Nigeria's agricultural policy framework has gone through a number of evolutionary processes and fundamental changes that reflected, in a historical perspective, the changing character of agricultural development problems and the roles which different segments of the society were expected to play in tackling these problems. The form and direction of agricultural policy at a point in time are dictated by the philosophical stance of government on the content of agricultural development and the role of government in the development process.

In the pre 1970 eras, government philosophy of agricultural development was characterized by minimum direct government intervention in agriculture. As such, government attitude to agriculture was relaxed, with the private sector and particularly the millions of small traditional farmers bearing the brunt of agricultural development efforts. Government efforts were merely supportive of the activities of these farmers and government efforts largely took the form of agricultural research, extension and export crop marketing, and pricing activities. Most of these activities were regional-based towards the end of the colonial era with federal government contribution being confined largely to agricultural research.

However, the turn of the 1970s was, therefore, characterized by a state of general apprehension about the condition of the Nigerian agricultural sector. This led to a fundamental change in the philosophy of government on agricultural development from one of minimum government intervention to one of almost maximum intervention, particularly by the federal government. The feeling was pervasive that the solutions to the increasingly serious problems of agriculture and especially those of food supply required the heavy clout of government in the form of multidimensional agricultural policies, programmes and projects, some of them requiring the direct involvement of government in agricultural production activities. The sudden smile of oil fortune on Nigeria reinforced this feeling. Hence, the decade of the l970s and early 1980s witnessed an unprecedented deluge of agricultural policies, programs, projects and institutions. These are presented below.

3.2 NATIONAL POLICY ON FOOD SECURITY IN NIGERIA: OBJECTIVES, INSTRUMENT AND MEASURES

Basic objectives of food policy commonly stated by various regimes of governments include: growth in food production, generation of employment, and a decent standard of living for food producer, and in general security against famine and food crisis. The National Development plan documents from 1970 to 1988 showed that the Nigerian Government targeted the following food policy objectives:

(i) Ensuring adequate food supplies for the country's growing population.

(ii) Providing increased incomes for food producer (farmers).

(iii) Increasing foreign exchange earnings from food exportation.

(iv) Encouraging the adoption of appropriate technologies in food production and

(v) Creating rural employment opportunities.

These are broad policy goals, which could have supplementary objectives such as achievement of stabilities in food supplies, ensuring efficient storage, maintaining food price stability and ensure ring fair and adequate economic returns to those carrying out ancillary food activities. Though the food objectives were stated in broad terms, they were accompanied with quantitative targets in terms of desirable per capita level of nutrient supply and the corresponding food production targets that would guarantee the achievement of nutrient supply goals.

Among the most important policy instruments adopted to achieve the above objective since the early 1970s as listed by Ojo (1988) include:

(i) Reduction of tax burden

(ii) Provision of credit

(iii) Increased effort in research

(iv) Man power development

(v) Rural development; and

(vi) Irrigation development

In the mid 1970s, the first six policy instrument were given priority attention, particularly as reflected in the attempt to remove unfair taxes and train more manpower for policy execution. The choice of policy instrument

during this period was greatly determined by the felt need to reform the Marketing Board System and improve the execution of agricultural development programmes. Between 1975 and 1988, the use of price subsidies, credit, irrigation development, rural transformation and land reforms assumed positions of prominence as policy instruments. Largely the worsening food security situation and greater financial capacity emanating from increasing oil revenues necessitated the expansion in the mix of utilized policy instrument package.

Government using the above policy instrument for the attainment of the objectives earlier state designed a wide range of policy and programme interventions. These policy measures have been put in place in recent years to address the food insecurity situation. These policy measures include:

(i) Integrated Rural Development (IRD)

(ii) Production of modern farming methods

(iii) Land and water resources development

(iv) Input subsidy and distribution

(vi) Price incentive scheme

(vii) Institution reforms and

(viii) Other measures.

The Integrated Rural Development (IRD) has been very important in terms of the number of farmers reached. The then Agricultural Development Projects (ADP) and National Accelerated Food Production Programme (NAFPP) both constituted the two major schemes under this IRD. The ADPs

were launched, as enclave projects in the 1970s. They became countrywide in 1985 with every state implementing an ADP unlike the former restricted enclave projects, which served only a few local government areas (LGAs). It was expected that the ADPs will improve farmer's productivity and income through the supply of farm inputs at village level, and also the provision of technical and management training to agricultural officials. The NAFPP like the ADPs was an attempt to move from all-purpose general extension, for rural development to a specific development strategy which aims at providing extension, inputs and other supporting service package together for farmers at the village level. However, a major difference between the NAFPP and ADPs was that while planning and implementation of the ADPs involve active participation by the World Bank, the NAFPP was almost 100% locally funded and implemented. The NAFPP gave way by 1985 mainly because of the emergence of the ADPs.

Notwithstanding, the laudable achievement of the ADPs several shortcomings and implementation problems were faced. Several criticisms, having to do with the concept and scope of ADPs, have been leveled by Idachaba (1980) and Okorie (1986). Such criticisms include the fact that the ADPs were not fully integrated rural development projects since they excluded vital social components. Also, there was the dominance by foreign technical man power and the exclusion of certain key food crops and marketing services in the first generation of ADPs. Another problem experienced in the implementation of the projects was the slow acceptance by many farmers of

some recommended practices, which could account for some of the under-achievement of set targets. This problem might be due to insufficient knowledge of the agricultural system in the project areas and the adequate role of research in persuading farmers to adjust.

Irrigation development and related activities for enhancing crop yield and encouragement for continuous production receive attention as important food policy from the inception of the third plan period. The importance attached to this approach necessitated the setting up of the implementing agencies at the state and federal levels. The most important of such agencies were the River Basin Development Authorities (RBDs) which were mandated to perform high ranging functions which include: (1) comprehensive development of water resources for multi-purpose use (2) control of floods and erosion and (3) construction and maintenance of damps. Initially, the authorities got the lion share of the Federal Government capital allocation to the agricultural sector. There were, however, important numerical and structural changes in the RBDs over the years. The number increased from 10 to 11 from 1976 to 1977 and to 18 in 1984. In 1986, the number was cut down to 11, while their activities were limited to the development of water resources (Okuneye, 1986; Okuneye, 1995).

Government also adopted an integrated approach for the procurement and distribution of purchased agricultural inputs, which included agro-chemicals, improved seeds and agricultural machinery and equipment. Fertilizers dominated the input supply and distribution programme. This was

done by establishing a Fertilizer Procurement and Distribution unit in the Federal Ministry of Agriculture to undertake central importation, port clearance and transportation to state deports as a means of rationalization of such imports, reducing overall costs and removing some inherent and observed malpractices. Local production capacity was developed through the establishment of fertilizer plants at Kaduna and Ondo.

Similarly, arrangements were made for moisture production of improved seeds for distribution to farmers. Consequently, a national seed multiplication system was established in 1977. Under the system, several agencies were set up at both the state and the federal levels to formulate policies, co-ordinate operational activities, organize the continuous supply and distribution of foundation seeds and to carry out the evaluation of the system on a regular basis. As to agricultural machinery and equipment, the major policies included liberal importation and low tariffs, the institution of tractor hiring units at state levels, the development of local production capacity and intermediate agricultural technology through new designs and adaptation of existing technologies.

Price incentives, which were given in respect of both output and purchase inputs, also became an important food security and agricultural productivity enhancement measure. Today, the federal government gives a 25 percent input subsidy on fertilizer while some states add their own incentives.

The next group of measures consisted of institutional reforms aimed at providing more and better services to farmers. Some of these reforms were in

the form of research and extension, manpower development, and training, land use, agricultural credit, and marketing. While decisive steps were taken to revive the agricultural research system to enhance its output and efficiency, the extension service was strengthened to become an effective link between the research system and farmers. The reform under the land use system was mainly encapsulated in the land use act, which aimed at increasing the utilization of land resources by encouraging larger capital, and managerial resource investments, which had enhancement of agricultural modernization, as its primary target. Agricultural credit formal institution were re – organized with the aim of delivering more credit to farmers through formal services and ensuring that financial institutions were easily accessible to farmers in their immediate environments. The Agricultural Credit Guarantee Scheme Fund (ACGSF) of 1977/78 put as a matter of priority about 10-15 percent of the loan portfolio of commercial and merchant banks for agriculture. Today, however, not much has been achieved in this area as only a few banks are implementing this policy. Finally, these programmes such as DFRRI, Green Revolution, and OFN were implemented with a view to boast food production. There were a few measures too, aimed primarily at increasing food consumption such as trade policies, which induced higher food prices import, price control to reduce food prices and measures to curb population explosion.

3.3 RECENT POLICIES AND PROGRAMMES WITH IMPACT ON THE AGRICULTURAL SECTOR

According to the World Bank (1991), three categories of policies, strategies and programmes do affect food supply. First are, those general ones designed to promote rapid economic growth and increase real per capita income. The second groups are those targeted at the poor to enhance their capacity to benefit from economic growth, improve food availability to them and their economic access to food. The third are the safety-net policies and programmes designed for vulnerable groups in the society who require immediate relief from transitory poverty and food shortage mainly through social welfare measures. In Nigeria, a considerable number of policy and programme interventions have been put in place in recent years to address the food shortage situation. These can be categorized into macro-economic and institutional policies.

A MACRO-ECONOMIC POLICIES

The macro-economic aspects, according to Olayemi (2002), include fiscal, monetary, trade, foreign, exchange, wage and income policies

i Fiscal policies

The fiscal policies are focused on reductions in extra-budgetary expenditures and budgeting deficits. A Value Added Tax (VAT) was introduced in 1993, and there was a reduction in personal income tax rate with the tax rate reducing from a range of 10-35 percent in 1993 to 5-10 percent

currently. This has the potential to increase the purchasing power of Nigerians and hence food demand. The capital budget allocation to the agricultural sector, also slightly increased from 2.0 percent in 1995 to 3.0 percent in 1997 and 3.3 percent in 1998,but has declined consistently below 3.0 percent since then, with attendant consequences on food production. There is the need for higher level of funding of agriculture in Nigeria.

ii Monetary policy

In general, monetary policies refer to the combination of measures designed to regulate the value, supply and cost of money in the economy, in consonance with the expected level of economic activity. Liquidity, interest rates and foreign exchange rates are the channels through which monetary policy influences economic activities.

The major instrument of monetary policy adopted since 1995 include the use of the Open Market Operation (OMO) to mop up excess liquidity in the economy, the use of government treasury bills to mop up excess liquidity and to finance budget deficits, the use of cash reserve requirement, the use of minimum rediscount rates and discount window operation to influence changes in interest rates and the repeal in 1996, of the low stimulating minimum percentages of total bank credit going to agriculture and other preferred sectors.

iii Trade policies

The main focus of trade policies is on measures to regulate export and import trade through such measures as tariffs, export and import quotas and prohibitions. They influence the investment climate in many ways. For

example, a liberal trade policy constitutes an incentive for foreign investors who may need to import raw materials and / or export products.

Before 1995, Nigeria's import trade policies with regard to import tariff and import prohibition policies were unstable. Whereas outright bands, were placed on major food items in 1989-1991. This was changed in 1992 for wheat and other food items. However, from 1995, government started to lay less emphasis on import prohibiting policies with the ultimate aim of complying with the World Trade Organization's (WTO) rules to which the country is committed.

At present, the Nigerian market is flooded with all kinds of import commodities with increasingly serious consequence on the agricultural economy. Export prohibition was a major policy instrument for enhancing the domestic availability of locally produced food, raw material and other agricultural product to consumers and industries. Between 1995 and 1998, many food and agricultural products were placed on the export promotion list; some of these have now been removed from the list. Also, the share of food items in the total import value showed an upward trend; rising from 10.3 percent in 1994 to 11.9 percent in 1997 and to about 13.0 percent in 2001. However, the share of non- oil exports (which are mainly agricultural products) in the total export value remained low, and being less than 3.0 percent between 1994 and 2001.

iv Foreign exchange policies

The objectives of these policies since 1986, under Structural Adjustment Programme (SAP), have been to allow free market forces to determine

exchange rate. This objective was pursued until 1994 when administrative controls once again came into operation. Then, in 1995, a dual exchange rate regime was put in place. One rate being market-propelled and the other officially fixed. However, the official rate was cancelled in 1999. Under these policies, the country's currency (the Naira) recorded drastic devaluation between 1986 and to date. This situation has exacerbated inflation and has led to skyrocketing cost of agricultural production. The consequence of this is pressure on the farmer's profit margins and increased need of production capital and credit. The Dutch Auction system now being used has not provided the appropriate medicine for the Naira.

V Wages and incomes policies

These policies were grossly neglected. Until recently, there seems to be some changes under the administration in the country today for government workers and people in the organized private sector (Agriculture). This could be said to have led to inflation thus making food not readily available to the vulnerable group of the population.

It has recently been emphasized by many experts that the poor performance of agriculture in the developing countries can be traced to the adoption of macroeconomic policies that are inconsistent with food policy measures.

The aspect of these macroeconomic policies, which produced serious disincentive effects on food and agricultural production, are discussed below;

First, there was a large distortion in the pattern of investment in favour of construction, transport communications and other service sectors, which had better returns on investments than agriculture. Coupled with this was the rapid increase in labour costs, which put the agricultural sector at a disadvantage. These factors were the basis of the massive shift of labour from the rural to the urban areas.

Secondly, the liberal food import policy permitted certain food items like: - wheat, rice and vegetable oil, to be cheaper than local substitutes since they often arrived at the ports at much lower cost than the local costs of producing similar items. The existing link between agriculture and industry was reduced to the minimum because of these relatively cheaper imports. Manufacturers could then import their raw materials instead of depending on local sources and in many cases it was more profitable to import the finished goods.

Thirdly, the administrative control of the exchange rate, which resulted in the significant over-valuation of the naira, placed Nigeria's agricultural exports at a disadvantage in international markets. The earnings of local producers were not only depressed because of that; they could not make ends meet when rising production costs were taken into account. The output price subsidies, which were implied by the excess of local prices over world market prices, were largely unreal. Thus, macroeconomic policies, which were designed to produce certain desirable objectives in one direction, were sources of disincentives in another direction to food

producers who were supposedly being supported by another set of policies.

B INSTITUTIONAL ARRANGEMENTS FOR FOOD SECURITY IN NIGERIA

Most micro-level policies have focused on the creation of the institutions and infrastructure for agricultural sector development. The major micro-level policies currently in operation are summarized as follows.

i Agricultural Research Policies

These policies have undergone many changes related to the creation of institutional mechanisms for the national co-ordination of agricultural research and for effective inter-linkage between agricultural research, extension and farmers. One recent development in this direction was the creation of the National Agricultural Research Project (NARP) in 1991 to fund mainly agricultural research, strengthen research institutions and consolidate agricultural research- extension-farmers' linkage.

ii Agricultural Extension Policies

These policies are shaped to promote new agricultural technologies through a Unified Agricultural Extension Service (UAES) and under the statewide agricultural development programmes. One of the important developments in the area of agricultural extension research co-operation is the emergence of the National Agricultural and Research Liaison Service (NAERLS).

iii Water Resource Development and Irrigation policies

The network of eleven RBDAs established in 1977 remains the major institution for water resources development input supply and pricing policies. However, the RBDAs were partially commercialized in 1992 as a result of which some of the subsidy on irrigation water supplied to farmers was removed. The move towards full commercialization was expected.

iv Privatization Policies

The policy of privatizing important public-sector enterprises has been in existence for many years, although the implementation has not been smooth. A Bureau of Public Enterprises (BPE) was established but its impact has been minimal on the economy. However, a law was proposed under the 1999 budget to give a stronger legal backing to privatization. There were also proposals to strengthen the Bureau of Public Enterprises for a more efficient implementation of privatization programs.

A privatization policy of government has recently disengaged itself from the procurement and distribution of petroleum products, seeds and agro-chemicals.

v Population Policy

Nigeria's Population Policy is at a rudimentary stage and limited to those dealing with family planning and improved primary healthcare delivery especially under the Expanded Programme on Immunization (EPI). There is the

need to evolve effective policies to regulate population growth since it is a major factor influencing a national food security status.

The importance of these policies in terms of improvement in food security status has been manifested through their collective effects on changes in agricultural technology, food production supply and availability, food production cost and farm income policies, food prices, consumer's access to food and the stability of access to food. The effects are subsequently wide-ranging, and multi-dimensional as asserted by Olayemi, (2002).

3.4 STRATEGIES AND POLICIES ADOPTED SINCE THE STRUCTURAL ADJUSTMENT PROGRAMMME (SAP) IN 1986

The failure of the state led approach to development, Nigeria's dwindling fortune in the petroleum export market, a burgeoning debt burden and an unhealthy investment climate led to the realization that the country's economy required some drastic restructuring. This was what gave impetus to the Structural Adjustment Programme (SAP) launched in July 1986.

A Structural Adjustment Program comprises a mix of demand-side policies, supply-side policies and other policies designed to improve the country's international competitiveness. Generally, structural adjustment policies in Nigeria were aimed not only at correcting existing price distortions in the economy but also structural imbalances and for promoting non-price factors which would enhance the effectiveness of price factors.

Broadly, Structural Adjustment Policies in Nigeria could be categorized into four groups. In the first group were expenditure reducing or demand-

management policies, which were designed to influence the economy's aggregate domestic absorption mainly through fiscal and monetary policy instruments. The second group included expenditure-switching policies that were designed to alter domestic relative prices in favour of tradable commodities and improve the price competitiveness of export commodities and import -competing goods. The most important policy instrument for this was the devaluation of the national currency. Thirdly, there were market liberalization policies that were designed to give the free interplay of market forces more roles in the economy, reduce administrative controls as well as government intervention in the operation of the economy and, generally, render the economy more flexible and more resilient. Policy instruments required for these included those aimed at reducing import and export taxes, eliminating export and import prohibitions, relaxing input and output marketing controls, withdrawal of subsidies and price controls, and so on. Fourthly, there were institutional or structural policies that were designed to eliminate those structural constraints that tended to inhibit the effectiveness of other adjustment policies.

Some major Structural Policy Instruments are those designed to promote the flow of technological innovation, provide better input delivery systems, provide more infrastructure and utilities, improve national information systems, provide institutional framework for the smooth operation of free market system and, generally, create a more favourable environment for increased investment in the economy, efficient allocation of resources and enhanced profitability of

public enterprises through commercialization and privatization. Specifically, the Structural Adjustment Program in Nigeria had been assigned the objectives of:

- Restructuring the Nigerian economy by restructuring and diversifying the economy's production base, nationalizing consumption patterns and reducing the economy's dependence on petroleum export and commodity import
- Expanding non-oil exports
- Reducing the import content of locally produced goods
- Attaining self-sufficiency in food and raw material production within the shortest time possible
- Rationalizing the country's monetary and fiscal policies and
- Liberalizing the country's external trade and payments systems and adopting appropriate measures to give the private sector a larger role in the domestic economy increase the reliance of the economy on market forces and reduce administrative control of the economy by government. Clearly, the first four objectives above depended critically on agriculture for their achievement. Hence, it might be assumed that agriculture was the cornerstone of the Structural Adjustment Programme.

As far as Nigeria was concerned, and with particular reference to the country's agricultural sector adjustment process, the economic philosophy underlying the Structural Adjustment Programme had as its key elements the principles that:

- Agriculture was essentially a private-sector business and the role of government must be largely to facilitate and be supportive of private-sector initiative
- The agricultural economy should be as free of government administrative control as possible and market forces must be allowed to play a leading role in directing the economy
- The agricultural economy should be more inward looking and self-reliant by depending more on local resources while also ensuring self-sufficiency in food production and the supply of raw materials to industries; and
- The agricultural economy should serve as a primary avenue for the diversification of exports.

The substantial rise in production costs has been an inevitable side effect of structural adjustment. The initial impetus to this development was created by the gradual removal of input subsidies by government as required by the adjustment process. The rise in input cost was on top of the increase arising from scarcity and black market activities in such inputs. Most of these inputs even when manufactured locally have high import content with the depreciation of the naira exchange rate, such inputs have become more expensive and thus escalated production costs. Similarly, transportation costs have jumped up due to the inadequate number of commercial vehicles, paucity of spare parts, increased fuel cost and poorly maintained roads. Thus,

although farmers certainly have benefited directly from improved agricultural prices under the new marketing system, net farm incomes might not have changed much.

CHAPTER FOUR

4.0 RESEARCH METHODOLOGY

4.1 METHODOLOGY

This research work attempted to provide insights into the effect of government expenditure on Nigerian agricultural sector. The government spending behavior to the sector is essential for its growth hence; the study adopted a multivariate regression model. This handled the relationship between the agricultural GDP, government expenditure on agriculture, price of agricultural output and rainfall. Equally important is a stability test, which was carried out in order to investigate the performance of the agricultural output within the pre-SAP and the with-SAP periods. This is particularly necessary in order to determine the level of government contribution to agriculture

4.2 SOURCES OF DATA

The research relied heavily on secondary data published by the Central Bank of Nigeria such as Statistical Bulleting and Annual Report and Statement of Account, Annual Abstract of Statistics of the Federal Office of Statistics, Financial and Economic review and journals.

4.3 ESTIMATION TECHNIQUE

The ordinary least square technique of estimation was used to estimate the coefficients. While a test of the hypothesis was conducted by the use of a t-test. The choice of technique was based on an a priori expectation, guided by economic theory.

4.4 MODEL SPECIFICATION

In order to estimate the level of contribution of government expenditure on agricultural output growth, the data were analyzed by the use of a Cobb-Douglas production function. Which employed the logarithmic function; they are called so because they are linear in logarithmic transformation, and are also referred to as log-linear regression model.

The equations are specified as;

Agric. GDP = $\beta_0 . E^{\beta_1} . F^{\beta_2} . P^{\beta_3}$ ……. (1)

Taking logarithms of the variable we fit a regression line by the method of OLS to the linear form.

$$InGDP_t = In\beta_0 + \beta_1 InE_t + \beta_2 InF_t + \beta_3 InP_t + U_t \ldots\ldots\ldots\ldots (2)$$

From the equations above, the agricultural output (GDP) is expressed as the dependant variable while the independent variables are government expenditure to agriculture (E), total amount of rainfall (F) and price of agricultural output (P). U_t is the stochastic disturbance term $\{U_t \sim N (0.\sigma^2)\}$ It captures the other variables not specified in the model. The time period considered for the analysis is from 1977 to 2006. β_1, β_2, β_3, are the respective elasticities and β_0, is a constant elasticity function.

However, the estimated result are expected to satisfy the a priori economic expectation in that government expenditure (E) to agriculture, output price (P) and total amount of rainfall (F) are expected to be positively related to the output.

4.4.1 Test of Structural Stability

Also, in order to investigate the influence of government agricultural expenditure on agricultural performance within this period, a structural stability test on the secondary data on Agricultural GDP and government expenditure on agriculture within the pre-SAP and with-SAP period were carried out.

This test was carried out in order to estimate how agricultural output behaves in relation to government expenditures on it. It was statistically tested with Chow break point test .The data was divided into two periods 1977 – 1985 and 1986 – 2006 This estimate justified the use of pre-SAP and with-SAP periods, for it reveals the performance of the reforms that were put in place in the period (1986) and the level of government participation, and how they had affected the government agricultural expenditure and the performance of the agricultural output.

The equations are specified as follows;

i. Pre-SAP period

$GDP_i = b_1 + b_2E_i + U_{1i}$ - - -(1) 1977-1985

i = 1,2, - - -N_1

ii. with-SAP period

$GDP_i = \alpha_1 + \alpha_2 E_i + U_{2i}$ - - -(2) 1986-2006

i = 1,2, - - -N_2

iii $GDP_t = y_1 + y2E_{t-1}$ - - -(3) 1977-2006

t =1,2 - - -N

Where GDP is agricultural output and it is the dependent variable.

E is government agricultural expenditure on agriculture and it is the independent or explanatory variable

U_{1i}, U_{2i} are the disturbances or error term in the two regressions

The idea of the Chow test is to fit the equation separately for each sub-sample and to see whether there are significant differences in the estimated equations. A significant difference indicates a structural change in the relationship. The chow forecast test leads naturally to more general tests of structural change. A structural change or structural break occurs if the parameters underlying a relationship differ from one sub-set of the data to another.

CHAPTER FIVE

5.0 PRESENTATION, ANALYSIS AND DISCUSSION OF RESULTS

5.1 EFFECT OF GOVERNMENT AGRICULTURAL EXPENDITURE ON AGRICULTURAL SECTOR OUTPUT

The effect of government agricultural expenditure on agricultural output is examined from the results of the estimated equations using the OLS technique. However, the general model is disaggregated into pre-SAP and with-SAP periods. This is done so as to examine the effect of SAP, and how it has affected the government agricultural expenditure on agricultural output. Also presented below alongside the estimated equations are: the student t-statistics presented in parenthesis, R-square (R^2), Adjusted R-square($\bar{R}^2$), and the F- statistics

The estimated equations are presented in logarithm form below;

Pre-SAP period

$$logGDP = 8.474 - 0.104E + 0.422P + 0.146F \quad \text{--(5.1.1)}$$

t-statistics (4.403) (-1.647) (3.344) (0.491)

$R^2 = 0.80$ $F_t = 5.44$

, $\tilde{R}^2 = 0.676$ $N=9$

Variable	Estimated coefficient	t_c	t_t	A prior expectation	t-value at 5% level of significance
C	8.474	4.803	2.447	> 0	Using rule of tumb ,expected sign and significant level.
E	-0.104	-1.647	2.447	>0	Wrong sign and Not significance at 5%
P	0.422	3.344	2.447	>0	Expected sign and significance at 5%
F	0.146	0.491	2.447	>0	Expected sign and Not significance at 5%

with-SAP period

logGDP = 10.520 + 0.020E + 0.179P – 0.081F - - - -(5.1.2)

t-statistics (34.583) (0.493) (5.230) (-1.319)

$R^2 = 0.895$, *Ft=3.39*

$\tilde{R}^2 = 0.875$ *N=20*

Variable	Estimated coefficient	t_c	t_t	A prior expectation	t-value at 5% level of significance
C	10.520	34.583	2.11	> 0	Using rule of tumb ,expected sign and significant level.
E	0.020	0.493	2.11	>0	Expected sign and Not significance at 5%
P	0.179	5.230	2.11	>0	Expected sign and significance at 5%
F	-0.081	-1.319	2.11	>0	wrong sign and Not significance at 5%

AGGREGATE PERIOD

logGDP = 10.285 – 0.066E + 0.326P – 0.111F - - - -(5.1.3)

t-statistics (21.400) (-1.332) (8.420) (-1.230)

$R^2 = 0.913$ *Ft=3.39*

$\tilde{R}^2 = 0.903$ *N=29*

Variable	Estimated coefficient	t_c	t_t	A prior expectation	t-value at 5% level of significance
C	0.48	21.400	2.06	> 0	Using rule of tumb ,expected sign and significant level.
E	0.049	-1.332	2.06	>0	Wrong sign and Not significance at 5%
P	0.039	8.420	2.06	>0	Expected sign and significance at 5%
F	0.090	-1.230	2.06	>0	Wrong sign and Not significance at 5%

5.2.1 ANALYSIS OF RESULTS

The first analysis to be made is on the pre-SAP period. The result in equation (5.1.1) shows that the estimated coefficients of the variables are in elasticities because they are estimated in log-linear form. The estimated elasticity of the government expenditure on agriculture does not confirm to our a priori expectation of a positive relationship, rather it is negative and insignificant at 5 percent. . The result also shows that a 1 percent increase in government expenditure will lead to a 0.1percent decrease in agricultural GDP. This implies an inverse relationship between output supply and government expenditure on agriculture during this period. The price and rainfall on the other hand turned out to be positively related to the agricultural output, but only price is significant at 5 percent, all things being equal, output supply are greatly influenced by output price. The estimated coefficient of price is 0.422 and it means that a1percent increase in price is associated with an increase of 0.422percent in agricultural GDP (output). While the result of the rainfall shows that a 1 percent increase in the amount of rainfall is also associated with an increase of 0.146 percent in agricultural GDP (output). Given an R^2 value of 0.80 and $\tilde{R}^2$ value of 0.67, the adjusted coefficient of determination shows that at least 67 percent of the changes in the agricultural sector output occur as a result of the combine impact of the government expenditure, price and rainfall. This implies that the government expenditure, price and rainfall played a role in the growth of agricultural output, while 33 percent is accounted for by exogenous factors. But the implication of this is that, the government

expenditure to agriculture was not sufficient enough to move the sector to the required level of satisfying both demand for food and raw materials for the industrial sector. The f-statistic on the other hand, is a measure of the overall significance of the estimated regression. It is similarly significant and shows that the explanatory variables have influence on the behavioural pattern of agricultural GDP (output).

Equation (5.1.2) represents the with-SAP era. The estimated coefficients under this period, however shows that both government expenditure and price confirm to the a priori expectation of a positive relationship. But, both government expenditure and rainfall are found to be statistically insignificant at 5percent. The result of the government expenditure however shows that 1 percent increase in expenditure will induce an increase of 0.02 percent in output; it implies that the output supply response is not significant enough to changes in government expenditure on agriculture during the period. Whereas a 1percent increase in price lead to a 0.17 percent increase in output. The estimated value of rainfall on the other hand shows a negative relationship where it is expected to be positive. It also shows that 1 percent increase in rainfall will induce a 0.081 percent decrease in output. This result shows that government commitment to agricultural funding over the years did not improve under SAP. The impact on agriculture was that the agricultural output was recording a growth rate of –2.3 percent. The performance of the economy suggests that there were financial constraints on agriculture. Also given the value of R^2 to be 0.89 and its $\tilde{R}^2$ 0.87, it indicate that 87 percent of the changes

in agriculture can be attributed to government expenditure, price and rainfall, while 13percent are attributed to exogenous factors.

The result in equation (5.1.3) represents the period when the government was heavily involved in the initiation and financing of the agricultural sector programmes, and the time the government withdrew its participation in the agricultural sector activities. The coefficient value of the government expenditure and the average rainfall does not confirm our a priori expectation of a positive relationship. It also shows that they are not significant at 5 percent. But with regard to government expenditure; a 1 percent increase is associated with a decrease of 0.66 percent in agricultural output while a 1 percent increase in rainfall is associated with a decrease of 0.111 percent in output. Whereas the price of the agricultural output turned out to be positively related to the agricultural output, and is significant at 5 percent level. It also shows that a 1 percent increase in price is associated with an increase of 0.326 percent in output. The result also shows a R^2 value of 0.91 and $\tilde{R}^2$ value of 0.902. This means that at least 90 percent of the changes in agricultural sector output occur because of the combine influence of the explanatory variables.

The above result reveals a mismatch between policy pronouncements concerning the priority rating of agriculture and actual expenditure pattern prior to SAP. While under SAP, the curtailment of government support for agriculture was clearly demonstrated by a number of policies, including desubsidization, privatization and commercialization of some agricultural

marketing institutions which contributed markedly to the sharp reduction in capital expenditure on agriculture.

5.2.2 HYPOTHESIS TESTING

The hypothesis is:

H_o: There is no relationship between government agricultural expenditure on agricultural sector output (E=0)

H_1: There is a relationship between government agricultural expenditure on agricultural sector output (E≠0).

The acceptance of the hypothesis depends on the value of the t-statistics which is tested at 5 percent level of significance. The rule is, if the t_c is greater than the t_t, the null hypothesis will be rejected, while the alternative hypothesis will be accepted. That is:

If $t_c \geq t_t$ reject H_o, otherwise accept.

From equation 5.1.1, the calculated t-value is –1.647 and is low as against the t-tabulated value of 2.447 i.e t_c /-.647/<t_t 2.447 at 0.005 level of significance. This shows that we have to reject the alternate hypothesis and accept the null hypothesis, and also conclude that the government expenditure is statistically insignificant to the growth of agricultural sector output. That is, there is no significant relationship between government expenditure and agricultural sector output

Equation 5.12 equally shows that there is no relationship between the government expenditure and the agricultural output. It can be seen that the

value of the t_c is 0.493 and the value of t_t is 2.11. Since the calculated t-value falls inside the critical t-value, there is no basis for rejecting H_o. I.e. t_c 0.0493 < t_t, 2.11. This means, we accept the null hypothesis and rejects the alternative hypothesis at 5 percent level of significant.

Lastly equation 5.1.3, attests that the government expenditure does not have an effect on the level of the agricultural output. Here the t_c value is /-1.332/ is less than the critical or t_t 2.06. i.e t_c 0.0493 < t_t 2.06 at 5percent level of significance. We therefore, accept the null hypothesis that there is no relationship between government agricultural expenditure and agricultural sector output in Nigeria.

In the estimations, Capital Expenditure on agriculture was used as a proxy for Government Expenditure. This is because the capital component covers expenditures on crop development, seed production and distribution, fertilizer procurement and distribution, agricultural mechanization, extension services, control of pests and diseases, soil conservation, irrigation, research, crop storage (buffer stocks) and agricultural training. And from the results, it is clear that serious response problem exist in Nigeria agricultural sector. The response of crops and sub-sectoral aggregate to capital expenditure on agriculture has a negative sign and it implies a negative effects. This however shows that the government's interest and its commitment to the sectors growth and development had declined.

The results above also reflect the inefficiency often associated with government involvement in agricultural investment. Although, Capital

expenditure made by the government on major services like farm input procurement and distribution, tractor hiring, large scale land clearing and so on may continue to increase nominally, they have not generated the desired result because effective delivery of these services was impaired by excessive bureaucratic procedures associated with government operations. Therefore, when a large number of farmers have no easy and direct access to such services and to modern inputs that are being distributed by the government, output will not increase significantly in response to increases in the level of investment.

The result also suggests that weather may not be as crucial as is often assumed. However, the insignificance of rainfall may simply be an indication of serious poor data collection. For example, relating average rainfall to output may be flawed given that rainfall level over a given period of time is critical to crops. Secondly, other weather conditions such as sunshine or wind may counter the positive effects of rainfall. Unless these lapses are shown to have insignificant effects on the results it would be premature to conclude that weather is not a significant factor.

Furthermore, this relatively small share of agriculture in public sector investment has created a serious bias against the sector in the provision of basic social and economic infrastructure. The cumulative effect of this development is at the root of the present state of technological development and the harsh burden on agricultural production in Nigeria.

This clearly reflects the performance of the agricultural sector after SAP, even though the picture that emerges is that the government remains a big

spender in Nigeria. The agricultural sector has experience a heavy loss in capital allocation at a time when much was being expected of it for increased supply of food and exports commodities as well as industrial raw material.

5.2 STABILITY TEST

The government expenditure on agricultural output has undergone an investigation for structural change between two periods, that is, the pre-SAP and the with-SAP periods. This is done in order to confirm the result from the OLS, that is, to affirm a break in the government expenditure to agriculture, by using the Chow break point test.

The results of the estimated Chow break point test are shown below:

F-statistic =11.678 probability 0.000038

Log likelihood ratio =33.95210 probability 0.000001

The hypothesis is

H_O: no structural change ($\beta_1 = \beta_2 = \beta_3$)

H_1: there is structural change ($\beta_1 \neq \beta_2 \neq \beta_3$)

The acceptance of the hypothesis depends on the value of the f- statistics which is tested at 5percent level of significance. The rules is, if the f-calculated is greater than the f-tabulated at 5percent level of significance, reject the null hypothesis that the regressions at the two periods are the same, that is, rejects the hypothesis of structural stability. That is:

If $f_c > f_t$ rejects Ho, otherwise, accept H_1

When $\propto$ is fixed at 5percent level, the critical value f 3, 23=3.03 at 5percentlevel. And since the observed f value of 11.678 exceeds the critical value, we rejects the null hypothesis that the government expenditure in the pre-SAP period and the With –SAP period are the same, that is, reject the hypothesis of structural Stability. Also, the p-value of the observed F is 0.000038 which is reasonably Low. This indicates that there was a structural change in the government expenditure on agricultural output within the year 1977-2006.

It is also evident from the empirical result that instability in government expenditure has detrimental effect on agricultural production growth.

The analyses show that Nigeria has witnessed an overall decline in the Share of agricultural expenditure in total government expenditure, reduction in government agricultural expenditure adversely affects agricultural sector Performance. Hence, expenditure reducing policies should be guided by careful assessment of cost effectiveness of on-going projects rather than by indiscriminately cutting across the board. To attain Sustainable growth in agriculture, it is suggested that provision of adequate public finance is needed as a stimulus to agricultural output growth.

CHAPTER SIX

6.0 SUMMARY, CONCLUSION AND RECOMMENDATION

6.1 SUMMARY

The Nigerian system of agriculture is based on numerous small farms. A 1970/71survey indicated that about 55 percent of all producing farms were smaller than 2.5 acres and that 82 percent of all farms had less than 5 acres. In an effort to reverse the low trend of agricultural production, make food available to the populace at reasonable prices, increase farm incomes and agricultural raw materials to industries, several measures were implemented.

Although the share of agriculture in total government expenditure is relatively low, the actual expenditure has been on the increase. In fact, a huge amount of resources has been pumped into the agricultural sector, on paper, in Nigeria within the last decades. The issue is the extent to which these expenditures actually go for what they are meant. The leakages in the sector, as with nearly all government expenditures, could be very high, accounting for the low response of the sector to increased expenditures. But in general, the financing policies and programmed of government for agriculture have had mixed results.

In the 1970s, Nigeria started what could be considered a determined effort to transform the agricultural sector. Efforts to rehabilitate oil palm and cocoa growing activities resulted in some improvements in the performance of these commodities. While, further agricultural growth was constrained by high cost and shortages of some inputs such as ploughs, hand pumps, tractor, fishing

out board engines, chemicals and livestock vaccines, most of which are imported.

Though, government expenditure for agricultural development is needed, first, to supplement private investment capital which is generally not adequate in peasant production systems due to the low capital base and level of savings and second to influence the pace of agricultural modernization which may be relatively low if left exclusively to private producers of course, in the process of doing these things, government provides a stock of facilities which need to be maintained on a current basis. While agricultural credit, on the other hand, is needed by the farmer to take advantage of modern farming techniques and for financing production processes such as storage and processing, particularly where production is largely seasonal. Much as these financial needs for agricultural production have been recognized in Nigeria, several constraints have prevented the smooth flow of capital to the agricultural sector.

It is as a result of these lingering problems, which severely limit agricultural output increases that; this research work has tried to find direction toward what is actually responsible for the persistence in the reduction of the agricultural sector.

Chapter two is a review of the government expenditure, where public expenditure (government expenditure) is classified into different variable such that its contribution to each variable can be determined. As such the concept government expenditure to agriculture is part of the variable in the public

expenditure and cannot be explained outside it. It is necessary therefore to understand the public expenditure as a whole.

Public expenditure refers to the expenses, which the government incurs for maintenance of the economy. Due to the increase in the government activities, it's hard to classify the public expenditure that is for the maintenance of the society. It is generally agreed that public expenditure is continually increasing in virtually all countries with growing importance in their national economy. Consequently, it can be said that government expenditure must increase at a rate faster than that of the national output, showing the importance of government activities and expenditures as an inevitable feature of progressive state.

In researches conducted, it is revealed that as income per head increases, government spending which is part and parcel of aggregate output would also increase. This is supported by findings that the income elasticity of aggregate output of public spending exceeds unity. This is seen as a result of pressure for social progress and the resulting changes in the relative spheres of private and public economic. It is further supported that as the output per head increases, the state activity and expenditure must grow more than proportionately in order to meet the growing need to provide and expand the spheres of public goods. Also, increases in population density and urbanization, increases government expenditure.

On the whole, public expenditure contributes to the development of the economy, especially when the inevitable changes in technology and the

increasing scale of investment are increasing the number of large private monopolies. While, the take over of such monopolies in the name of efficiency, would increase government expenditure.

Such intervention can be seen in the agricultural sector. The government at different time had put in place different policies, programmes and credit facilities. Such facilities were supposed to make loan available to peasant farmers, who neither have the necessary collateral nor steady source of income for the financial institutions. These institutions were profit oriented that abhor losses, they find it very hard to give loans to the peasant farmers, and when it is made available, and the credit is either not used properly or allocated to the wrong farmers. These problems also affect the government credit agencies, both at the state and national levels.

In this study, it has been revealed that the country has had various policies and programmes designed since the 1970sand of such is the ADPs. The ADPs (Agricultural Development Projects) represented the first major practical demonstration of the integrated approach to agricultural development in Nigeria. The scheme was launched in various parts of the country between 1973and 1985. The strategy in the ADPs was to provide essential modern inputs and facilitating services and structures to producers with a view to achieving more satisfactory rates of increase in production of mainly food crops in each project area. Notwithstanding the laudable achievement of the ADPs several shortcomings and implementation problems were faced.

Also, the River Basin Development Authorities (RBDA) was expected to embark on vigorous development of the land and water resource potentials of Nigeria for agricultural purpose and rural development. A substantial proportion of government capital allocation to agriculture in the third and fourth plan periods was earmarked for the implementation of the authorities' projects. And against these huge capital expenditures, the achievements of the River Basins Development Authorities have been very modest and for this reason farmers and the general public have heavily criticized them. Each of the eleven (RBDA) under took huge capital investments on their irrigation projects. But because these projects are capital-intensive and were not preceded by thorough planning, completion was difficult.

However, a further investigation in to the causes of ineffectiveness of most food policy measures in the last decade reveals a set of recurrent problems with regard to policy design and implementation.

Such problems are Food policy and planning approach, ineffective institution, and man power bottlenecks and inadequate co-ordination.

While a problem that originates from development outside the agricultural sector, is the macroeconomic policy. Many experts who believe that the poor performance of most food policy measures in the developing countries can be traced to the adoption of macroeconomic policies that are inconsistent with food policy and vice-versa have recently emphasized the impact of the macro-economic policies on food and agricultural policies.

On the part of the Structural Adjustment Programme (SAP) its basic purpose was to rectify the in appropriate past macro and micro policies so as to entrench sustainable economic growth. A good agricultural sector performance was expected to be an important factor in the attainment of the overall goal of SAP which was to; alter and realign the aggregate domestic expenditure and the structure of production; with a view to minimizing import dependence, diversifying the export base and achieving stable and balanced economic development. The agricultural sector was to generate a significant increase in production to meet domestic food needs, local raw materials requirements encourage exports and raise rural income and employment.

It is clear that the agricultural sector depends for its growth on foreign innovations without which agricultural production would be reduced to a purely traditional activity, which is likely to perform below expectation. The over-dependence on the outside world for innovations is a constraint that needs to be addressed; otherwise no meaningful adjustment can take place. This again takes us back to the domain of agricultural policy. To look inwards, policy actions must resolve the issue of structural transformation of the agricultural sector with regard to technological progress. The nature of the agricultural research and extension systems will be critical, while the role of appropriate technologies whether adapted or developed is equally important. A perspective plan of agricultural development must incorporate these issues.

6.2 CONCLUSION

The size of the government expenditure to agriculture is dependent on, among other things, the existence of an agricultural policy frame work which indicates its priorities within the agricultural sector, availability of funds and the sectoral priorities within the general economic policy frame work. There is no doubt that in Nigeria, government has always emphasized the importance of agriculture in the development policy. However, there have been indications that this overall position of the government was not supported in practical way by financial allocations for the development of the sector, for instance, total capital allocation to agricultural sectors was only 4.9 percent of its aggregate capital allocations to all sectors during the first plan period (1962-68). This must be considered low, given that agricultural production accounted for between 50-65 percent of the GDP during the period. Although, total allocation to the agricultural sector increased more rapidly within this period but the proportionate share of total agricultural sector allocations were on the decline. Therefore low capital expenditure on agriculture by the federal government was particularly unsatisfactory and this is not a surprise since its interest was in agricultural research as specified in the Nigerian constitution. Thought, that attitude of in-difference was short sighted and detrimental to food and agricultural production. Since it was obvious that agriculture was basically under develop and it needed just the minimum test to show its weakness. An example is the issue of the decline in rainfall in most part of Nigeria which ranged between 15-60 percent this led to the re-appearance of the drought of

1982-1983 which came with even greater severity than before. This drought was attributed to several features, the most important being metrological changes, poor land use and inadequate water control schemes. Also there was the recent incidence of bird flu in some part of the world, Nigeria inclusive, and it ravaged most of the poultry farm. This incidence discouraged most small-scale farmers in Nigeria from investing in poultry farming again, thereby causing a huge scarcity and also an increased in price of the few available poultry farm.

With regard to the research results, the amount of government expenditure to agriculture during the period under consideration had no effect on the agricultural output. Although, government made emphasis on the importance of agriculture in its development policy; however, agricultural policies, programmes were formulated by different regimes with the idea of stimulating and inducing a better agricultural production. Therefore it can be stated that the poor performance of the agricultural sector reflects largely not only on the expenditure allocation pattern but also as a result of defects in their conceptualization and in efficient implementation of some policies and programs.

6.3 RECOMMENDATION

It has been noted that while agricultural credit was increasing and multiplicity of government finance and other programmes observed since the 1970s, aggregate agricultural production tended to stagnate. Apart from finance, several factors such as credit supply to farmers by lending banks:

improper monitoring of agricultural projects by the lending institutions have also contributed to the non-commensurate response of aggregate agricultural production to the various policy measures.

Some programmes have been ineffective in contributing to the growth of the agricultural sector as result of defects in their conceptualization and inefficient implementation. For example, programmes such as Operation Feed the Nation, National Acceleration Food Production Programme, River Basin Development Authorities, etc. were rather all embracing and too large in scope as to be efficiently implemented. A better approach is for project to be modest, sector- specific and for pilot programmes to be undertaken before replications if benefits are found out weigh costs.

Other areas that require considerable attention in view of their potential contribution to agricultural growth are input procurement/distribution and application of suitable technology. Adoption of modern farming/husbandry practices, such as the supply of improved seeds/seedlings, agricultural chemicals for pest and disease control and fertilizers to enhance yield/output. Yet the procurement and distribution of fertilizer have been characterized by bottlenecks resulting in inadequate quantities of the product-reaching farmers at more than twice the subsidized rates. It is suggested that fertilizer procurement and distribution be privatized and a better mechanism for providing fertilizer subsidy be evolved-preferably through ADPs or farmers associations. With the exception of the ADPs, it is difficult for any observer to believe that the food policy measures adopted for implementation were

preceded by thorough planning in the sense of a desire to follow a particular pattern of structural change in the food economy. A systematic planning of the food economy would have begun with on identification of appropriate instruments and policy measures for the attainment of stated objectives. There would also be on effective monitoring and evaluation system for ensuring that objectives were being achieved. Above all, in such an environment, government would clearly determine the extent of its intervention so as to produce the optimum results.

Similarly, research institutes should ensure that improved and high-yielding seeds and simple technologies capable of increasing output are made available to farmers at reasonable costs. For agricultural research to have development as its focus, a people centered approach is needed. This strategy should have a long-term perspective in terms of the factors that influence both the demand for and supply of food items. The strategy should also create a path through which shorter-term government priorities could dovetail into the long-term perspective. It should also identify the immediate and long-term skills required by the universities and research institutes to meet up with the public and private sectors.

Basically, the small-scale farmers are the major producers of food and fiber in Nigeria. Hence, research focus on how to improve their levels of efficiency should be the main priority for food security to be achieved.

Research in crops, mainly cowpea, maize, tubers and vegetables needs to focus on post-harvest preservation and storage to minimize, if not eliminate, the current high losses variously put between 20 and 35 percent.

Similarly, in the areas of animal production, emphasis needs to be put on poultry; cattle and piggery given their high demand elasticity and required supplies. Measures to improved breed of livestock and fisheries, improvement in the processing and storage of the agricultural enterprises are essential research areas, which should be a pedestal for achieving national and household food security.

It should be emphasized that agricultural development cannot take place without a vibrant rural development programme. Hence, research needs to be focused on rural-electrification, feeder roads, storage facilities, rural health programmes and credit institutions. These are some of the areas that can complement the efforts towards the attainment of food security within a short space of time.

Additional focus is necessary in the area of environmentally related measures designed to stimulate agricultural growth. Past efforts were largely concentrated on the provision of irrigational facilities, such as dams in drought-prone section of the country and on tree planting to slow down desert encroachment. A shift should be made to the less expensive but effective fadama-type irrigational facilities relaying on hand pumps and with the capacity for greater territorial coverage than dams. For the south, programmes

would have to be developed to minimize damage to topsoil and resultant poor crop yield caused by erosion, floods and landslides.

Finally, more weight would have to be attached to data gathering, coordination and reconciliation to enhance planning and facilitate decision-making. Ultimately, a viable national agricultural data bank, capable of meeting the needs of relevant users, would have to be established and founded. Information sharing and utilization should attract stipulated and agreed user feeing in other to make such system self-sustaining in the long run.

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