AGRICULTURAL POLICIES AND FOOD SECURITY IN NIGERIA: A STUDY OF FADAMA PROGRAMME IN CROSS RIVER STATE, NIGERIA

BY

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PAD/Ph.D/16/001

A DOCTORATE DEGREE THESIS CARRIED OUT IN THE DEPARTMENT OF PUBLIC ADMINISTRATION, UNIVERSITY OF CALABAR, CALABAR

SUBMITTED TO

GRADUATE SCHOOL
UNIVERSITY OF CALABAR
CALABAR-NIGEIA

IN PARTIAL FULFILLMENT FOR THE AWARD OF THE DOCTOR OF PHILOSOPHY (Ph.D) DEGREE IN POLICY ADMINISTRATION (DEVELOPMENT ADMINISTRATION)

AUGUST, 2019

DECLARATION

I, Adie, Hillary Idiege, a postgraduate student in the Department of Public Administration with Registration Number: PAD/Ph.D/16/001 declare that this thesis on "Agricultural Policies and Food Security in Nigeria: A study of FADAMA programme in Cross River State" is original and has not been submitted in any part or in full for another Degree or Diploma of this University or any other institution of higher learning.

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CERTIFICATION

This is to certify that this research titled "Agricultural Policies and Food Security in Nigeria: A study of FADAMA programme in Cross River State" was carried out by Adie, Hilary Idiege with Registration Number: PAD/Ph.D/17/008 under our supervision in the Department of Public Administration University of Calabar and has been found to have met the regulations of the University of Calabar. We therefore recommend the work for the award of Doctor of philosophy (Ph.D) Degree in Public Administration.

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ACKNOWLEDGEMENT

I sincerely wish to express my indebtedness and gratitude to my chief and second supervisors, Dr. Michael Sunday Agba and Associate Prof. Uno Ijim Agbor for their useful comments and suggestions, constructive criticisms, scholarly analysis and thorough supervision which have obviously contributed to the uniqueness and success of this research work.

I also wish to appreciate my current Ag. Head of Department, Dr. Pius Abang for his brotherly love, advice and valuable suggestions.

My profound gratitude goes to my dynamic and indefatigable father, Associate Prof. Felix Onen Eteng for his fatherly love, advice, prayers, financial supports, encouragement and useful suggestions that have made this research work successful.

My colleagues within and outside the Department of Public Administration are not left out especially Dr. Duke Otu, Dr. Edino, Dr. Agnes, Dr. Effiom, Dr. Ekpenyong, Dr. Chris, Dr. Ozumba, Dr. Lilian, Mr. Ubi, Mr. Ayamba, Mr. Terrence, Mr. Ekanem, Ms Joy, Ms Dede, Mr. Opara, Mr. Akah, Mr. Adinya, Mr. Gabriel, Mr. Mahamud, Mr. Azu, mr. Emmanuel, Mr. Awobi, Mr. Victor, Mr. Utam, Mr. Utulu, Mr. Egaga, Mr. Obogo, mr. Akpan, Mr. Bassey, Mr. Mboto, Mr. Kelvin and Mr. Richard. Other senior colleagues and friends worthy of acknowledgement are Prof. Celestine Bassey, Prof. S.P.I. Agi, Prof. M. Coker, Prof. C.N. Odock, Dr. Atelhe, Dr. Abumbe, Dr. Obo, Dr. Neji, Dr. Theophilus, Dr. Mrs. Williams, Dr. Ebel, Dr. Ochiche, Dr. Ofem Usani, Dr. Diwa, Dr. Ogodo, Dr. Inah, Prof. Bassey and Dr. Bassey.

I appreciate the indefatigable efforts of beloved wife, Mrs. Regina Adie, and my lovely children, Emmanuel Adie, Hilary Adie (Jnr), Testimony Adie and Godswill Adie. Their prayers, love, advice, encouragement and understanding is not taken for granted but sincerely appreciated.

To my parents and siblings, Mr. and Mrs. Regina Adie Okpe (parents) Elam, Mike, Innocent, Ekpo, Tina, Maria, Agbo, Vero, uncle Ogan, Tony Onyi, Uncle Amama, Uncle Isaac Ebuara, Dr Otigba, Festus, Ebahe, Eddy, Tessy, Eberechi, Amanada, Faith. I also want to appreciate the efforts of Mrs. Esther Ekpenyong who typed this work. My greatest appreciation goes to God Almighty for being my source of strength, encouragement and success.

ABSTRACT

The study examines impact of FADAMA programme as an agricultural policy on food security and rural poverty reduction in Cross River State. It adopts a secondary and primary data research approach using questionnaire that was administered on key stakeholders across the 3 senatorial district of Cross River State who served as our targeted sampling population for the research work. The sample size adopted for the work was 600. The exploratory analysis was done using simple percentage and frequency analysis. The method of estimation technique adopted in ascertaining the veracity of our stated hypothesis was chi-square test. The empirical results obtained from the estimated study shows that provision of funds to farmers through programs such as FADAMA have significant impact on poverty reduction and enhancement of improved standard of living. Findings also show that benefits of agricultural programs such as FADAMA have not trickled down to stimulating living conditions of farmers due to inadequate funds and failure of government, particularly states government, to release funds for such programs as encapsulated in the policy document of some of these programs. Thus, Government and relevant authorities should through agricultural programs such as FADAMA ensure adequate provision of financial incentives to farmers that is sufficient to boost food production and gearing of rural farmers' incomes in the upward direction that consequently ensures reduction in rural poverty. Also, government should ensure holistic and sincere policy execution and implementation of planned and formulated agricultural programs that stimulates and boost food production and consequently ensuring improved food security.

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CHAPTER ONE

INTRODUCTION

1.1 Background to the study

Food is an integral part of God's plan for humanity. God provides food to feed His people in the desert (manna) and Jesus Christ multiplied five loaves and two fish to feed the crowd during his ministry on earth. There is a biblical significance of food as nourishment to be cultivated, consumed and stored, (see Genesis 1:29, 6: 21, 9:3; Deuteronomy 10: 18 and Psalm 104: 14). Okon (2009) observed that because food is so basic to man's existence, modern societies tackled the problem of food shortage in three ways: by attaining self-sufficiency in the production of their food requirements; by supplementing their integral food production efforts with food importation: and by adopting a strategy that is rather imperialistic in nature by controlling the resources of others in order to ensure the regular supply of one's needs. Of the three, food self-sufficiency is the most reliable policy to be pursued which we are yet to attain in Nigeria.

Olusola (2013) explained that a country experiences food self-sufficiency or food security when all people, at all times have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life. This means that the right to adequate food is realized when every man, woman, child, alone or in community with others, has physical and economic access at all times to safe and nutritious food, consistent with the right to adequate food and the fundamental right of everyone to be freed from hunger (FAO. 1996).

Food security can be defined at various levels such as regional, national and global levels (Sharma. 1992; Dyson. 1996; Ajibola. 2000; Dia Z-Bonilla. 2002; Lofgren and Richards. 2003). At the Global level, food security means adequate global food availability and adequate capacity of the food-deficit countries to import. For this to be ensured, barrier to trade especially in food items at the" international level must be removed. At the national level, food security connotes adequate food availability from all sources to meet the per-capita food requirement of the population.

In Nigeria, Adegboyc (2004) observed, that availability of adequate food storage facilities, affordability of rising food import bills, provision of appropriate channels for food marketing and distribution, and development of food processing infrastructures among others are key factors for consideration. Food insecurity on the other hand is the inability to obtain sufficient, nutritious, personal acceptable food through normal food channels or the uncertainty that one will be able-to do' so. (Davis and Tarastik. 1994). Between 1940s to early 1950, Nigeria had adequate food security. The country was able to feed her citizens and at the same time export the surplus food items for foreign exchange earnings. Every region specialized in the production of one or two major crops.

Nigeria had the groundnut pyramids in the North, the cocoa in the mountains in the West, oil palm and kernel heaps in the East and the rubber plantation in the Mid-west, but when oil was discovered in 1956 and exportation of it started in 1958, things started changing gradually and later furiously. As oil prices went up, interest in agriculture waned which marked the beginning of decline in food production.

According to Olayemi (1995) Agricultural policy in Nigeria has been through a history of changes, beginning from the colonial era when food was apparently in abundance with respect to need. Emphasis of policy was to provide cash crops for export

and foreign exchange. After the Nigerian civil war (1967-1970) food importation became worrisome by late 1970s. The contribution of Agriculbsture to the Nation's GDP declined to 8.3 percent (1971-1975), to 3.0 percent (1981-1985), and witnessed a slight increase but still significantly low 4.6 percent (1986-1989) (Ukpong & Malgwi. 1991).Since then, the overall contribution of agriculture to the Nation's GDP has been on the decline.

It is against this backdrop that the government initiated policies, programmes and strategies with a view to enhancing its productivity and overall contribution to the Nation's economy. Some of these policies include: Operation Feed the Nation (OFN) which was initiated by the former military Head of State, General Olusegun Obasanjo in 1976 to make this nation self-sufficient in basic food needs. Government provided subsidized fertilizers, credit facilities and other farms equipment to assist famers but the OFN however failed due to lack of delegated responsibilities, poor planning and inadequate data. The Green Revolution of Alhaji Shehu Shagari was initiated in 1979-1983. He called his own initiative Green Revolution without any significant change in conception, content or context of the policy. The programme did not make any appreciable impact due to bureaucratic and political corruption. Then came General Babangida's Directorate of Food, Roads and Rural Infrastructure. (DFRRI) in 1985. It was supposed to be a comprehensive, integrated programme for massive food production and rural transformation. The DFRRI programme also failed due to non-involvement of the rural dwellers in the formulation, execution and evaluation of rural and agricultural development programme meant to change their lives.

With the advent of civilian administration in 1999 greater attention was given to food production. The Nigerian Minister for Agriculture then, publicly restated government's commitment to combat hunger and malnutrition by providing

adequate food for the people and ensures food security for all. To achieve this target a number of what he called food security initiative were launched among which is the National FADAMA Development project NFDP).

FADAMA Development Project is a World Bank development programme which collaborates with the Federal, State and local governments of Nigeria. The National FADAMA development project is executed in phases: FADAMA I and II focused mainly on the provision of irrigation facilities for crop production although, non-farmers were among FADAMA resources users, such as pastoralists, hunters, vulnerable and marginalized groups. FADAMA III project is a follow-up in 19 states which Cross River State, the research field of study is inclusive.

World Bank consultant on the FADAMAIII project, Dr. Idris Badiru, made the disclosure that World Bank has earmarked 200 million dollars or N7.2 billion for FADAMA III additional financing of projects in Nigeria on Thursday in Calabar at the opening of the FADAMA III additional financing mid-term review mission to Cross River State. "Cross River is moving in the right direction..." this was the speech the consultant made, according to the SUN Newspaper publication (May 27, 2017).

Under the FADAMA project, participants collectively identified their development priorities and agreed on their investment activities. The World Bank contributes 55.6%, Federal Government of Nigeria, (FGN) 5.1%, State government 17.1% and Local governments 8.9%. Agbarevo and Obinne (2010) observed that the World Bank has provided the sum of $200m US Dollars for Nigeria for FADAMA II Development Project in August 2013 (World Bank, 2013) Baldwin cited in Agbarevo, 2005) states that FADAMA project is demand – driven in which the beneficiaries determine their priorities, analyze their problems, plan how to solve them and implement the chosen course of action with government official as facilitators in a participatory

manner. This model has the advantage of active participation of people in projects of which they are the beneficiaries.

This paradigm shift will succeed where previous programmes have failed in increasing food production, rural incomes, and consequently reduce rural poverty. Specifically, the FADAMA project is to reduce poverty by improving the living conditions of the rural poor and to contribute to food security and increased access to rural infrastructure. Thus this study evaluates FADAMA programme as an agricultural policy for food security in Cross River State.

1.2 Statement of the problem

Before the oil boom of 1970s, Agriculture was the mainstay of the Nigerian economy. The country depended largely on it for her survival. Agricultural sector provided food for the ever-growing population, employment, raw materials for agro-based industries, capital for peasant farmers and foreign exchange earnings for the importation of capital goods. Ogbuagu (1995) observed that before independence in 1960, agriculture activity provided for over 60 percents of the country's GDP and in 1968, the sector still accounted for foreign exchange earnings. But after Middle-East oil embargo in 1973, the oil sector took over the Nigerian economy and agriculture was relegated to the background.

According to Ukpong and Malgwi (1991) this has brought a dashed decline in the contribution of agricultural sector to the country's GDP to 8.3% (1971-1971), the 3.0% (1981-1985), and witnessed a slight increase but still significantly low 4.6% (1986-1989). Since then, the overall contribution of agriculture to the nation's GDP has been on the decline. Paul and Martin (2008) observed that agriculture remains stagnant, and food security remain an illusion while hunger and malnutrition in the increase in are the country. The importance of the agricultural sector especially in the area of sustainable

food supply and promotion of the national economy may have necessitated the initiation of various agricultural policies by successive regimes in Nigeria. The Agricultural Development Project (ADP) was established in different parts of the country with the assistance of the World Bank in the mid 1970s. The programme was to provide extension services to farmers, provision of credit and marketing services and basic agricultural infrastructure to improve agricultural yields. River Basin Development Authorities (RBDA) were also established in 1976 to provide water related services to argument inadequate rainfalls for the purposes of improving yields.

Operation Feed the Nation (OFN) came on board in 1970 with the aim of making Nigeria self-sufficient and self-reliant in food productivity. The National Accelerated Food Production Programme (NAFPP) was established in 1973 with a view to increasing stable food production in Nigeria. Similarly the Green Revolution as a strategy for accelerated food production and the development the rural areas was introduced. The Babangida regime in 1986 introduced the Directorate for Food Road and Rural Infrastructure (DFRRI). The aim was to improve the quality of lives of the rural people through the provision of basic amenities to improve food production from the rural areas.

It was surmised by policy scholars that these programmes did not achieve the reasons for which they were established, therefore, failed colossally to address the issue of self sufficiency in food production evidence in the astronomical increase in food bills of Nigeria. Eminue (2009) attributed these to organizational and institutional failures, while Adefila (1995) identified poor government funding and misappropriation of released funds as the major setback of these programmes. Oboho (1996) attributed the failure of policy instability and uncertainty, which Akinwumi (1996) ascribed to lack of access to credit facilities by rural farmers to boost their productivity. It is evidenced that Nigeria is yet to attained sustainable food sufficiency and therefore, would continue to

evolve agricultural programmes that are geared towards achieving food sufficiency. FADAMA is one of such new agricultural policies established to contribute to food security in Nigeria.

The problem is whether the FADAMA programme increased food security in Cross River State in terms of food availability, affordability, accessibility and acceptability. This study therefore, attempt to ascertain whether the FADAMA programme as an agricultural policy has improved food production and reduced food insecurity in Cross River State. If No, what are the problems associated with execution of FADAMA programme in Nigeria. This and others are issues to be considered in this study.

1.3 Objectives of the study

The main objective of the study is to evaluate the FADAMA programme as an agricultural policy for food security in Cross River State. However, the specific objectives of the study are to:

a. Assess whether FADAMA programme has contributed to the availability of food in Cross River State.
b. Assess whether FADAMA programme has contributed to the accessibility (effective distribution) of food in Cross River State.
c. Examine whether FADAMA programme has contributed to culturally acceptable and nutritionally adequate food production in Cross River State
d. Examine whether FADAMA programme has contributed to ecologically sustainable (appropriateness) food production in Cross River State
e. Assess whether FADAMA has contributed to the sufficiency in food production in Cross River State

1.4 Research questions

The following research questions were raised to guide this study:

a. What is the contribution of FADAMA programme availability of food in Cross River State?
b. What is the contribution of FADAMA programme to food accessibility (effective distribution) of food supply in Cross River State?
c. What is the contribution of FADAMA programme to culturally acceptable and nutritionally adequate food production in Cross River State?
d. What is the contribution of FADAMA programme to ecologically sustainable food production in Cross River State?
e. What is the contribution of FADAMA programme to sufficiency in food production in Cross River State?

1.5 Statement of hypotheses-

The following hypotheses to guide direction of the study:

Hypothesis 1

Ho: The FADAMA programme has not contributed significantly to availability of food supply in Cross River State.

Hypothesis 2

Ho: The FADAMA programme has not contributed significantly to accessibility of food supply in Cross River State.

Hypothesis 3

Ho: The FADAMA programme has not contributed significantly to the production of culturally, acceptable food production in Cross River State.

Hypothesis 4

Ho: The FADAMA programme has not contributed significantly to the production of ecologically sustainable food production in Cross River State.

Hypothesis 5

Ho: The FADAMA programme has not contributed significantly to the sufficiency in food production in Cross River State.

1.6 Significance of the study

The significance of the study presents the value or contribution which the research will make to the existing knowledge. Obasi (1999) asserts that research is an important tool for advancing knowledge and enable man to relate more effectively to his environment. Thus, the importance of this study upon completion cannot be overstressed. For about two decades now, the knowledge of FADAMA programme bring all that is still vague. Many rural dwellers in Nigeria do not adequately understand the concept of FADAMA programme, its objectives, scope and even source of funding and the impact on increased food security and poverty reduction among rural dwellers. It's therefore believe that this study will bring all these into limelight.

Theoretically, the study seeks to fill the gap in knowledge and had need for more intensive and extensive cooperation and collaboration among players and stakeholders to counter food insecurity in Nigeria. The study will also open up further discourses on partnering and synergy in developing strategic agricultural policies which represents an entirely new perspective in confronting agricultural development and food security in Nigeria.

Empirically, because fighting food insecurity and the challenges of initiation of programmes capable of cushioning the effects are similar in different parts of the world, one benefit of the analysis carried out in this study is to appraise the strategies employed by the Cross River State government through its FADAMA initiative, to help resolve the food insecurity challenges confronting other countries in similar circumstances. The

study is significant; in that it has both in-built and explicit in contributions to policy makers and implementations on the need to re-assess, re-appraise and re-examine Nigeria Agricultural food policies in the future.

Put differently, the issue of food security and rural poverty reduction is not the task of either the government or world bank or others collaborators in FADAMA programme rather it's the collaborative or concerted efforts of both the Governments at all levels, World Bank non-governmental organization's as well as rural farmers as beneficiaries of FADAMA programme. If any of sub-systems is dysfunctional it affects the entire system, so if either the famers or government fail to play their assigned responsibility the programme will be discontinued as observed in FADAMA III programme in Cross River State of Nigeria. The Government of Cross River State under the leadership of Senator (Professor) Ben Ayade failed to pay the approved percentage of their funds for effective execution of FADAMA programme.

1.7 Scope and limitations of the study

The scope of this study is to evaluate the impact of FADAMA programme as an agricultural policy on food security in Cross River State, Nigeria. The study covers the FADAMA III project and its related activities within the three selected local government areas under investigation. These projects include crop faming, fisheries, agro-foresting, agro-processing and livestock. The sub projects include snail faming, poultry, goat, cocoa, rice, groundnut, pineapple, bee farming, bush mango etc.

Also, the research field covers the three selected local government areas, namely: Bekwarra local government in the Northern Senatorial Zone of the State, the Ikom local government area in the Central Senatorial Zone and the Calabar Municipality Council in the Southern Senatorial Zone of Cross River State. Furthermore, a study of this magnitude cannot be completed successfully without the researcher encountering some

constraints or limitations. Thus, this study was faced with some problems namely: limited time for the completion of the thesis, financial and geographical limitation, transport and communication as some rural areas were inaccessible and uncooperative attitude of some respondents.

Other facts that exist elsewhere in which the researcher could not have access to are seen as limitations to this study. Also, most of the relevant information collected so far for this study is in piece-meal and need serious effort to trim to the required standard. On the other hand, some information are said to be classified information and out of bound to non-staff. However, the researcher ensured that the limitations did not affect the outcome of the study by supplementing the available information through internet materials, textbooks, journals and administration of questionnaire and oral interview.

1.8 Operational definition of concepts

The following terms shall be defined for conceptual clarification:

a. Food Availability – This means that food supply is available all the time. it means food production and supply are reliable, sufficient quantities are available and within the reach of consumers. Put differently, food availability means adequate food are supply both in quantity and quality to the market for customers to buy. There is no time or period both in season and out of season that food are not found or available for people to buy. The question is, with the availability of food supply to the market, are these foods accessible or affordable?

b. Food Accessibility: - Food accessibility simply means that enough food is available and all the people have the right to secure the food by all people regardless of status, rich or poor, abled, disabled, elderly, homeless or destitute not withstanding but how many people can afford these food that have been

supplied for sales in the market? Yes, citizens have the right to food but do they have purchasing power the financial ability to back up effective demands.

c. Effective Food Distribution – This means that the food produced is supply to all people their geographical locations notwithstanding. Whenever food is produced its made available to whoever needs the food at all times and at all places. In fact, effective food distribution means the ability of the food producers or agency responsibility for the distribution of food to ensure that goods produced is supply to all the nook and cranny of Nigeria no matter where you live be it in the rural areas or urban centres or cities you will see the availability of the quantity and quality of the food you need.

d. Effective Acceptability – Simply means the people accepted the quality and quantity of food produced and supply to the market for public consumption. Here, people accepted the food that is available and they have the financial ability to purchase the food.

e. Culturally Acceptable – Food that is culturally acceptable means that the food that is produced and is available for consumption is culturally accepted by the people. This means that the food is not different to the food the people are used to but that the available food is in line with the culture of the people. It is the food the people are used to eating, it is not new or foreign or imposed from somewhere on them but the food they are use to cultivate and consume locally according to their culture and tradition.

f. Nutritionally Acceptable/Adequate – This refers to both nutritionally adequacy and safety. Here, the nutritional value of the food should not only be adequate but must be safe for consumption for continuous improvement of living conditions.

g. Ecologically Sustainable – This means that food supply production and procurement have to be sustainable. When food security is dependable then it becomes sustainable because it would not compromise the ability of future generations to access food all the time. here, ecologically sustainable as it relates to food security, we talk of food stability, sustainability, dependability and reliability

h. Food sufficiency – By food sufficiency we means that the food produced are not only available but adequately enough to meet the needs of the teaming populations of Nigerians and foreigners therein.

i. Policy: A policy is a guide to action or plan of action, statement of ideas proposed by Government.

Okechukwu (2013) defines policy as "decisions taken by governments, institutions, corporate bodies or business organizations that explains long and short term action or inactions of the government or organization concerned. It is a planned programme of government which states what should be done or not be done and the ways of pursuing such articulations.

j. Programme: A programme may generally be seen as a set of goals and related activities geared towards solving specific problem(s). Also Fab (2010) defined programme as a "complex" of goals, policies, procedures, rules, task, assignments, steps to be taken, resources to be employed and other elements necessary to carry out a given course of action, they are ordinarily supported by budget.

k. FADAMA III: This is the third phase of the FADAMA project in Nigeria, and is essentially an agricultural diversification project. The project which is demand-

driven is funded by the World Bank, Federal Government, State and Local governments in Nigeria.

l. Poor rural farmers: These are people who live in abject poverty without access to basic infrastructures and poor yields are obtained from crops, and when good yields are obtained, spoilage kept due to lack of storage facilitates which tends to maintain the vicious cycle of poverty. They constitutes the most neglected majority in Nigeria.

m. FADAMA Project: Is a World Bank Development programme in Nigeria, which collaborates with the Nigerian government.

n. Food: Food is material, usually of plant or animal origin that contains or consists of essential body nutrients, such as carbohydrates, fat, proteins, vitamins, or minerals, and is ingested and assimilated by an organism to produce energy to stimulate growth, and maintain life. Balthes (1999) observed that food is life and life can be studied and understood through food. Food is a substance taken in to maintain life and growth.

o. Food Demand: Food demand is the need to access food.

p. Food supply: Is the total amount of food available for human consumption, usually derived from the commodity account (UNDP, 2012).

q. Food security: Food security can be defined as the condition when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food to meets their dietary needs and food preferences for an active and health life, (FAO, 1996 & FAO, 2010b).

r. Components of food security: The five components of food security are availability (Sufficient supply), accessibility (effective distribution), Acceptability

(culturally acceptable/nutritionally adequate), appropriateness (ecologically sustainable and safe) agency (enables action).

s. Food insecurity: Is the inability to obtain sufficient, nutritious, personally acceptable food through normal food channels. It implies a limited ability to access, secure and consume adequate and nutritious food.

1.9 Organization of the study

This research work is organized into six chapters. Chapter One is the introduction covering the background to the study, statement of the study, objective of the study, research questions, significance of the study, scope and limitations of the study, and operational definition of concepts for conceptual clarification. Chapter Two of the study is concern with the review of the relevant related literature of the study under investigation as well as the theoretical framework. Chapter Three is on FADAMA programme and its implementation in Cross River State, the Fourth chapter discusses the methodology of the study. Chapter Five is concerned with data presentation, analysis and discussion of findings. The Sixth chapter of the study is the summary, conclusion and recommendations.

CHAPTER TWO

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 Literature review

This chapter is concerned with the review of relevance related literature of the study under investigation as well as the theoretical framework. The review covers the related areas under the following sub-headings:

2.1.1 Agricultural development in Nigeria: Theoretical issues

This section of literature review on a study of agricultural policies and food security in Nigeria: A study of FADAMA in Cross River State, would appropriately commence with attempt to capture various theoretical approaches to understanding, agricultural development and agricultural policies. These phrases has been variously conceptualized by different scholars in the field of agric economics and policy studies. However, some definitions are necessary in providing direction in an attempt to capture the nature and scope of this phenomenon.

The first move in any attempt to evolve an enduring meaningful perspective on the evolution of agricultural development is to jettison the view of agriculture in traditional societies as being static, by this allusion, agricultural development is a gradual process that transforms, the agricultural sector such that quality and quantity of output as well as living standards and social values of the operators improve substantially. To Hayami and Rutlam (1985) historically, the challenge of agricultural development is not a movement from pre modern to modernity but has to do with the accelerating the rate of development of agricultural output and productivity that consist with the growth of other sectors. It is in the light of the above observation that Hayami and Rutlam (1985) stresses that theory of agricultural development is worth examining to provide a leeway to the dynamics and nuances of agricultural growth into the emerging sources of growth

in economics ranging from output growing at a rate of 1.0 percent or less to those in which its output in agriculture is growing at annual rate of 4.0 percent or more

As advanced by Ahmad (1967) and Edgar (1967), the Conservation theory or model emphasize that agricultural development can be enhanced by intensive use of land. To them agricultural output growth can be increased by spatial expansion and increase in use of labour. As suggested by Edgar (1967), continuous use of land area eventually results in the decrease in marginal productivity of land and labour. However, agricultural development can be achieved by intensive use of land through the use of conservation method like crop rotation, mixed cropping, manure and fertilizer application, drainage, irrigation and other methods that can make the land gather momentum. This model is likened to Jonston and Kilby's improvement (unimogal) approach rather than a bimodal strategy of agricultural development.

To them in the improvement strategy, development is centred on small-scale farming units using primarily, the biological technology package of high yielding crop varieties, mixed cropping with irrigation and intensive fertilizer use Japan, and Taiwan are cases in point.

Barnett and Morse (1963) considered agricultural development from the lenses of Urban-Industrial Impact Model, the theory explains that agricultural development is a function of the proximity of agricultural activities to the urban-industrial centers and to the quality as well as the availability of means of transportation. Put differently, urban-industrial impact development theory tends to explain geographic variation in the intensity of farming system and in the productivity of labour in an industrializing society. It explains the effective performance of the factor and markets of products linking the agricultural and non- agricultural sectors in regions and countries characterized by rapid urban-industrial development. The perspective has been tested and adopted extensively in

the United States, but failed to be adopted and given less attention in the developing countries like Nigeria and others in sub Saharan Africa.

In contradistinction to the urban-industrial impact paradigm is the diffusion model of agricultural model which point of departure is on the empirical observations of substantial differences in land and labour productivity among farmers and regions. To Boserup (1965), the path to agricultural development is through more effective dissemination of technical knowledge and a deliberate dispersion of productivity among farmers and among countries. By this assertion this model emphasizes the flow of information among farmers on improved technology, new institutional arrangements and how to make rational economic decisions.

This model of agricultural development has made available the major intellectual basis for much research and extension effort in farm management and production economics. Brown (1970) averred that this development has led to the adoption of active programmes of farm management research and extension which came into existence at a time when experiment-station research was making only a modest contribution to agricultural productivity impact. Obviously, agricultural development model to which the Diffusion theory is a variant as it gives an insights into the dynamics of the diffusion process when juxtaposed with the observation of wide agricultural productivity lacuna among developed and developing countries and the presumption of inefficient resource allocation among irrational peasants farmers, produces an extension bias in the choice of agricultural development strategy over the years. This tends to describe the context of our study of the agricultural policies and food security in Nigeria: A study of FADAMA in Cross River State, which falls within the agricultural development plans and policy thrust of any country, this, then calls for a rather relevant conceptualization of agricultural development within this context.

Nonetheless, the diffusion model as a foundation for the design of agricultural development policies has its limitations because it became crystally clear that technical assistance and community development programmes that are holistically dependent on the diffusion model were unable or inadequate to generate rapid modernization of traditional farmers or rapid success in agricultural output.

Schultz (1965) and other intellectual co-travelers, building on the inadequacy of policies based on other theories in agricultural development adumbrated in this review, to wit: conservation, urban-industrial impact and the diffusion models advanced another perspective that is irreducible to the transformation of a traditional agricultural sector into a productive source of economic advancement, to him it is investment driven, which makes modern, high payoff inputs. To Schultz (1985), high payoff inputs are not monolithic but rather are nuanced, which can be categorized in three fold: the capacity of public and private sector research institutions to produce new technical knowledge; the ability of the industrial sector to develop, produce and market new technical inputs, and the ability of farmers to acquire new knowledge and adopt new innovations effectively.

The acceptability of the payoff input model has been translated into an economic doctrine which is due to the success of efforts to develop new high productivity grain varieties suitable for the tropics. New high-yielding wheat and corn varieties were developed in Mexico, and New high-yielding rice varieties in the Philippines in the 1960s. These varieties observers opined were responsive to industrial inputs, such as fertilizer and other chemical and to more effective soil and water management. To them the dividend associated with the implementation of the new varieties and the technical inputs and management practices have led to rapid dispersion of the new varieties among farmers in many countries in Africa Latin America and Asia. The effect on farm productivity and profit has been dramatic to be tagged as a green revolution. The

importance of the high payoff input model is that agriculture policies anchored on the model appeared capable of bringing sufficient high rate of agricultural growth and increase which provide the platform for economic development that is in tandem with modernity.

The ramification of this model is that it is sufficiently inclusive to incorporate the central concepts of the conservation, urban-industrial development. The uniqueness of this model for agricultural development policy are the importance placed on accelerating the process of development and the advancement of new inputs or techniques through public investment in scientific research and education. However, plausible the model may be, especially on its treatment of investment in research is the main source of new high payoff techniques. It does not explain how economic conditions induce the development and adaption of an efficient set of technologies for a particular society or country. The model does not attempt to specify the processes by which investment in research in particular direction.

Away from the high payoff model, there was a paradigm shift, with emphasis on technical and institutional changes in agriculture. According to Ahmad (1966) these changes are treated as endogenous to the development process rather than as an exogenous factor that operates independently of other development processes. This processes must commence with the recognition that there are multiple paths of technological development as such are not monolithic. It is believed that with positive changes in relative resource endowments and technology of the operator, they become better positioned to demand for better services from institutions providing support service to the agricultural sector.

Still underlying more conceptual issue is the containerization of agricultural Development into two approaches to include the Improvement or Evolutionary approach

and the structural transformation approach. The Improvement approach aims at a progressive development of peasant farming through improvement of the existing services, such as extension, credit, marketing etc. Without any radical change in the traditional institutional environment. To Colman and Nixson (1979), the point of departure of the Evolutionary approach to agricultural development that in attempts to enhance productivity of the existing farm system, pattern of land ownership and farming, rights should be maintained and policies to stimulate farmers rather than coercing them should be adopted. This was corroborated by Johnston and Kilby (1975) that the potential's of small farmers to boost agricultural production should be the focus. It has been argued that such a strategy enables a widening fraction of the working population in agricultural to be associated with increasing productive technologies hinged mainly in an expanded use of purchased inputs that are divisible and neutral to scale, notably seeds and fertilizers.

On the other hand, the Structural Transformation Approach to agricultural development recognizes that fundamental changes may be necessary to accelerate the rate of progress. The purveyors of this approach are of the opinion that there is need for a creation of farming system based on intensive use of the land with focus on planned farmers of economics size.

To Merill (1975), Abercrombie (1972), and Ahmed (1975), this approach recognizes the task of converting the operators of subsistence oriented farmers into highly productive modern farmers with an improved standard of living. Of course, it is a shift from that evolutionary strategy to an alternative strategy. This transformation is therefore seen as the creation of large-scale farmers and settlement schemes, particularly irrigated ones in which the major part of the capital investment is provided by the public sector

and where farmers, submit to a degree of discipline regarding the crops they may grow and the husbandry standards they should achieve.

This transformative approach to agricultural development has be criticized on many grounds especially as it relates to the technological aspect of the approach. As pointed out by Johnston and Kilby (1975), the adoption of a bimodal strategy is closely related to this technological aspect. The bimodal strategy emphasizes attempt to develop large-scale frequently mechanized agriculture while permitting the continued existence of small-scale labour intensive farming system. However, there seem to be inadequate justification as to why the transformation approach should be defined restrictively as applying to capital-intensive projects. This is because it is an appropriate label to describe those strategies which involve land reform and wholesale redistribution of rights in the land.

What could be gleaned here is that the progress made by China in the agriculture sector after the civil war was as a result of the Agrarian Reform Law Publication in 1950 and policy directed toward eliminating the landlords, distributing land and creating mutual aid teams as the operational units in agriculture and of peasant associations as the political and social channels for rural organization (Henle, 1974).

In the case of Tawan, Griffin (1974), stress that the level of success achieved in the technical change of it agriculture sector revolves on land ownership which is equally distributed and access to fertilizer, water, technical knowledge and credit enjoyed by all peasants. In these circumstances, a technical change that is profitable for one farmer will be equally profitable for all other farmers and hence innovation will be rapid and universal.

The experience gained in China, Japan and in Taiwanese agriculture attests to the need for some appropriate measure of land reform in most developing countries. If such a

situation is to be replicated. Therefore, it is heuristic to state that, the ultimate goal of any agricultural strategy or model is an increase inform output at costs compatible with current levels of market demand. An improvement in the output of farm products, however, involves more than varying the proportion in which labour and raw materials are combined with land. Also, it goes beyond the substitution of mechanical for hand cultivation. It requires fundamental changes in the institutional framework in which agricultural production and marketing are displayed. It may be appropriate to make fundamental changes in the extant system of farm organization and land tenure in order to facilitate the flow of investment funds into agriculture and the adoption of new and superior technologies for production.

Having highlighted the various models and paradigms in explaining agricultural development in different societies, though little evidence exists as to the presence of any socio-economic characteristic that are peculiar to Nigeria's agricultural sector, but absent in other developing countries, it is generally accepted that the degree of the impact of each of these parameters varies, especially when the state of the economy is considered. To achieve result, the strategy for agricultural development should be predicator on the socio-economic factors that exist within a country. As such it is possible to devise and implement agricultural policies which are effective in terms of achievement of multiple objectives.

2.1.2 Nigeria Agricultural Development Policies since 1960

A fundamental reality in the Nigerian economic environment is the acceptance that agriculture is the mainstay of the economy. To be sure agriculture represents a strategic asset to the overall national economy. The importance of agriculture is manifested in Nigeria as thus:

a. provision of employment opportunities to over 60 percent of Nigerian workforce.

b. Widespread prevalence of poverty has been linked to the level of the development of agriculture in Nigeria as over 40 percent of Nigerians live below poverty line;

c. Meeting the food and fibre needs of the population.

To Eminue (2005) agriculture does not only derive its importance from the number of foreign and domestic institutions and parastatals involved in its activities but under the 1999 constitution of the Federal Republic of Nigeria, agriculture is on the Concurrent Legislature list, which implies that either Federal or State governments (or both) could invest in them. However, in the past especially at independence agriculture was a Residual activity administered under the Ministry of Economic Development and classified under primary production activities and was the direct responsibility of the Regional governments (Eyo, 2005).

Agricultural policy in Nigeria has gone through history of changes, Olayemi (1995), identified three phases of this transformation to wit: Pre-1970 era, 1971-1984 era and post 1984 era. He averred that both the technical and socio-economic forces operating within this system determined each era's policy. Prior to Nigeria's independence when food was somewhat in abundance with respect to need, emphasis of public policy was to produce cash crops for export and foreign exchange. As observed by Eyo (2005) the first agricultural development plan of the first national development plan (1962-1965) where agricultural development was planned as part of the governments effort to meet the general objectives of creating necessary conditions for achieving and maintaining a high possible rate improvement in standard of living of the people. Here the marketing boards were actively involved as it was a carryover of the colonial agricultural policies. During this period the agricultural sector revolved around research into the challenges of production of cash crops for exports thereby maintaining, the status

– quo and jettisoning policies that would have addressed agricultural challenges in other areas as surplus in food crop production.

As pointed out by scholars that the agricultural development plan of the second national development plan (1970-1974) was seen as government effort to create necessary conditions for the improvement of the standard of living of the people, ensuring strong self reliance and united nation; just and others. The objectives of the agricultural sector included expansion of production of export crops, but ensuring availability of new materials to support domestic manufacturing and increasing rural employment. In contrast to the first agricultural development plan where the central government were passive, in this plan government showed commitment. To achieve the objectives of this plan, government evolve and utilized appropriate institutional and administrative apparatus to facilitate the smooth integrated development of these potentials.

According to Babajide (1999) the first steps by government was the launching of the National Accelerated Food Product Programme, in 1972, a strategy to give more food. This programme was formally initiated in six states in 1973 namely Western, East Central, Benue-Plateau, Lagos, Bendel and Kano (Okuneye, 1985). Its main objective was to accelerate the production of six major food crops to wit: rice, maize, millet, sorghum, cassava and wheat. The increased production is to be observed by using field test packages of improved practices that can out-yield the local and traditional ones. The project is integrated nationwide through adaptative research extension programme which was designed to enable Nigerian farmers to rapidly increase food crop production.

Okuneye (1985) pointed out that various institutes and centres were established to guide and coordinate the activities of NAFPP. For instance, the National Rice/Maize centre was established for rice and maize in participating states. This centre is based at

the National Cereals Research Institute (NCRI) in Ibadan, while a centre for millet, sorghum and wheat is at Samaru-Zaria and the National Root Crop Research Institute at Umudike-Umuahna takes care of cassava. The International Institute for Tropical Agricultural (ITTA), in Ibadan is the national coordinator of the programme (ITTA, 1976). The various crop research institutes involved in the programme are expected to evolve, through research, high yielding varieties of the crops and transfer these to be tried by agents on farmers farm. The NAFPP as a strategy in accelerating agricultural production consisted of three components namely: research, extension and Agro services which needed coordination and integration to give the best result. Specific recommendations were made to different states for each crop produced in their localities as was in the case of crops in Ogun state as established by IITA (1976).

The agricultural development strategy of the second economic development plan laid the foundation for governments involvement in direct food production, by commencing the pilot phases of the agricultural Development Projects (ADPs) and the trial phases of the River Basin Development Programme. According to Ogbuagu, (1995) the ADPs were designed to improve the productivity of the farmers so as to make them the pilot for agricultural development in the country. The main reason for the establishment of this World Bank assisted agricultural projects was to stimulate the agricultural sector of country's economy through the development and provisions of input delivery system, low cost agricultural feeder roads, water supplies, soil conservation works effective extension services as well as providing credit and marketing services. Osuniogun and Oludimu (1986) stressed that the main characteristics of the ADPs include: (a) provision of seeds, fertilizers, chemicals and mechanical equipment either for sale on cash or credit basis at the farm service centres, (b) construction of farm service centers; (c) training of staff and farming in modern farming techniques, (d) construction

and maintenance of rural roads, and (e) provision of planning assistance and farm management.

The sustenance of this policy could be traceable to the availability of fund for ADP activities, as funds were obtained from multiple sources, like the World Bank, Federal and State governments. The challenges bedeviling this programme notwithstanding, scholars and observers have contended that the ADPs, justified their existence as purveyors for improving agricultural production in the country (Oyaide, 1986, Itussani, 1986, Ononogbo, 1993). Their sense of judgement has its bearing on the positive performance of the ADPs in the mid-1980s, besides the food crop production which Osuniogun and Oludimu (1986) averred were encouraging for example:

i. Yam - 2,153 million tones

ii. Sorghum - 1,953 million tones

iii. Millet - 1,564 million tones

iv. Cassava - 918,716 million tones

v. Maize - 488,396 million tones

vi. Cowpeas - 474,450 million tones

vii. Groundnuts - 197,910 million tones

viii. Rice - 112,924 million tones

ix. Cotton - 22,869 million tones

x. Considerable quantities of vegetables, mainly tomatoes, pepper and onions.

(Osuniogun and Ohidinu, 1986, 115)

Apart from, the performance of the ADPs in the area of food production, the ADPs activities in the infrastructural sector was commendable. As at December 1985, the ADPs had constructed cumulatively 5,494km of feeder road and rehabilitated or

maintained 3,537km road. They had constructed 601 farm service centers/stores. 71 development centers. 973 wash bores, 3,663 boreholes, 101 earth dams, 686 wells, 908 staff housing units and 3,244 small motorized pumps for Fadama irrigation. 0

However, Osuniogun and Oludimu (1986) were of the view that despite the achievements of the ADPs, the projects had some major challenges. To them the World Bank Project Completion Reports highlighted the challenges to include such things as first erratic financing regime, given the poor state of funding of existing projects, since 1981; second, is the incorrect technological package based on mono-cropping rather than prevailing mixed cropping, third, excessive reliance on expatriate management; fourth, short period set for phases of the project despite that most aspects of agricultural development are of a long-term nature, and so many others. But of all the challenges of the ADPs, lack of sufficient and timely release of funds remains their major obstacle. This probably accounted for their poor performance. This project cannot be jettisoned, but rather requires restrategizing and re-planning for reposition the programme to achieve it envisaged goal, through deliberate commitment on the part of all players. Achieving food security through FADAMA project should be encouraged, hence our study of FADAMA projects in Cross River State.

The second agricultural development policy in Nigeria which laid the foundation for the establishment of the River Basin Development Authorities (RBDAs), which is another agricultural development programme embarked upon in the country in the mid-1970s. To Okuneye (1985), the main purpose for establishing the RBDAs was to have sufficient water for agricultural purposes and for effective use and control of water resources. The decrees establishing the Chad Basin and Sokoto-Rima Development authorities were promulgated and later amended in 1975. Eleven more RBDAs were established by Decree No. 25 of 1976, that is to say additional nine new ones were

created and the existing two recognized to bring the number to eleven. Obi et al (2008) viewed the establishment of the RBDAs as the vehicles for transforming peasant agriculture in the country with the attainment of the goals of self-sufficiency in food production as the ultima-ratio.

According to Ojo (1991), the functions of the RBDAs can be summarized thus:

a. Constructing and maintaining dams, dykes, wells, boreholes, irrigation and drainage systems;
b. Undertaking comprehensive development of water resources for multipurpose use, including irrigation and urban water supply;
c. Undertaking schemes for the control of the floods and erosion, and for water-shed management;
d. Resettlement of persons affected by their activities;
e. Developing irrigation schemes for the productivity of livestock and leasing the irrigated lands to farmers or recognized associations in the locality of the area at an economic fee;
f. Control of pollution in water resources system.
g. Development of fisheries and improvement of navigation;
h. Large scale seed multiplication for distribution to farmers;
i. Agricultural processing and
j. The implementation of rural development projects.

Obi (1999), pointed out that, since 1986, the activities of the RBDAs have been restricted to land development and irrigation of farmlands. And by 1992 saw the adoption of partial commercialization of their activities. The commercialization of their activities is seen as a means of increasing internally generated revenue for the Authorities.

Presently, the RBDAs still enjoys the support of government and equally serves to develop numerous river basins in Nigeria.

Still in agricultural development plan of the third national development plan (1975-1980). This agricultural policy was designed to meet the same goal as that of the second national development and to optimize the same set of objectives of the agricultural sector. The basic plan action evolved arrangements to facilitate smooth integrated development of the agricultural potential of the nation. The government during this period established the agricultural Project Monitoring and Evaluation Unit. Other activities of government during this plan period included the introduction of the Land Use Decree, the Operation Feed the Nation and the introduction of the Agricultural Credit Guarantee Fund Scheme among others.

Scholars on agricultural development have identified land tenure system as the main bottleneck in the establishment of large-scale farms by private operators in Nigeria. According to Famoriyo (1979), Kirk-Greene and Rimner (1981) they averred that the general principle governing traditional land tenure is that rights of beneficial use of a piece of land which has in perpetuity with an individual and his heirs and the rights of ownership with the community. However, the Land Use Decree seeks to enhance agricultural output by the reform of land tenure. Decree vests the control of all land in State government control to be held in trust for the Federal Government. Here, it must be noted that traditional authorities remains the basic pillars of local government and therefore there appears to be no affective modification in land tenure system since the same social class still controls the use of the land. By this observation, the Federal Government stand on land tenure is faulty and its perturbation of the so called reform attracting foreign investments in agricultural production is not tenable. It is only recently that Nigeria has witnessed a healthy cooperation among states with regards to food

production-The cooperation between Lagos state government and the Kebbi State government in the areas of Rice production. The Kebbi state government making available the land, while the Lagos state government providing the necessary fund. To produce what is now known as the LAKE Brand of rice.

The National Agricultural Land Development Policy (NALDP) was at the instant of the Land Use decree as observed by Eyo (2005). In this policy, government supports land development for productive agriculture. The objectives of this policy include, making land easily accessible to farmers, ensuring that land is allocated to the most suitable use, to ensure that land is used in such a way that its potential for continuous use is maintained, and to enlighten the public on land matters. This policy seems plausible, but its practicability begs for answer as it regards strategies to actualize the policy objective, for instance, the development of livestock centers to settle the nomads or what is regarded as the herdsman that has posed a serious security issues in the Nigeria polity, where there has been incessant killings between the herdsman and farmers of communities. More so the acquisition and allocation of agricultural land to farmers by relevant institutions has been farfetched.

Okuneye (1985) contends that, the Land Use Decree which forms the basis of the National Agricultural Land Development policy have very little or no effect on the present pattern of agricultural production because according to section 36 of the Decree, and it states:

> '*any occupier or holder of such land (in rural areas), whether under customary rights or otherwise whosoever, shall be that land was on the commencement of this Decree being used for agricultural purposes continue to be entitled to possession of the land for use for agricultural purposes as if a customary right of occupancy had been granted to the*

occupier or holder. Thereof by the appropriate local government, to land being use for agricultural purposes includes lands which is in accordance with the custom of the locality concerned, allowed to lie fallow' (Okuneye, 1985).

Okuneye observation here is that the Land Use Decree policy like every other agricultural policies put forward by the Nigerian government were done with good intentions and had some potential advantages, but there are certain bulwarks that will continue to beset the realization of their objectives. During the period (1975-1980), the government initiated other policies targeted at cushioning the deteriorating food supply situation in Nigeria. One of such agricultural policy worth examining is the defunct. Operation Feed the Nation (OFN) programme, which was launched in May, 1976 by General Obasanjo led administration. OFN as observed by Eminue (2005), aimed at sensitizing Nigerians to the need for them to produce at least part of their own food or what Okuneye (1985) termed self-sufficiency in food production. It was designed to give encouragement and material assistance to the people in the form of technical advice and the supply of essential farm inputs such as seed, fertilizers, pesticides, farm implements, livestock and livestock feed at subsidized prices. While the Federal Government was responsible for the large scale importation of fertilizers and other agricultural inputs, State governments embarked on food production projects such as dam model farms, rice projects, etc (Eminue, 2005). Our study on agricultural policies and food security in Nigeria. a study of FADAMA in Cross River State share resemblance of the self-sufficiency drive of the Obasanjo administration and the Operation Feed the Nation Programme (OFN).

To operationalize the OFN programme, management committees were set up. At the national level, there was a National Council for OFN, and in each of the then 19

states, there was Council for OFN. We also had National Committee and State Committees in charge of Operation Feed the Nation. Here, the councils were charged with policy matters, which the committees were directly responsible for the implementation of the programme in liaison with the State Ministries of Agriculture. In this light there seems to be a synergy between policy making and implementation. However, OFN was meant to restore the dignity of farming to all Nigerians. Okuneye (1985) and Babayde (1999), averred that the success of the programme and its impact on the food supply in the country depends largely on the reactions of farmers. It was said that large numbers of farmers, educational institutions both at the primary, secondary and tertiary levels, and civil servants benefited from the programme.

The question remains, do there exist any empirical evidence pointing to the direct impact of OFN on increased food production in the country? In their studies in Imo and Anambra states of Eastern Nigeria, by Uwakah et al (1980), their findings showed that the programme made its greatest impact in terms of mobilizing the people and creating among them 86.34 percent of general awareness of the need for increased food production. They found out only small increases in total farm areas cultivated by farmers attributable to OFN, with observable but statistically insignificant increase in the use of fertilizers and other improved farming inputs.

The Green Revolution Programme (GRP) of President Shagari's administration is a modified form of the OFN which was launched in 1980. To Eminue (2005), the GRP was comprehensive and multi-sectional with emphasis on the harnessing of all available agricultural land and water resources. The central elements of the GRP showed that it was wider in scope than the OFN, as alluded by Olayide et al (1979). To Olayide, the recommendation to establish new input procurement and distribution systems. Specifically, government Ministries are to divest themselves of the responsibilities and to

hand them over to private commercial firms. Secondly, measures were put in place for timely provisions of inputs, and of appropriate technical advice to farmers; thirdly, the massive allocation of federal funds for the construction of rural physical infrastructures such as feeder roads, minor irrigation works and storage facilities, Fourthly, the establishment of a new federal extension service to supervise the activities on agricultural development projects such as the IBRD projects in some areas in the Northern states of the federation, the NAFPP and to provide a new extension framework for the rest of the country and finally input subsidies and the crop pricing policies are to be streamlined in keeping with the need to marshal the nation's resources. Of course, the main objectives of the programme are to make the country self sufficient in respect of foods in the first five years and to rehabilitate her export produce in seven years from 1980. It areas of focuses are agricultural production, food and export crops livestock, fisheries and forestry (Eminue, 2005).

Similarly, to the OFN, vigorous programmes of pest and disease control and nationwide erosion control programme were initiated and programme was to improve the livestock, fishery and forestry production. The RBDA, and the Agricultural Development Projects (ADPs) pulled their resources such as land and human resources to the success of the programme. The programmes achieved partial success, while farmers benefitting from the GRP increased their production, and measures of positive results in livestock's production, fishery and forestry.

Despite this degree of achievement, there remains various challenge being encountered by the programme which includes among others: the funding which were not forthcoming as observed by Okuneye 1985, Aribisala (1983). Eminue (2005). The delays by the treasury to release funds further compounded the impact of the programme. Mention must be made of the problem of equity in the distribution of benefits for the

programme, especially when the distributors of the essential inputs are politicians and middlemen, the large scale farmers are the greatest beneficiaries, while the peasant farmers are the losers. Eminue (2005) like other scholars agreed that the unwillingness of farmers and communities to relinquish their land for the execution of government sponsored projects, huge amounts required for the payment of compensation and political considerations led to the failure of GRP. Other challenges as adduced by Okuneye (1985) which include those of paucity of data, inadequate executive capacities, inability to capture the advantages of economies of size and lack of infrastructural facilities. Even the involvement of the private commercial firms was not fully implemented, which again explains the non-commitment of the government in developmental issue, such as agriculture, which must accommodate all the strata of the society.

Analyzing also another important scheme introduced during the third National Development Plain is the Guaranteed Minimum Price Scheme. The main thrust was to provide guaranteed minimum prices for food crop farmers. This policy was first introduced in 1976 to ensure that farmers sale farm produce at fair prices and their incomes stabilized. Its introduction provided for the first time the food crop farmers with the so-called benefits that their counterparts in the export crop divide had enjoyed in the past under the defunct marketing boards. The strategies put in place by government: were the establishment of commodity marketing boards charged with the responsibility of fixing prices for these crops. To Okuneye (1985), by fixing these minimum prices for the major staple crops of the country, it was envisaged that the scheme would assist in eliminating seasonal price fluctuations as well, as serve as a means of achieving a better income distribution to the advantage of rural areas. A periodic review of prices of various agricultural commodities based on study of relative prices and production cost was a

desideration. In 1994, government announced new producer prices for palm kernel, palm oil, coffee robusta, soya bean, and benni seed.

The scheme was set up with good intentions but its implementations was faulty in the sense that prices fixed were less than those obtained in the markets. As observed by IITA (1976) and Okuneye (1985), among the reasons adduced for the failure of the scheme were that the basis chosen for arriving at the minimum prices, using production costs is fraught with many shortcomings, such as difficulties in arriving at expected reasonable gross margins for the farmers and problem associated with such exercise, etc, and the inadequacy of storage facilities in many parts of the country. This also explains the lip service that, government plays, they are good at initiating policies, but they tend to be lethargic in the implementation and evaluation of such policies in the past and as such had led to the proliferation of policies in the past and the present.

More fundamental, is the paradigm shift from the agricultural development plans of the past four national development plans to the agricultural development plan of what is called rolling plans. A rolling plan demystified is a plan designed to continue over a period and is subject to regular review and updating. Several events heralded the consideration for a rolling plan, the economic crisis of 1983 made the Nigerian government to declare economic emergency period in 1985 and the adoption of the structural adjustment programme in 1986 prolonged the use of the Fourth national economic development plan up till 1989. To Babajide (1999), the focus of the SAP programme from 1986 had been on returning Nigeria to self-sufficiency and enhancing the contribution of agriculture to foreign exchange earnings.

As alluded somewhere in this study that Nigeria dropped the national economic development plan with emphasis on fixed five years development plan for a new concept called the rolling plan, that is subject to regular reviews. To be sure, there was the first

rolling plan of 1990-92; the second national rolling plan 1991-1993, the third rolling plan 1993 to 1995 and so on and so forth. On successful completion of the pilot phased of the agricultural development projects (ADPs), which initially served to make farmers easily accessible by providing a network of rural roads; embarked on seed multiplication farm input supply and agricultural extension service. It also enhanced rural water supplies through the construction of earth dams and sinking boreholes. However, by 1986, the ADPs took over all the agricultural functions of the River Basin and Rural Development Authorities. Not only that the ADPs are recognized with agricultural extension services all over the country but has remained a key agency used by government to improve agriculture in Nigeria. Okoliand Onah (2002:163) referred to this as rural development strategies including the Directorate for Food Road and Rural Infrastructure (DFRRI) established in 1986 to take up the functions of constructing and maintaining feeder roads, among other things, and the ADP was established in all states of the federation in 1991. Therefore, our study of agricultural policies and food society in Nigeria. a case of FADAMA in Cross River State is quiet stimulating, especially the paramount that successive regimes has held firm to its policy in Nigeria.

As articulated by Dagagsh (2008) that during the post SAP, Nigeria depended on the use of ad-hoc short term instruments for economic management which he tagged an era of the rolling stone (1990-1999) and Ugwu (2009:) averred that attempt was made in 1996 to make the rolling plan a long term National vision in which development could be anchored. A nation vision document was put in place as the vision 2010 which was later extended to vision 2020.

According to some sources like Eyo (2005) he, observed, that in the 1990s government encouraged the establishment of Community Bank in localities that have agricultural production potentials; pursued the privatization of fertilizer procurement and

distribution; undertook nationwide rehabilitation of farm power and machinery, the irrigation facilities and the strategic grains reserve, provided tax exemption on tractor ploughs and other agricultural equipment, as well as locally manufactured fertilizers and agro chemicals. He stressed further that by year 2000, that government role at agricultural development remained at the level of support services. But institutional reforms were undertaken by the government, which include the transfer of the Department of Cooperatives to the Agricultural Cooperative Division of the Federal Ministry of Agriculture, merging of the Nigerian Agricultural and Cooperative Bank, the then People's Bank and the Family Economic Advancement Programme (FEAP) to form the Nigerian Agricultural cooperative and Rural development Bank and the subsuming of the Federal Agricultural Coordinating Unit and Agricultural Project Evaluation Monitoring Unit with the Project Coordination Unit (PCU).

As adumbrated elsewhere in this study that the policy thrust of the Green revolution as it relates to establishing new input procurement and distribution systems which must be handled by private commercial firms which was not put to practice, by the policy thrust of year 2000 gave the beat to the private sector. While the role of the Federal government is to include policy formulation, maintaining a reasonable flow of resource into agricultural and rural development, enhancing development of rural infrastructures, research, development of appropriate technology, seed industry development, distributive control of pest and diseases of international significance maintenance of irrigation facilities, establishing and sustaining a national plant and animal quarantine services, promoting agricultural export, promoting micro credit delivery among others.

On the other hand the state governments are to play the role of providing and funding extension services; promoting the production of agricultural inputs, ensuring the

availability of land for agriculture, developing and managing the irrigation areas developing grazing reserves, training and manpower development, pest and disease control, encouraging agricultural credit institutions to provide loans to small farmers. While the Local governments are expected to make land available to persons wishing to established farms, and coordination of agricultural data collection in their areas.

Despite the laudable policy plans of the Nigeria government in the past and present Egonwam and Ibodje (2001) comment on the unfortunate stillborn of the Nigerian's rolling plans and the vision 2010. They said that the linkage between vision 2010 and the national rolling plan and the annual budget seems to be foggy. This explains the challenges encountered by Lither to development plans initiated and adopted by successive governments and the recent Rolling plans that was envisaged to help overcome the rigidities of the fixed year plans.

The Broad Policy Objectives of the Nigerian Agricultural Policy

According to the Ministry of Agriculture policy Guideline report (2004), the broad policy objectives of the agricultural policies in Nigeria include-

1. Attainment of self—sufficiency in basic food commodities with particular reference to those which consume considerable shares of Nigeria's foreign exchange and for which the country has comparative advantage in local production;
2. Increase in production of agricultural raw materials to meet the growth of an expanding industrial sector;
3. Increase in production and processing of exportable commodities with a view to increasing their foreign exchange earning capacity and further diversifying the country's export base and sources of foreign exchange earnings:

4. Modernization of agricultural production, processing, storage and distribution through the infusion of improved technologies and management so that agriculture can be more responsive to the demands of other sectors of the Nigerian economy;
5. Creation of more agricultural and rural employment opportunities to increase the income of farmers and rural dwellers and to productively absorb an increasing labour force in the nations;
6. Protection and improvement of agricultural resources and preservation of the environment for sustainable agricultural production;
7. Establishment of appropriate institutions and creation of administrative organs to facilities the integrated development and realization of the country's agricultural potentials.

2.1.3 Food security in Nigeria

Still underlying more conceptual issues is that of food security as Beer land and Huysman, (1999) posits that it is an access to sufficient food for normal and healthy living in the society. The World Bank (1986) perceives it from the same lense, as the access to sufficient food for an active healthy life by all people. However, FAO (1999) and FAO (2010) conceptualized food security in this manner, as the condition when all people have physical, social and economic access to sufficient, safe and nutrition food capable to meet their dietary needs for an active and healthy life. This observation by FAO is quite comprehensive because it tends to touch on the availability of food, people's access to food and their uses as well as the stability of all three components. Corroborating this assertion UNHLTF (2010) observed that this conceptualization includes the qualitative dimensions of safety and nutrition linking food security to people's energy, protein and nutrient needs for life, activity and growth.

To Barrett (2002), five key elements remains analytically useful model of food security:

a. The physiological need of individuals for nutrients supplied by food must be useful in assessing food security at units of analysis.
b. Recognition of behavioural patterns: The biological necessity of high frequency nutrient intake means that food security status may be time – varying, and present circumstances may be a function of both past experience and futuristic patterns.
c. Observing of the complementarities and trade-off between food and other variables, notably education and health.
d. Build upon an understanding and comprehension of uncertainly and risk. As the term security implies freedom from risk to biological lags inherent to food production and subjecting of food consumption decisions to temporarily uncertainty.
e. Grasping the irreversibilities and associated threshold effects that make the threat of an adverse nutritional state so turbulent.

The above analytical model of food security resonates with the 5As of food security or what is tagged the five components of food security as it relates to Availability (sufficient, supply); Acces ›ility (effective distribution), appropriateness (ecologically sustainable and safe), and . :ncy enables action). But there was a consensus among scholars that food security c n be analyzed on the following levels:

a. Individual: All indi uals regardless of age religious affinity or location should have access to food a all times,
b. Household: The abi ity and willingness of every household to have enough resources to access appro riate food.

c. Community: The concerns underlying social, economic, and institutional factors within community that affects the quantity and quality of food and its affordability or price relative to the sufficiency of resources available at the disposal of the people to purchase it (Cohen 2002).

d. National: A country's food security has its bearing on such nation's defence-peace and security. The ability to meet her food needs is a guarantee to a peaceful nation. Self-sufficiency through local production secures a nation from external influences in the market economy.

e. Global: The ability of the global food production to meet the demand. On the other hand is the concept of food insecurity, which implies a limited ability to access, secure and consume adequate and nutritious food. According to Davis and Tarasuk (1994), food insecurity is the inability to obtain sufficient nutritious and personally accept/able food through normal food channels. More lucidly, Beerlamdt and Huysman (1999) opined that food insecurity indicates a form of vulnerability in the process of food entitlement and an expression of poverty. As food, security exists when all people, at all times have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life. Food insecurity therefore, exists when people do not have adequate physical, social or economic access to food. As Adeoti (1989) averred that in chronic food insecurity, which arises from a lack of resources to produce or acquire food, the diet is persistently inadequate.

Availability, is the mantra when discussing food security, as stated in the 1996 Rome declaration in World Food Security, food security is conceptualized as:

> Food that is available at all times, to which all persons have means of access, that is nutritionally adequate in terms of quantity, quality and variety, and is acceptable within the given culture (Cited in Clover, 2000:7).

In Africa, the five 'A's of the food security component that encompasses a wide range of interrelated economic, social and political complexes endogenous and exogenous have challenged Africa's ability to address food security.

In a study by Menghestab Haile (2005) he identified a number of factors that are responsible for the precarious food insecurity in Africa. These include: low agricultural productivity, lack of agricultural policies, poor infrastructure and high transport costs, lack of appropriate marketing strategies, frequent extreme weather events, weak financial support systems, political conflicts and lack of safety net systems. But Smith (1998) view it as poverty.

In a joint publication by the UNFAO, IFAD and WEP, (2012) titled: The state of food insecurity in the World 2012 (SOFI), it was captured that one out of every eight people in the world is chronically malnourished, the UN agencies stressed that close to 870 million people were hungry in 2010-2012, which is about 12.5 percent of the world's population or as previously estimated from about 1 billion, or 18.6 percent in 1990-92.

They are of the view that the majority of people suffering hunger which is 852 million, live in developing countries, where the prevalence of under nourishment estimated at 14.9 percent. Africa was the only region were the number of hungry grew over the period, from 175 million to 239 million, nearly 20 million added in the years past. To FAO (2012), data available as at that time put the number of hungry people at 925 million in 2010 and 1.82 billion in 2009.

According to Makeko (2013), food security is a complicated issue of global importance which is susceptible to many forces such as climate change, urban development, population growth and oil price shifts that are interconnected and rarely confined by borders. Others she said are poverty and inequality, neglect of agriculture, world trade rules, insecure land tenure and neglect of gender issues and conflict. To Tarasuk (2001) food insecurity can be measured either through direct measures of household or individual-level food insecurity while indirect indictor is used to refer to measures that are not of food insecurity but from which some level of vulnerability to food insecurity might reasonably be inferred. Indirect indicators of food insecurity lack the specifically and sensitivity to individual or household level food insecurity that can be obtained from direct measures (Tarasuk, 2001). Food security becomes a failure when a large proportion of the world population are under nourished. This simply, points out that the right to food cannot be realized in free market, rather as affirmed by Mechlem (2014) that improving food security will lead to progressive realization of the right to food.

2.1.4 Nigeria's Food Security Issues

Prior to independence, Nigeria did not have to contend with the problem of food insecurity. Ojo and Adebayo, (2012), contends that, the system then was able to feed her citizens and at the same time export the surplus food items. This was a period every regions in Nigeria had to specialize in the production of one or two major crops, whether food or cash crops, and together the country was relatively self-sufficient in food production. But with the discovery of oil in 1958 and the increase in oil revenue for the country, interest in agriculture begin to wane and food production declined.

According to Tell (May 5, 2008), the consequential effect of the decline in food production in most countries, and its attendant rising cost of food items, especially, rise in the prices of staple foods. To UNDP (2012), the chronic food insecurity prevalent in sub-

saharan Africa arose from decades of poor governance. To them, across sub-saharan Africas rural infrastructure has deteriorated, farming has been otiose, gender, other inequalities have deepened, and food systems were stagnated. The peasants or the smallholder farmers, who supposed to pivot the recovery of its agriculture, have long been frustrated. Thus rebuilding food security must first commence with liberating them from this sordid state and unleash their potential.

To Nigeria, according to Ojo and Adebayo (2012), not only does political situation in Nigeria and her neighboring countries like Chad, Cameroun and Niger seem to pose a threat to states in the North East, such as Borno and Adamawa as they rely on these state for their food supplies, but drought and famine has taken its toll on the food supply. Water Resources, the challenge responsible for the food insecurity in Nigeria is not unconnected with the fact that the nation's agriculture is mainly rainified and the country has not taken full advantage of its irrigation potential estimated between two and 2.5 million hectares. According to Tell (2008), the area under irrigation is at about 220,000 hectares or less than one percent of the total areas under crops. The contribution of irrigated agriculture to crop production is therefore, minute.

To Ifeanacho, Nte and Nwagwu (2009), the global food crisis added a new and critical dimension to food insecurity in Nigeria, here they are more hungered. This resonates with Ighobor (2013) observation that sub-Saharan Africa Nigeria inclusive remains the most insecure region in the world due to increasing poverty among its populations. According to a publication by the Economist EIU report (2012), about 64.7 percent of household expenditure is spent on food consumption. While in the areas of food affordability, availability, and quality and safety respectively Nigeria scored 15.4, 51.5 and 37.2 respectively. Also, in relation to the 105 nation global food security

ranking, Nigeria ranks 103 in food affordability, 51 in food availability and 84 in food quality and safety.

In another study on global food security index, by the EIU report (2012), Nigeria ranks 80 out of 105 nation index (Table 2.1)

Table 2.1

Global food security index of low economics in sub-saharan Africa, 2012 (out of 105 nation index)

S/N	Country	Rand (105)	Score (100)	Performance
1	Mali	85	31.6	Needs improvement
2.	Togo	97	27.5	Needs improvement
3.	Cote d'Ivoire	76	38.0	Needs improvement
4.	Benin	82	34.1	Needs improvement
5.	Cameroon	74	38.6	Needs improvement
6.	Nigeria	80	34.8	Needs improvement
7.	Niger	91	29.2	Needs improvement
8.	Chad	104	20.2	Needs improvement
9.	Sudan	96	27.6	Needs improvement
10	Bunundi	103	22.9	Needs improvement
11.	Miadagascar	101	26.3	Needs improvement
12.	Tanzania	99	26.8	Needs improvement
13	Mozambique	92	29.2	Needs improvement
14.	Zambia	95	28.5	Needs improvement
15.	Angola	87	30.5	Needs improvement
16.	Congo DR	105	18.4	
17.	Kenya	77	37.6	Needs improvement
18.	Ethiopia	100	26.4	Needs improvement
19.	RSA	40	61.7	Good
20.	Uganda	71	41.9	Moderate
21.	Ghana	68	43.1	Moderate
22.	Guinea	86	31.3	Needs improvement
23.	Sierra Leone	94	28.7	Needs improvement
24.	Burkina Faso	88	30.2	Needs improvement
25.	Botswana	47	56.5	Good
26.	Senegal	93	28.8	Needs improvement
27.	Malawi	98	27.3	Needs improvement
28.	Rwanda	90	29.8	

Source: Data sourced and complied from the Economic Intelligence Unit, http//foodsecurityindex.eiu.com/Country/Details, accessed July 13, 2012.

The U.S., Denmark and Norway dominate on the list of most food secure nations while the least food secure nations are Congo, Chad and Bunudi. Comparatively out of the 28 sub-Saharan African countries in the study, Nigeria was far below South Africa, Botswana, Ghana and Uganda in terms of performance. South Africa and Botswana score good (75-50), while Ghana and Uganda scored (50-25) which is tagged moderate performance and Nigeria ranked 80 and scored 34.8 percent in the performance, which indicates that Nigeria needs, a significant improvement in its food security issues and policies and actions to make her population more food secure. As opined by Olufemi (2013) that unequal access to food is pervasive in Nigeria and often the indigent, poor and vulnerable groups resort to desperate measures to access food. UNDP (2012) observation fits Nigerian's case; it asserts that inequality in the access to food constitutes food insecurity, which occurs when people lack the capacity to acquire it. This uneven access is thus a symptom of the low incomes and high levels of vulnerability that will affect Nigeria and many other Africans.

The report also revealed the strengths in the Nigeria data in the areas of prevalence of under nourishment (98.2/100); volatility of agricultural production (86.8/100) and agricultural input tariffs (78.1/100). The problems defined as any score below (25). To the Economist EIU report (2012) on Nigeria, the absence of food safety not programme is 0%, while absence of public expenditure on agricultural research and development is (0%), the Gross Domestic Product is put at (3%), food consumption as a share of household expenditure is (9.6%); the proportion of population under global poverty line is (9.6%); protein quality (12.8), EIU women's Economic Opportunity Index (19.9%) and EIU Democracy Index (23.6%) (The Economist EIU report, 2012). In these indexes that seems to have high percentages, Nigeria may be somewhat doing well apart from political mistrust, corruption and leadership incompetence.

In contradistinction with the North African countries, the study showed that Algeria and Morroco ranked moderate while Egypt and Tunisia ranked good in the statistics on Table 2.2. On the performance ranking of global food security index of North African countries 2012 out of 105 nation index. It is important to note that these North African countries ranked between 50 and 73, and performed between moderate and good in the food security index scores (Table 2.2).

Countries in North African are performing better. Nigeria, which is touted to have the potentials to do better than others and even rank among the top or next in rank to South Africa, but the reverse, is the case. According to Etuk (2013), Nigeria is heavily endowed with enormous agricultural potential and substantial natural resources. With a population estimated at over 180 million, the market for agricultural and food products is guaranteed and additional prospect being the feeding of other less endowed African countries. Nigeria to him had about 84 million hectares of arable land and a coastline that stretches about 960km. Fresh water resources of about 12.6 million hectares for fish production and irrigation activities are also available. The ecological diversity in Nigeria lends itself to various forms of agricultural production.

In Nigeria, economic and social indicators however, show that the country appear not to have taken advantage of nature's endowment as the case was before and shortly offer independence. To NEEDs (2005), about two-thirds of the Nigerian people are poor despite living in a country with vast potential wealth. In 2012, Nigeria's per capita income was US $1052.34, dollars while South Africa had US $6003.00, dollars. Average life expectancy was put at 52 years, which is the 17th lowest in the world. The Human Development Index was 0.459 compared to 0.463 for sub-Saharan Africa (SSA). Also, the multi-Dimensional poverty index indicates that 54.1 percent lived in poverty with 57.3 percent in intense depravity. These indicators contrasts with the International

Monetary Fund (IMF) estimate of a GDP of US $270 billion dollars for Nigeria making her the second largest economy on the African continent. The poor rankings is connected with the fact that oil and gas account for a large percentage of the country's revenue and not oblivious of the fact that this sector offers a low percentage of employment compared to agriculture which employs about 70 of the nation's labour force.

To be sure, agriculture is the most important contributor to Nigeria's GDP, after oil. Since the agriculture sector is linked to the livelihoods of over 70 percent of the population, the prevalence of food insecurity and poverty means that less attention have been given to agriculture. This Hartmann (2008), observed as Nigeria having assets that are greater than oil. In the same vein, Balogun (2019), averred that if the country can get its arts together, enough capacity is available to boost domestic food production in Nigeria for self-sufficiency and food security. By diversifying the nation's economy and export revenue through increased agricultural export, sufficiently moderating and stabilizing food prices and capacity for mitigating possible food crisis that are tied to the vagaries of natural disasters and instability of the global food trade.

From the copious literature available to this study, evidence abound that Nigeria government did not lay supine to addressing the issues of food insecurity. Olufemi (2013), stressed that several direct or indirect poverty alleviation programmes instituted over the years by various administrations in Nigeria to reduce poverty and unemployment, poverty and derivation are still prevalent among the populace and the extent remains unquantifiable because it has eroded into virtually every facet of the human nature and existential life. The various agricultural policies of successive government could be seen in this light. The 1976, General Obasanjo's Operation Feed the Nation (OFN), which was intended to be some kind of agricultural revolution in which everyone was asked to be involved. However, for

Table 2.2

Global food security index of North African countries 2012 (out of 105 nation index)

North African Countries	Rank (105)	Score (100)	Performance
Algeria	73	40.5	Moderate
Egypt	52	51.6	Good
Morocco	59	49.3	Moderate
Tunisia	50	52.7	Good

various reasons, these efforts did not produce the bumper harvest that was expected (Ekpu, 2009).

The OFN was replaced by the Green Revolution an initiative of President Shagari administration. This programme had no significant change in conception, content or context. The programme did not accomplish it purpose, because of corruption. This assertion was captured vividly by UNDP (2012), while commenting on the cause of chronic food insecurity in sub Saharan Africa as arising from decades of poor governance, where various regimes types proliferated the resources of their countries at the detriment of development. The came Babangida's Directorate of Food Roads and Rural Infrastructure-DFRRI in 1985. Its objective was laudable, because of its comprehensive, integractive posturing for massive food production and rural transformation. As opined by Ojo and Adebayo (2012) on the level of policy it was great but in actual practice it went the way of others, which are fraught with corruption and eventual frustration. What could be inferred here is that, the problem of agricultural development and terminal end point being food sufficiency is not in the policy initiatives but has to do with the mustering of enough political will to see that the policies are implemented.

As observed by the National Economic Empowerment and Development Strategy that though incomes from crude oil over the years have been increasing in Nigeria, but the people have been enmeshed deeper into poverty. In1980, an estimated 27 percent of Nigerians lived in poverty. At the advent of the civilian administration in 1999 about 70 percent of the population hard income of less than $1 dollar a day and the figure has risen ever since (NEEDS, 2004). In tandem with the vision (2020) for food, where agriculture and the environment consensus for action on meeting food needs while reducing poverty and protecting the environment envisions a world where every person has access to

sufficient food to sustain a healthy and productive life, and nourishment is not tolerated and where food emanates from efficient, effective and low-cost food systems that are in congruent with sustainable use of natural resources (IFPRI, 2007). The Nigeria government restated their commitment to combat hunger and ensure food security for all.

Bello (2004) asserts that a number of what is called food security initiatives were launched. They include:

1. Special Programme for Food Security (SPES), Through this programme, the government sought the assistance of the food and Agriculture Organization (FAO), in disseminating information on proven and accessible technologies to 109 farming communities across the country to enhance food production and relatively increase income levels of the farmers.
2. Root and Tuber Expansion programme: This programme supported by the International Fund for Agricultural Development (IFAD), made available to farmers the requisite information on improved processing technology and expansion technique for cassava and its products.
3. Fadama Development Project: This project is for ensuring all-season farming through large scale irrigation system or naturally flooded areas (FADAMA) of a number of crops.
4. Provision of infrastructures: Thereby linking up the rural areas through new accessed roads and grading the old ones, supplying energy through rural electrification, distributing farm inputs like seedlings and fertilizer;
5. Community-based Agricultural and Rural Development Schemes: In this kind of schemes the participants who are usually men, are encouraged by the government, to take to farming by providing them with material and financial support. This comes under different nomenclature such as farm settlement or back-to-land programme.

6. Policy instrument and direction by which government banned, among other goods, the import of some agricultural product. The effect of this have unleashed boundless productive energy in the areas of livestock production and agriculture (Nigeria Tribune, October 1, 2004); sold fertilizer to farmers at subsidized rate and facilitated increased investment in agricultural by strengthening the financial capability of state-owned agricultural banks to grant soft-loans, and pleading with private commercial banks to extend low-interest loan facilities to large-scale and small scale farmers. The banks pleas has been largely ignored by the commercial banks because of the perceived risk in agricultural financial and the negative consequences of volatile agricultural market (Larson et al. 2004).

As we articulated elsewhere in this study that the policies are laudable, but commitment, on the part of government especially as it got to do with funding remains worrisome. All other aspects of these policy were effected in successive regimes initiatives for instance, the ADPs which has been there in the past and presently named FADAMA initiative which concerns us in the study. To Gregg (2013) there is virtually no fertilizer for the farmers in Imo state, he stressed that the Imo region application of fertilizer is less than 10 percent of what is required based on sound agricultural experience elsewhere. This negates the perturbation of government of providing farmers in the country with subsidized fertilizers. Adewuyi and Hayatu (2011) study on the effect of poverty on food security of rural households in Adamawa state, concluded that poverty reduction programmes should incorporate food production and recommended the production of growth in agriculture as a means of achieving food security in Nigeria and elsewhere.

The ultimate solution to the chronic food insecurity according to scholars is to avail people with opportunities to earn adequate incomes to assure an abundant food

supply from domestic production or imports. To Ibe (2013), it is widely recognized that in countries account for large segments of the malnourished as could be seen in the cases of India and Bangladesh, the basic causes underlying food insecurity can only be accelerating the growth of agriculture. Adewuyi and Hayata (2011) agrees with Ibe (2013) that the agricultural sector in these countries is so large that its neglect, would jeopardize the overall economic development and with it, is the possibility of providing employment opportunities for the growing population and the ability to give all households with access to food.

Again, it is noted by analysts that any policies that raise the income of the poor while increasing overall economic growth should obviously be given high priority since they would reduce chronic food insecurity without imposing a cost on the economy. Long-run economic growth itself is often slowed by the deleterious effects of widespread chronic food insecurity. In these cases, policy makers may want to consider intervention that would speed up the achievement of food security for malnourished groups without necessarily waiting for the general efforts of growth to reach them. many national governments place a high priority on reducing chronic and transitory food insecurity but often use measures that adversely affect economic growth and food security in a long-run.

In Nigeria today despite the existence of Special Programme for Food Security (SPFS), National Economic Empowerment Development Strategy (NEEDS) and the State Component (SEED). Fadama programmes and Local Empowerment Management Programme (LEEMP), and others. Most of these programmes collapsed midway and were jettisoned while few successfully ones lacked adequate funding and management and were eventually abandoned due to non-continuity and inconsistency in government policies. According to Ofoh, (2013), those programmes were bound to fail because they

were bogus with high social and environmental costs and neglected the bottom-up approach to doing business. Put differently, the programmes were imposed from above by the State and Federal government and sometimes from the Bretton wood institutions without inputs from the target beneficiaries. Similarly, this factor played out itself on the failure of farmers to adopt the so-called improvement technologies emanating from conventional research, because such researches were not based on the farmer's needs, capabilities and local peculiarities. Against this backdrop was the rise to farming Systems Research (FSR) or Farming System Approach to research with the objective of enhancing development of technology that are relevant to the farmers needs and enhancement.

To buttress the above assertion, Agriculture Extension Transportation Agency (AETA) (2012), averred that in operation, the various Research Institutes and Universities develop agricultural technologies. while the Federal Department of Agricultural Extension (FDAE) and the National Agricultural Research and Liaison Services (NAERLS) are responsible for the adoption of the technologies developed. These are in turn transferred to the Agricultural Development Projects (ADPs) what is now known as FADAMA and to other NGOs for onward transfer to farmers for adoption.

As observed by Nwachukwu (2013), that presently agricultural research and extension services are moribund. The system is characterized by weak linkages and poor coordination. Also at the height of its implementation, the private sector participation was very low and still remains so. Therefore, in Nigeria today with its vast natural and human resources and having the largest National Agricultural Research and Extension System (NARES) in sub-Saharan Africa, made up of 17 commodity based research institutes, a specialized National Agricultural Extension Institute, not less than 18 Faculties of agriculture in regular Federal Universities; 3 Specialized Universities of Agriculture and

one international Agricultural Research centre (IARC-IITA) Arokoyo, 1998), yet the country is categorized among the food insecure countries in Africa (AETA, 2012). The country has not been able to marshal a sustainable agricultural development that will make her competitive in the agricultural market place.

Ojo and Adebayo (2012) were of the opinion that successive administrations in Nigeria have been grappling with the food security challenge in the country, but the huge gap between intentions and actual practices has always been the bane of Nigeria's agricultural policies. In extant literature, there is a huge gap between food policy and agricultural policy. The agricultural policy is targeted at an expanded food production, food policy is for minimum multinational standards that will guarantee food security. While expansive agricultural policy is being advanced there is also the need for a national food policy which seeks to assure all citizens access to food supply that is reasonably priced, relatively safe, adequate in quantity and nutritious.

Claffey and Stucker, (1982) and Nyangito (1999). Nigeria presently has no food policy, perhaps because there is little appreciation of its contemporary role to agricultural system and practices to promote relative self-sufficiency in food production. Simply put, the level of food security to be achieved must be determined by individual countries in which Nigeria is not an exception. Identifying this as desirable, Olufemi (2013), opines that general self-reliance and localization remained the easiest policy. Change for a national government like Nigeria to implement because it is within the rubric of the national government. Succinctly put, the Federal government through their States and Local governments could galvanize institutions, civil society and the private sector to engage in local food production and patronage. Self-reliance, according to Olufemi (2013) is the guiding principle at many spatial level, which must begin at the local, hence the need for localization of food production and distribution, which must be based on food sheds. The

food shed provided a place to ground ourselves in the biological and social realities of living on the land and from the land in a place, we can call home (Norberg-Hodge and Gorelic, 2008).

On the other hand, localization is a process of de-centralization, or shifting economic activity into the hands of millions of small and medium sized business instead of concentrating it in fewer mega-corporations. To Norberg-Hodge, localization means striking a balance between trade and local production by diversifying economic activity and shortening the distance between producer and consumers. This process undercuts monocultures as depending on oil as the case of Nigeria and increase biodiversity thereby eliminating soil erosion, promotes organic agriculture, protect and create jobs in agriculture and food processing, etc. (Perkins, 1999; Norberg-Hodge and Gorelic, 2008). The ultimate goal of this, according to power (1999) is self-provisioning activities and promoting self-reliance and skills development which is lacking in Nigeria.

Heasman and Lang (2006) advanced the thesis that an ecologically driven community-based food policy that would build on a healthy environment that defines access to nutrition's food as a basic human right should be embraced by countries. In alike manner, Kloppen burg et al (1996), asserts that food policy should emphasize on self reliance that is associated with proximity closely linked to both social and environmental sustainability.

Some countries adopted this food policy as regards right to food as could be seen in Candia's Tororte's Green Communities programme and Food Share project Field to Table, and the Brazil Belo Horizonte programme and Hunger Zero Project (FOME Zero initiative). However, plausible this policy may be, implementation of the policy tends to be difficult policy change for government due to people's ignorance, multiple actors and institutions, corporate control, limit or no information on food products, emphasis on

processed and available foods. Therefore, the right to food transcends food sector. It comprises education, health, housing, social justice and requires fulfilling the fundamental basic human right to basic needs. Ahmed et al (2007), contends that the right to food, is difficult to implement when over 1billion people live on less than $1 dollar a day. The crisis as First Information and Action Network (2009) observed is deeply rooted in decades of misguided international and national policies, initiated and implemented under the eyes of Bretton woods institutions such as IMF and World Bank and even the World Trade Organization. These policies have undermined the policy spaces for nations to respect, protect and fulfill the human right to adequate food. Fulfill the human right to adequate food. Rocha (2006) attest to the fact that, political will and commitment are sinaqua non for the right to food as a human right and a right of citizenship and this commitment will lead to policies and programmes prompting food security. To Rochg (2001), the Brazilian version of food policy which is the Belo Horizonte Programme was successful, because it adapted food security principle and a human right as a right of citizen. While Intergovernmental Working Group (IGWG, 2004), asserts that evidences abound supporting the claim that human right to adequate food finds expression directly and indirectly in Canada's agricultural, economic, health, nutrition and social policy, legal instruments, international commitments and institutions.

More fundamentally, scholars are of the view that for food security initiatives to be enduring, participation must be encouraged. Being involved and participate in food society is beneficial both on the short, medium and long term and the reserve being opting not to participate would be adverse to the success of any community planning process. Commenting on the culture of non participating, Reeves (2005) asserts that it can generate a sense of non compliance with people not willing to be seen as difficult. But participatory approaches to development make people apart and fully involved in

interactional that affect them and over which they hitherto had limited control (Cooke and Kothari, 2002). To Guijt and Shah (1998), participatory development as it regards food security increases the involvement of socially and economically marginalized peoples in decision making over their own lives. Corroborating the above view point Burkey (1993), opines that, it is a process whereby people learn to take charge of their lives and solve their problems, which is the essence of development.

Putting this concept in its right perspective, participation is seen as a product and a process. As a product, participation is seen as a way of achieving set goal. Here decisions have already been made and people are invited to participate by cooperating with these decisions as well as to be informed of the happening. Participation is passive and benefits accurse only to project planners. As a process, Participation is seen as an essential pre-condition for the development process and as well as a tool for promoting empowerment (Pather, 1994). The non-participation of the farmers and practitioners in the policy planning and implementation of all successive agricultural policies in Nigeria could be seen in this light which has led to the failures of the implementation. More so, the World Bank (1994) perceives participation as a process through which stakeholders influence and share control over development initiatives, decisions and resources that affect their well-being. To this end participation as a process empowers people and promotes their capacity to make decisions and play active roles in issues that concern them.

According to Gregg (2013), many successful farming communities globally, have recognized the importance of participatory approach to development. To him many farmers have come together and united the large numbers of farmers into cooperatives. We have the Fonterra in New Zealand which has been of particular help to Nigeria effort providing advice and counsel. The cooperative to Gregg (2013), is a legal entity, which

can act on behalf of its farmer-member constituency. The farming cooperative on its own can afford to pool its resources together to lire functional experts that can lend their voice on the coop's behalf when dealing with vendors, managements, or finish production distributors. In Imo state Nigeria, the variant participatory action-plan is the initial farming cooperative pilot that had been created "Aku-Ubi which is centred in the L.G.A of Ohaji-Egbema. It has a website that was created by the American Christian international foundation and the African, Health and Agricultural foundations.

Olufemi attest to the fact that this collaborative learning process emphasizes participation and collaborative planning that empowers the community and results in positive outcomes that built the capital and asserts of the most vulnerable. Similarly, the term collaborative planning was used by Healey (1997) to describe the process by which participants arrive at an agreement on action they expresses their mutual interests, as could be seen in Gregg (2018) observations. In a study of 5 villages in a city region of India's Peri Urban Interface (PUI), Halkatli et al, (2003) made use of the participatory action planning project (APP) approach over a one-year period. The communities to Halkatli et al. (2008) developed action plans based on the twin objectives of enhancing livelihoods of the poor and managing the natural resource base. Aller et al (2000) adopted the integrated systems for knowledge management (ISKM) framework to support the process of constructive community dialogue and to provide practical support for resource management decision making in the South Island high county of New Zealand.

Following the narratives from New Zealand and India it shows that participation can be beneficial in the broader sense of food security and sustainable livelihoods if it is people driven, learning-based and collaborative at the micro, meso or macro levels. By this assertion, participation in development process must engender local ownership of the decision making process and project management, a commitment of local resources and a

belief in people's capacities to bring about change (Aaker and Shaumaker, 1996). To Pretty (1998), true participatory projects empowers people by building skills, interests and capacities that continue even after the project ends, while good evaluation is required to generate useful feed back to guide implementation and also to be used to shape future policy (Allen, 2001). Meares (1999) Position is apt here, which sees participations in food security as being rooted in measuring as in what people care about and seek to identify people's values.

There is an unanimity among scholars that effective communications guarantees participation. Effective agricultural communication they said is the transfer of agriculturaltechnological from technology developers (eg. Research institutes, Universities, Private organizations, etc) through the transfer agencies (e.g ADPs) or the FADAMA to the technology utilizers (e.g. the farmers) in a manner that guarantees that what was intended actually got to the farmers. Beltran (1981) opines that, it is the identification and utilization process that will propel the increase in participation of intended beneficiaries at the grassroots level. To maintain success, the communication must be willing to establish a genuine two-way flow of information, through debate and discussion. They must display positive attitudes, empathy and sense of loyalty towards his audience, and must be knowledgeable enough of the society and the locals.

The basic element is this type of communication is participation. As we already adumbrated and articulated in this study that whenever there is participation, greater success is achieved. Therefore, direct participation in the communication process gives the audience personal interest in the success of the innovation or programme be it of any type, even that of the food security makes less suspicious the actual intention of the government and her agents. When people have no say in what guides their lives, the

result is usually apathy, which can and often does degenerate into violent opposition to the message and policy.

2.1.5 Challenges of the implementation of agricultural policies in Nigeria

A review of various agricultural programmes and schemes of successive governments in Nigeria reveals that they have demonstrated varying degrees of commitment to agricultural development. This analysts observed accounted for the uncoordinated and disrupted growth in the agriculture sector of the Nigeria economy.

To Babajide (1999), one major problem that has become the bane of Nigeria's agricultural policy is the lack of continuity associated with government programmes. The effect of this agricultural development has been far-reaching. He stressed that successive governments were seen introducing new programmes and institutions which do not represent continuity and complimentarily of the existing ones. The result and effect is the abandonment of policies mid way before their effects became manifest.

The above assertion was corroborated by Eminue (2005) that Nigeria agricultural policies and programmes since independence have been characterized by frequent changes such that there is no consistency in their implementation. Every new government in the country wants to start on a clean slate and this involves changes in the functionaries who operate the agricultural sector as well as government world view and vision as the best way to bring agricultural development. To Eminue, frequent policy changes occurs because policies were based on idiosyncratic considerations which never reflected the fundamental values andgoals of the society, nor were they formulated on the basis of principle that were of general acceptance to the populace. Therefore, at the stage of implementation it is short lived. This has been the cases with the OFN, Green Revolution, DFRRI and others, Yet, Stability of Policy, which guarantees that the objectives, strategies and the various programmes which derive from them are implemented over a

reasonable length of time, is a precondition for successful investment in agriculture. Identifying the problems inhibiting effectiveness of agricultural policies in Nigeria, Ekpu (2009) averred that one of such problem is policy somersaults, which is the frequent changes of polices on agriculture as one government replaces another. On each occasion this happens, Nigeria has always had to start afresh.

Various efforts at promoting development in the agricultural sector by successive governments in Nigeria has not yielded desired results. Most agricultural policies and programme failed and became incapacitated in Nigeria because of the challenges of inadequate funds for the execution of their objectives. As alluded by Okuneye (1985), that the various agricultural schemes embarked upon by the Nigeria government and their somewhat achievement were short lived because of poor government funding. The usual delays by the Treasury and the Central Bank to release funds compounds the implementation of such policies. The NAFP RBDA's and ADPs were examples of agricultural programmes that failed and became incapacitated as a result of lack of fund. Where adequate funds were provided, it was rather misappropriated leading to unnecessarily high cost of running the programmes, such as Green Revolution, OFN and DERFRI. This UNDP (2013) averred stemmed from decades of poor governance and regimes bent or amassing wealth, self serving elite, that are quick to profit from graft and patronage. To Eminue (2005), despite the fact that agriculture has been seen as the main stay of the Nigeria economy, but for as long it has not be given the much needed attention in terms of annual budgetary allocations. The percentage share by the budget, which government allocates to agriculture, is an indicator of its involvement in agricultural development. However, it could be deduced that the inadequate budgetary allocation and actual financial disbursement has made commentators to conclude that previous governments in Nigeria were non-challant to agricultural development, especially the

paying of lip-service to the release of the percentage of agricultural benefit, but were usually diverted to other things.

Aside the poor funding associated with the failure of Nigerian agricultural policies since inception, the major reasons for the low performance and in most cases incapacitation of Nigerian agricultural policies and programmes is traceable to the challenges of implementation. In the, thinking of Eminue (2005), implementation remains the process of converting human and material inputs, which includes informational, technical, human, demand and support inputs, etc into outputs in the form of goods and services. In Nigeria context, there is a groundswell of opinion among scholars that is not guilty of paucity of agricultural policies but grappling with its implementation challenges remains her major problem. Obi, et al (2008) observed that poor agricultural policy implementation as a cog in the wheel of development could arise from a lot of factors such as corruption, poor funding, inadequate planning, lack of participation, poor and unstable management among other things.

Still on the challenges of agricultural policy implementation in Nigeria. Agriculture suffers from acute, dearth, irregular supply of or inaccessibility to agricultural inputs, such as seeds, seedlings, fertilizers pesticides, fish seeds and finger lings, nets and fishing's crafts, spraying pumps, tractors, credit facilities, etc. Perhaps, the agricultural input which experiences the most critical shortage in the country is fertilizer, which Gregg (2013) observed rarely got to farmers in Imo State of Nigeria. This farm input which is vital to good crop yield often face serious procurement and distribution bottle necks arising form factors like hoarding, corruption, inefficient distribution system and bad politics. Ogbuagu (1995) affirmed that there were reports in the past of farmers being starved of those agricultural inputs. Ojo and Adebayo (2012) stressed that fertilizer as an important ingredient for improved yield has been fraught with politics. The people who

gets fertilizer allocations hardly have farms, they only have party cards. In 1993/94 croping seasons, government provided one million tons of fertilizer. But by 1997, subsidy on fertilize was removed and fertilizer usage dropped to 200,000 metric tons, the lowest ever.

According to Okuneye (1985) any strategy for agricultural development must embrace some combination of programmes of institution building related to such activities as agricultural research and rural education and farmers training. There is the problem of linkage between agricultural research programme priorities and farmers, owing largely in most cases to financial constraints and uncoordinated programming and privatization of efforts. To Eminue (2005), the management of agricultural research in Nigeria is fraught with enormous organizational and institutional problems. There is frequent changes in organizational structures established for research purposes that such structures arenot allowed sufficient time and trial but are either changed or their location, scope of work, functions and their organizational structures are dictated by power politics sectional interests, institutional prestige and personality problems rather than on the basis of identified shortcomings after comprehensive evaluation. Alluding to Eminue (2005) assertion Arokoyo (1998) observed that Nigeria has the largest National Agricultural Research and Extension Systems (NARES) in Sub-Saharan Africa, yet it is still under performing in terms of Agricultural development in the region.

It has been consensually agreed by scholars that the ineffectiveness of most research institutions is attributable to lack of funding and a state of resource poverty generally arising from low budgetary allocation. Beside the vicissitudes of budgetary allocations for agricultural research, these allocations oscillates from year to year and are irregularly disbursed-a situation which militates against long –term research planning. Of course, it is common place that expenditure on infrastructure and other non-research

overhead claim the lion share of such allocations while corruption and misappropriation of funds reduce the scope of research activity that could be undertaken. However, constrained by debilitating paucity of funds government's projection that practical involvement by research institutes and colleges of agriculture could be profitable cannot be realized, as most laboratories, workshops and studio are not working optimally.

Nwackukwu (2013) surmised that it is expected of the research institutes and universities to develop agricultural technologies. The Federal Department of Agricultural Extension (FDAE) and the National Agricultural Extension Research and Liaison Services (NAERIS) being responsible for the adaptation of the technologies developed which are transferred to the ADPs and the NGOs for onward transfer to the end users which are the farmers for adoption. But the fact remains that agricultural research and extension services are almost dead in Nigeria because of the weak linkages and poor coordination of the system. It need be noted that the National Agricultural and Research Extension Systems (NARES), has been plagued by a weak, dysfunctional and uncoordinated Research-Extension Farmer Inputs Linkage System (REFILS). This design is expected to bring allthe key stakeholders in the agricultural sector together in participatory technology development, adaptation, dissemination and utilization for sustainable agricultural development. The resultant effect is that though technologies are developed but due to systems failures, these technologies are not effectively transferred to the farmers. To Nwachukwu and Apu (2008), the low agricultural production and policy somersault in Nigeria is attributable to the low level adoption of innovations developed for farmers by the research institutions. For Rogers (2003), getting a new idea adopted even when it has obvious utilities is difficult in Nigeria because of the huge gap between the research institutes and the end users, or what we term lack of nexus among participant.

Commenting on viable strategy for agricultural development in Nigeria, Okuneye (1985) stressed it must include, programmes for investment in infrastructure. Infrastructure in this instance is construed to include physical infrastructure such as roads, educational and health facilities, social service such as potable water and electricity and communication system. In Nigeria agricultural performance is greatly impeded by the low level of development of infrastructure. In the rural areas where majority of the small holders farmers operate, inadequate infrastructure constitutes a major constraint to agricultural investment and development. In many parts of the country physical and marketing infrastructure is poorly developed, storage facilities are rudimentary and access to information and markets is highly restricted. The situation represents the urban bias in the pattern of development in the country. The deficiency in infrastructure is reflected by restricted access to the markets which limit the availability of agricultural products in many areas, and reduces farmers income (Olukunle, 2013). To Eminue (2005) inadequate infrastructure constitutes the major constraints to investment in agriculture and rural development.

To Olukunle, (2013), the infrastructure challenges has persisted in Nigeria due to government neglect, poor governance, lack of leadership, poor maintenance culture and poor funding. In terms of road facilities the Agricultural Development Programmes (ADPs) and an institution was established to pursue the task of agricultural and rural development in Nigeria. Its area of focus was to make farmers easily accessible by providing a network of rural roads, embarking on seed multiplication, farm, input supply and agricultural extension services. The ADPs also enhanced rural water supplies through the construction of earth dams and sinking of boreholes. Ditto, the Directorate for Foods, Roads and Rural infrastructure, whose mandate was to provide rural roads and support food production. But by 1987, the DFRRI embarked on the construction of more feeder

roads and the implementation of the national water supply scheme and also launched the rural markets and electrification programmes. While on the other hand was the establishment of the National Agricultural Land Development Authority (NALDA) with a mandate to acquire, develop and allocate land to all categories of farmers for use in agricultural production. The NALDA was also to address the persistent problem of slow pace of high cost of land development, inadequate extension services and input distribution. Eminue (2005) averred that the major problem that confronted NALDA prior to its proscription, was the inability of some states to provide the required 1,200 hectares of land in a continuous location. To Olukunle (2013) the non-substance of good rural road networks in the rural areas by government through the various programmes has hindered agricultural inputs and outputs. As regards educational and health facilities, these are largely urban-biased, and the supply of potable water had not been adequate for a majority of rural dwellers, talkless of electricity supply which is often epileptic. Obi et al (2000) opinionated that the lack of infrastructure in the rural areas had contributed to the lack of private sector participation in the agricultural sector. This situation no doubt poses a serious challenge to the various level of government in their efforts to develop agriculture and also enhance rural development.

Agricultural development in Nigeria is still constrained by the challenges of inadequate agricultural mechanization. The existence of tools of farming stills dominates operations in the Nigeria agricultural sectors. The use of hoes and machetes by farmers is still prevalent in Nigeria. It can be observed that over 90 percent of farm operations, which includes bush clearing, land preparation, planting, application of fertilizers, weed and insects control, harvesting and a lot more, are being handled manually. This makes agricultural activity uninteresting. The challenge of inadequate mechanization has always been identified by successive governments, but it has not been duly tackled.

Notwithstanding, efforts by State government to operate tractor loan schemes, tractor hire services, the problem of inadequate agricultural mechanization still persists owing to problem of loan recovery, difficulties of finding a qualified machine operators and procuring of spare parts.

According Nwosu (2004), there are only two tractor assembly plants in Nigeria-Steyarin Bauchi and Fiat in Kano. The major problem faced by such establishments is the non-availability of spare parts for even the assembled in Nigeria tractors has been identified but never seen, seriously tackled. Where there is adequate funding on the part of government especially, the provision of necessary foreign exchange to procure urgently needed spare parts and solution to agricultural mechanization which lies in the local establishment of spare parts industries. For mechanization of agriculture will no doubt assist to exterminate the drudgery that characterized the use of the simple farm tools. It is in the light of the above analysis thatEminue (2005) summed up his argument that the solution to the challenges of agricultural mechanization of Nigeria lies in the local establishment of spare-parts industries refurbishment agencies,tractor or assembly plants and ensuring that there are adequately funded. For it is a misnomer that tractor assembly plants such as Steyrand Fiat does not have spare parts stores to serve the spare parts needs of her patronizes.

Another impeding force to the realization of agricultural development in Nigeria is the lack of credit facilities to farmers. Successive governments in Nigeria have always seen the granting of credit facilities to farmers as one of the means by which the agricultural sector can be improved. The objectives of the policy are to; enhance increasing investment in agriculture, enhance the adoption of improved agricultural practices and techniques of production, enhancing the flow of credit facilities to operators of the sector, and achieve increased farm output as well as satisfactory level of farm

income. The agencies involved in implementing the policy are the Central Bank of Nigeria, (CBN). The commercial Banks and the Nigerian Agricultural and Cooperative Bank (NACB) Eminue, 2005; Eyo, 2005; Okuneye, 1985).

The greatest challenge in this regard on Nigeria's agricultural sector is the limited access of small-holders farmers to institutional credit, particularly given governments policy to withdraw from direct involvement in credit operations. This problem more often than not arises as a result of the propensity of banks and other financial institutions to insist on tangible and valuable collateral and securities which rural farmers cannot provide as a condition that qualifies them for loans. That said, the environmental and operational modes of banks in the country are discriminatory to the rural farmers. The cost of borrowing is relatively high while the opportunity cost of owned capital is sometimes prohibitive. As pointed out by Iniodu and Udoka (1999) concerning the agricultural credit schemes/programmes operated in Eastern Nigeria, they said is closely related to the problem of inaccessibility of credit to small-scale farmers have been attributed to the problems of highly centralized administration of such credits, delays in processing and disbursement, and the high rate of non-compliance of agricultural loans. Eminue (2005) stressed that, during the political era, loan schemestends to be politicized as such that loans were obtained by proxy than the actual people that the loans were designed. All these retards agricultural development and food security.

Similar to the lack of credit facilities to small scale farmers as impeding force, is the unfamiliarity of the smallholder farmers with agricultural Insurance Scheme (AIS). Identifying the inability of small-scale farmers to provide the required collateral security as a major problem in credits administration. The government established an insurance scheme for the farmers with the objective to protect farmers against the effects of natural hazards by compensating them sufficiently to keep them in business. The Nigerian

Agricultural Insurance Company was launched in December 1988. However, because of lack of communication among the policy makers, implementers and the farmers, most Nigerian farmers did not embrace and operate the scheme. This scheme according to Eminue (2005) has only been embraced by only 8 states and as a result of the high cost involved, crops continue to suffer from such perils and hazards as fire, lightening, windstorm, flood, drought, pests, diseases and wild animals, while livestock suffer similar from death and injuries due to accident.

The effects of these natural hazards continues to discourage most farmers from making huge financial investments in the agricultural sector. Because of the agricultural insurance schemes, which are operated in other countries to reduce the effects of the vagaries and vicissitudes of the weather and to ensure desirable improvements in the agricultural sector, are yet to be wholly embraced by Nigerian farmers. The problems lies in the continued government provision of financial and material assistance to farmers on a temporary basis rather than on a permanent basis in the event of agricultural disasters arising from natural hazards. This situation resonates with the views of writers on participatory approaches to development, which makes people central to development by encouraging beneficiary involvement in interventions that affect them and over which they previously had limited controls or influence (Cooke and Kothari, 2002). Again, it reflects the lack of communication in the policy and programme of government to the beneficiaries.

Related to the above is the undue government's interference with agricultural cooperatives which have stymied the implementation of agricultural policies in Nigeria. Of course the basic principle of voluntary association informs or ought to inform the establishment of agricultural cooperatives, the Federal Government's tenacious hold on the apex body-cooperative Federation of Nigeria (CFN) has been identified and the main

reason for the poor performance of agricultural cooperatives in Nigeria. Akinwuni (2000) observes, the speed with which the new groups were assembled, registered and assisted made the established cooperatives to crumble. Most times government interferes in those cooperatives by seconding their employees to manage cooperatives societies by promising certain groups some incentives should they come together as cooperatives. The promise for them to access essential commodities in 1976; to qualify for loans under the Better Life for Rural Women Programme in 1991; to qualify for loans under the Family Support Programme (FSP) and the People's Bank in 1994; and the Fadama Users Association to access agricultural equipment and inputs (1999) (Eminue, 2005) This approach negates the popular and all-embracing approach to development which the Nigeria government have consistently failed to follow in pursuing development, which as it where most be populist driven.

It is against this background that scholars have agreed that, the unhealthy influence of partisan politics has been the major impediments to the formulation and implementation of an effective food and nutrition policy in most states in Nigeria. As adduced by Malia (1986) that during Nigeria's second Republic that farmers in Kaduna state suffered most as a result of party politics. He stressed that the distribution of fertilizers and tractors was based on party loyalty, so much so that famers who did not support the National party of Nigeria (NPN) were discriminated against by the President Liaison Officer (PLO) in the distribution of fertilizers, tractors and other factors of production. In addition there was lack of cooperation among Federal, State and Local officials which did not allow the actors concerned in agriculture to work together in harmony for the realization of food and nutrition policies. Therefore, agricultural underdevelopment in Nigeria can be said to stem from decades of bad politics predicated on prebendalism and self-serving politics.

One of the most serious of all the major challenges of Food and Agricultural policy in Nigeria is lack of leadership associated with mismanagements at all levels, corruptions and embezzlements of public funds are very common within Nigeria's government officials. Whereas, patriotism, trust, honesty, organization and careful management has often led to success and prosperity in other climes, the reverse is always the case in Nigeria, because of bad politics and self discipline.

It has become common knowledge that Nigeria's deepening economic crisis were exacerbated by the looting of the nation's treasury by the political, middlemen, overnight big farmers and a host of other parasitic groups (Eke and Ifeanacho, 2008). Here they did not carry along the supposed agents of agricultural development in the country who are the farmers. To World Bank (1994), Participation is seen as a process through which stakeholder influence and share control over development initiatives, decisions and resources that affect their lives. By extension, it is a process that empower people and promotes their capacity to make decisions and play active roles in issues that concern them. This approach suppose to involve all and sundry, but in Nigeria, the reverse is the case. Most agricultural policies and programmes in Nigeria are formulated in a top-down fashion. This implies that such policies and programmes emanate from the top and are sent down to the people at the grassroots levels who are the beneficiaries of such policies without such beneficiaries participating in their initiation, implementation and evaluation. This was the case with OFN, Green Revolution, DFRRI, NAFPP, etc.

This top-down or up-bottom approach does not encourage the participation of peasant farmers in agricultural policies and programmes in the country. And the resultant effect, being the disinterestedness and lack of commitment it has created among the people who hardly understand what such agricultural policies and programmes hold for them. Ajida (1987) captures this fact as one of the reasons for the failure of the first

National Development Plan (1962-1968) and yet still the bane of subsequent successive agricultural development policies and programmes. To Ayida (1989), the local authorities were not sufficiently brought into the planning process in spite of their activities as development agencies in many parts of country. There is no gainsaying the fact that the participation of farmers in the design and implementation of agricultural policies and programmes which affect them will enhance their support and facilitate successful implementation. Therefore, popular participation of the people (farmers) in future agricultural policy making in the country should bedesirous. For it remains the best strategy that allows farmers to take active and influential part in shaping decisions that affects their lives.

As a corollary to the above view point, Okuneye (1985) observed that one of the reasons adduced for the failure for agricultural policies and programmes like the Green Revolution, the ADPs and the RBDAs, apart from the paucity of funds and the usual delays by the Treasury to release funds which further compounded the issue. There is the problem of equity or the distribution of benefits from the programme. Particularly when the distributors of the essential inputs are politicians and middlemen, the large farmers are always the greater beneficiaries. In a finding by the Shehu Mohammed Commission of Inquiry in 1975, it was stated that one Kyari and a businessman, Mai Deribe imported 3,000 metric tones of rice from Thailand at a cost N28.00 per bag. Yet at the time, locally produced rice sold for only N15.00 per bag. (Newswatch, Oct. 5, 1998:11). This middlemen and so called large scale farmer always thwart every efforts of government because of their negative interest. Vigorous steps have not been taken by successive government to involve our peasant farmers in the policies and programmes, as they seems to constitute over 80 percent of the farming population as against the large scale farmers who are mere 5 percent of the total farmers.

Apart from the above problems/constraints of Nigerian agricultural policies and programmes, there are equally other problems that have continued to militate against agricultural development in the country. Excessive rent-seeking, corruption and poor management has constituted the greatest problems bedeviling agricultural policies and programmes in Nigeria. They are seen as been cancerous that have stymied every effort to agricultural development. According to Nwosu (2000); this challenge was made direct reference to by the Vision 2010 document, when it stated in clear terms that the problems of agriculture had persisted over the years in spite of massive government investment in the sector and that the apparent ineffectiveness of government intervention was due largely to corruption and the diversion of resources meant for the sector.

Watts (1987) pointed at the poor performance of agriculture in Nigeria despite huge investments and in particular the colossa sums of money invested in the RBDAs, which Eke and Ifeanacho christenedill – conceived plans to boost agricultural production. The RBDAs gulped N2.2 billion naira and the OFN ended up swallowing more than N1billion naira in wasted public funds as at when one dollar is equivalent to 80 Nigerian kobo. Watts (1987), Ojo and Adebayo (2012) blamed this situation on excessive rent-seeking, poor management and corruption. Over the years, the agricultural sector appears to have become a victim of factors such as conspicuous and import-oriented consumption, and the love of gigantic and capital intensive projects which provided ample opportunities for the diversion of public funds, excessive rent-seeking and corruption. The resultant effect of the situation is poor management and gross inefficiency manifested in cost escalations and numerous uncompleted or abandoned projects.

In a cursory look at the past attempts at improving agricultural production in Nigeria, through policies and programmes such as the OFN, GRP and others, Olukunle

(2013) noted that government emphasis was on increased production without commensurate efforts at post harvest system management and industrial utilization. Most of the programmes took the various aspects of the post harvest system such as processing, packaging, marketing, storage, distribution and transportation in isolation from one another. There was no effort to make the system comprehensive and holistic in its management. Even the industrial utilization of agricultural commodities was constrained by inadequate linkage of agriculture to industrial sector. Most programme as identified by scholars followed haphazard implementation that creates more problems without achieving anticipated goals. However, most of the programmes were said to have yielded seasonal increases in agricultural output, the major challenges was the inefficient and ineffective post-harvest management which have always resulted in substantial agricultural wastages, food looses, reduction in available food, restriction in its spread over the years, and also reduction in employment and rural income.

In actual sense, there must exist synergies between rural areas where most of the farmers concentrate and the urban areas where most industries and large people lives. Therefore any policies of such must put into consideration this fact. Rural urban linkage according to Weliwita and Okpala, (2004) refers to the growing flow of public and private capital, people and goods, flow of ideas, information and innovation between urban and rural areas. Put it in the right context, the rural areas is the source of food, raw materials and labour for cities. Whiles cities (urban areas) also provide markets for agricultural products, specialized services and sources of temporary employment and shelter for rural dwellers (Insights, 2002). Ordinarily, urban and rural (relations have been conceived in terms of social and economic interactions and linkages between two distinct models of production and reproduction as the case may be (Potter and Unwin, 1989;, Kelly, 1998). These relationships might be in the form of flows of commodities. A large

household in both rural and urban areas rely on the combination of agricultural and no-agricultural income sources for their livelihoods. They also include rural activities taking place in urban centres (Urban agriculture) and activities often classified as urban (manufacturing and services) taking place in rural settlements (Tacoli, 2003; IIED, 2008).

The overall synergy between agricultural production and urban based enterprises is often key to the development of more vibrant local economies on a index level to less unequal economic growth. In Nigeria, as observed by Olukunle (2013), the difficulty confronting the local industrial utilization of agricultural commodities is how to initiate and sustain the momentum for diversification of raw agricultural commodities into agro-industry for transformation into high value added products in order to realize and optimize high growth potential that undoubtedly in exists in agricultural commodities. More worrisome is the dilapidating state of rural infrastructures that has been hampering effective linkage of agriculture to the industry. Available evidence depicts that there had been poor linkage of agricultural sector between the rural and the urban. To Kruger (1998) in South AFRICA, maintenance of rural urban linkages are well pronounced and access to these rural assists as regards the agricultural products is at least a supplementary if not an essential element for security and stabilizing the livelihood systems of many vulnerable urban households.

In Nigeria, there is no synergy between the rual and the urban centres because it was not considered in her national development strategy. Rural areas constitute centres of agricultural productivity and the urban areas provide the market of these goods. Of course the rural areas do not have the population to consume the food produced hence urban areas serves as distribution and major consumer centres of rural produce. It is the urban areas that facilitates a link to national and international markets (Kamete, 1998). To

Olufemi (2013) there is a nexus between rural and urban areas for food, empowerment. By this interlocking and interconnectedness between the rural and the urban areas explains why countries in the Southern Africa region in Africa like Botswana and South Africa have performed better than others like Nigeria that lacks policy frameworks to pursue food security in her policy. The Local Economic Development (LED) had Spatial Development Initiatives (SDIs) strategies adequate by local governments in South Africa is an example of urban – rural linkage adopted as part of the Municipal planning tool, the Integrated Development Planning (IDP). This plan focuses on competitiveness of local economies, networking and cooperation, building partnership, learning knowledge exchange. But this effort seems impracticable in Nigeria because there is always a deliberate attempt to alienate the people or the stakeholders from any policy that would benefit them at all levels-right from policy conception to implementation.

The 'bottom up' approach to agricultural Development should be a desideratum in Nigeria as against the 'top-bottom' approach which is the norm in Nigeria. There is a consensus among scholars, that developing rural infrastructures, providing appropriate regulations and monitor growth, strengthening governance structures which is lacking in Nigeria is very crucial to improving agricultural production and ultimately guaranteeing food security. This can be achieved by an integrated holistic development approach that is people's driven as against elitism. All these has been the bane of the implementation of the various agricultural development policies in Nigeria because they lacked local panache and content and did not emanate from them.

Having reviewed scholarly works on conceptual issues of Agricultural development in Nigeria's food security policies and challenges of the implementations of agricultural policies in Nigeria. It is evident that literature reviewed have presented an adequate assistance to the very topic under study. However, it is also clear that specific

work has not been done on the agricultural policies and food security in Nigeria. A study of Fadama in Cross River State as such this study intends to fill in such gap and lacuna.

2.2 Theoretical framework

The single word usually used to describe theoretical framework is worldview. A worldview is essentially a state of mind or cognitive orientation of an individual or society encompassing the whole of the individual or society's knowledge and point of view, put differently, a worldview gives a guide to reality, it takes the multi-sided quality of this present reality and brings it to suppositions that are conceivable. Therefore, theoretical framework and worldview helps us systematize and simplify a very complicated world.

Thus, systems theory will be adopted and used as a suitable and appreciable theoretical framework for the study to analyze and evaluate the role of FADAMA programme as an agricultural policy for food security and reduction of rural poverty in Cross River State, Nigeria.

The systems theory seek to explain a series of statements about relationships among independent and dependent variables which are assumed to interact with each other, that is, changes in one or more variables are accompanied , or followed by changes in other variable or combination of variables. To Anatol Rapoport (1968), a system can be describes as a whole which functions as whole by virtue of the interdependence of its part. And the process or method which aim at discovering how this brought about in the widest variety of systems has been called general systems theory. Therefore, systems theory conceptualized is a science which has the comparative study of systems as its object.

The Social sciences imported the modern concept of system from homeostatic physics and biology. Such a comparative research programme for heterogeneous types of

systems pre supposes a highly general concept of systems for which numerous features have been proposed.: the inter dependency of the parts of a system; the reference of any structure and process in a system to the environment of the system; equilibrium and adaptation and continuous re-adaptations to environmental demands as core elements of the understanding of a system, self organization of a system as the principal way it responds to external intervention; complexity as trigger mechanism for system information as the form which describes the internal network structures of connectedness among system elements.

The systems theory has been adopted in many disciplines. In sociology, Talcott Parsons has been the foremost students of systems theory and his work has influenced thought on systems in political science. He developed an action system to be used as an analytical tool. Parson (1977) identified that in any concrete social system, these four universal functional aspects often constitute antonymous subset of the respective system. (adaptation, goal attainment, integration, pattern maintenance). In an analogy to economics he then added input/output analysis. Here systems and subsystems are interrelated through the input and output of resources which are either the result or the precondition of ongoing system processes. Among these resources are the cognitive and motivational resources of participants, and the rights and values which are attributed to them. These different types of resources are transferred in exchange processes between systems. For analyzing these exchange processes, going on between systems, without which systems would never be able to procure the resources they need for their functioning. Talcott Parsons created a theory about media of exchange.

Parsons, though recognizes that action can occur between an individual and an object, he is more enamoured with action in a societalcontext as against the political scientists. In his action system places persons both in the role of subjects and in role of

objects. Therefore subject and object interact in a system. if actors gain satisfaction, they develop a vested interest in the preservation and functioning of the system.

In the context of this study the systems theory as adopted in political science by Easton seek to explain the concept of agricultural policies and food security in most countries of the globe. In contradistinction of Parsons approach which is societal driven, the systems theory is political and finds as it point of departure the political system. According to leading theorist of systems theory, Easton (1965), he averred that the theory is based on the idea of political life as a boundary maintaining set of interactions imbedded in and surrounded by other social systems which constantly influence. To Easton, political interactions can be distinguished from others kinds of interactions by the fact that they are oriented principally toward the authoritative allocation of values for a society. Other systems theorists like Karl (1969) adhering to the functional requirements of Parsons; stressed that a system is characterized by transactions and communications. He is concerned with the extent to which political systems are equipped with adequate facilities for collecting external and internal information as well as for transmitting this information to the points of decision-making. Almond (1960), on the other hand conceptualized it as that system of interactions to be found in all independent societies which performs the functions of integration and adaptation (both internally and vis-à-vis other societies). While Sppiro (1966) holds the opinion that a political system can exist wherever people exist either cooperate or engage in conflict to solve common problems. To him a political system is a community that is processing its issue.

There is unanimity among these theorists Easton (1965) Spiro (1966), Almem) (1960) and Deutsch (1964) on the functions performed by the political system. They share as interest in the means by which the system converts input into outputs. Easton's system analysis in which this study has adopted to guide in the analysis on the

agricultural policies in food security has been identified with what is termed input-output analysis. In his scheme, the principal outputs are the decisions allocating system benefits. Easton suggestion in his work to make demands and to support is to be involved in the political process. However, people are involved in the political processes only in the sense that they have something to do with the political system. Then they make demands on it for the authoritative allocation of value and lend it support so that it can survive and carry out the function of authoritative allocation more efficiently. The citizen is not a member of the political system as such but its client.

Discussing the transactions across system boundary, Easton averred that the effect that are transmitted across the boundary of a system as the inputs of the second system, the one that they influence. A transaction between them in the form of an input-output relationship (Easton 1965). It therefore follows from this that if the participation of the ordinary members of the community (those who are not political authorities) in the political system, consists in their demands and support inputs, as it clearly the case, then, these members are, strictly speaking, outsides the political system although they are related to it in the sense that they affect it and are affected by it. Easton capture it more vividly in this manner:

> *'It will matter little whether we consider these inputs as internal or external to the political system. They stand on the border, bridging and linking the political system with all other intra-and extra-society systems. Depending upon the requirements of our analysis, they may be equally conceived to be within the system or outside it as long as we recognize that they remain in the neighborhood of the boundary (Easton, 1965).'*

To be sure, in so far as Easton is interested in the inputs of the human environment of the political system, he is interested in them mainly from the angle of the fact they might cause stresses which could undermine the stability or the regulative capacities of the political system, considering the treatment of the class of inputs, demands. Demands are articulated statements, directed towards the authorities, proposing that some kind of authoritative allocation ought to be undertaken. In any input into the political system centres on the consequences of that input for the survival and regulative capacity of the political system. Likewise supports are interesting, mainly because they might place stress on, or alleviate stress from, the political system. To Easton (1965) demand represent only one primary index that can be used to locate and identify the way in which environmental and internal disturbance as may stress a system. While the second major index of stress has to do with the support for various aspects of a system, as for some kinds authorities, the regime, or constitutional order or for the political community itself. Where such support threatens to fall below a minimal level, regardless of the cause, the system must either provide mechanisms to revive the flagging support or its days will be numbered.

This assertion above falls within our study on agricultural policies and food security in Nigeria: A study of FADAMA in Cross River State. But successive governments, in Nigeria has responded to demands of the need to develop agricultural policies that would position Nigeria on the pedestal for self-sufficiency and food security in the country, but despite all these efforts instead of attaining food security the reverse has been the case. This prompted the UNDP (2012) to declare that the problem is not far from corruption and lack of leadership and a fantty political system, that can no longer galvanized popular support for their programmes and policies. In so far as Easton is interested in inputs, his interest centres on the point that inputs place stress on the

political system and could conceivably destabilize it or undermine its ability to regulate behaviour.

Easton (1965) is concerned, as well, with the capacity of political systems to respond to their environments. This discussion of the variables response is fairly predictable. He begins by reviewing the circumstances under which demands cause stress to the political system. He pays particular attention to the point that political systems become subject to stress if they do not limit the number and variety of demands that enter the system. The danger of demand overload can be put to check by the presence of structural regulators of the quantity of demands to wit: parties, and pressure groups etc. Political system can also respond to demand overload by increasing their channel capacity for bearing demands to the point where they become outputs.

It must be noted that it is not only demands that subject a political system to stress; support inputs have the same potential for causing stress. A case in point where support inputs become a source of stress when they fall below a minimal level. To maintain itself, the political system must respond appropriately when this lack of vital support inputs begins to occur. One type of response would be to change the structure and processes that characterize a particular type of political system. This is perhaps the most radical strategy. It requires the system to transform its goals and structures as a means of maintaining at least some kind of system for making authorities allocations.

Another way the system can respond is to seek to instill in its member a high level of diffuse support in order that regardless of what happens the members will continue to be bound to it by strong ties of loyalty and affection. This point and observation by Easton (1965) alludes to the synergy that should exist among the government and the governed in order to attract maximum support, but in Nigeria the reverse is always the case as the political system tends to foist policies be it agricultural policies or otherwise

to the people even when the citizenry makes demands that would have been all-embracing.

However, in a developed clime with a robust political system where citizens are bound to it by strong ties of loyalty, the political system can respond to support stress by the outputs. Through the outputs, efforts may be made to stimulate the input of specific support. Specific support is an input to a system that occurs as a return for the specific benefits and advantages that members of a system experience as part of their membership. Equating this assertion with the performance of agricultural policies in Nigeria, it could be gleaned that the practitioners which are the small scale farmers have not given the policies system any specific support because they felt that previous and extent policies have not been of any benefit to them, but seem to benefit the politicians and government functionaries. The discussion of Easton's response shows that this variable remains another tool for gaining insight into how the political system is to be maintained in order to effectively compel compliance.

This systems theory has its empirical utility, because Easton (1965) system theory though developed for constructivist purposes and is a conceptual framework for analyzing politics, yet it is useful for constructing an empirical theory of political science as well as using it in understanding actual forces operating in a political system. In this context, the political actors and citizens can know 'what' 'where' and 'how' of political actors and citizens can know 'what' 'where' and 'how' of political operations and take remedial action. Third World countries like Nigeria can gain a lot from its study and actual use, avoiding many risks, crisis and difficulties. Advanced countries already made use of it in one form or other.

As alluded by Almond (1960), his primary concern was on the political input and output functions of the political system. The input addresses the questions of how

political systems engage in political socialization, interest articulation and aggregation, and political communication. His concerns with the political output functions involving rule making, rule application and rule adjudication. His output finding in the case of the United States political system, correspond to the executive, legislative and judicial branches. This observation by Almond resonates with that of Easton's system theory because their analysis were carried out on countries with matured political culture as against the underdeveloped political systems of the Third World countries.

Despite the empirical utilities of Easton's System Theory, Ake (1982) observed that it is nebulous in several ways as regards – the relations between the variables which are not stated with rigour. To him its applicability is difficult if not impossible to the study of the world, and the data gathered in the context of the theory will mean little.

Easton's concepts of systemic persistence and change have also been criticized citifies on grounds of precision. As Evans puts it, Easton talks of persistence as the main property of the political system, but he does not refer to the maintenance of specific structure for this purpose. His emphasis on the systems automatic response to stress without considering the distinction between goals of individuals or groups and those of the system. Easton's model gives little place to the study of individual or their groups. The model relegates individual to the background. This model fails and ignores the issue of social change and revolution and fails to provide for the study of political development and social change. Easton model can be used for analysis of the political systems of developed Western democracies. It cannot be usefully employed for the study of Asia and African political system.

The drawbacks of Easton's system theory notwithstanding, his scheme has provided for the orderly arrangement and examination of data gathered for this work. Therefore, the study is cast in the language of the system theory with the understanding

that Easton's systems theory is a theory which deals primarily with the input and output matrix in his analysis of the political system in countries such as Nigeria as it relates to Agricultural policies and food security in Nigeria. A study of FADAMA in Cross River State. As adumbrated by Easton (1965) in his scheme, the principal inputs into the political system are demands and supports, while the principal outputs are decisions, and allocating system benefits.

Countering food insecurity in Nigeria or anywhere in the world will need a synergy between citizens and political system as regards the government. The question remains are the players, willing to cooperate and collaborate to stem the challenge of self-sufficiency in food. For where there is a master-servant relation in development related issues, there tends to be grandstanding and retardation.

In conclusion, The responsibility of providing food security in terms of food availability, affordability, accessibility, and culturally acceptable in Cross River State, Nigeria which FADAMA programme set to achieve should not be the responsibility of the Federal, State and Local Governments of Nigeria alone but the concerted and collaborative efforts of all other sub-units or components of the system such as the Federal Government, State Governments and Local Governments, Commercial and Micro-Finance Banks, World Bank, Private Sector, Agricultural Development Bank, Rural farmers as beneficiaries of FADAMA programme and Ministry of Agriculture.

Here, the Federal Government through the State Ministry of Agriculture will play the role of planning, coordination, facilitative and monitoring in the overall programme. The State Governments play a financing role by funding farm settlements and providing credit to Micro-Finance Institutions for onward lending to small and medium scale farmer.

The Local Government support State Government in providing basic infrastructure required in the rural and farming communities including access roads, power, water and market. The private sector collaborate with various tiers of government to finance, execute, and operate major programs and projects. These will include farm support centres, irrigation systems, fertilizer, abattoirs, livestock market etc.

The farmers as beneficiaries of the FADAMA programme shift from subsistence farming to agric-business. They also formed capitalized cooperatives and register formally with Government. The Non-Governmental Organizations help to support programmes implementation from the foregoing, you will observe that it requires a concerted effort of all the sub-units in the system. If a particular sub unit it component is dysfunctional it affects the entire workability of the system.

CHAPTER THREE

NATIONAL FADAMA DEVELOPMENT PROGRAMME (NFDP) IN CROSS RIVER STATE.

3.1 Overview: FADAMA programe as an agricultural project in Cross River State, Nigeria

The Fadama concept is an old tradition in Hausa, where flooded land is used for growing a variety of crops and small-scale irrigation. This land is suitable for irrigation, fishing and providing feed and water for livestock. The project which was initiated in the early 1990s is now in its third phase, the first phase had only six participating states with only jigawa as a "core state" i.e. a state in which FADAMAI was fully implemented. Critical evaluation of the performance of FADAMAI clearly revealed that the full realization of project benefits was marred by some specific limitations at the level of project design and implementation, including the non –involvement of project clients in project planning; project was restricted to crop production, neglecting downstream value, addition activities of marketing and processing, and ignoring of other FADAMA resources users.

FADAMA II: The second phase of the project known as FADAMA II was initiated to address some of the pitfalls of FADAMA I, which prevented the full realization of the potentials benefits of agricultural production activities. The pitfalls included poor development of rural infrastructure, storage, processing and marketing activities, low investment in irrigation technology, and poor organization of FADAMA farmers as well as lack of adequate techniques for greater productivity. FADAMA I and FADAMA II focused basically on provision of irrigation facilities for crop production although non farmers were among FADAMA resource users, such as pastoralists, hunters, vulnerable and marginalized groups.

The second National fadama Development project is a world Bank- assisted project that has been designed and is being implemented in twelve states of Nigeria. The states are Adamawa, Bauchi, Federal Capital Territory (FCT), Gombe, Imo, Kaduna, Kebbi, Lagos, Niger, Ogun, Oyo and Taraba. The project development Objective (PDO) is to sustainably increase the incomes of participating rural community dwellers. The project has adopted a demand-driven approach whereby all users of fadama resources are encouraged to develop participatory and socially –inclusive local development plans.

The project has five components comprising: (i) capacity building; (ii) investment in community –owned productive rural infrastructure; (iii) Pilot capital asset acquisition support; (iv) demand –driven advisory services; and (v) project management, monitoring and evaluation. The key performance indicators of the project at the end of five –year project life are: (a) To increase the incomes of 50 percent of the beneficiaries by 20 percent at the end of the project in year 6; and (b) To reduce conflicts arising from competition to access the scarce fadama land and water resources.

The project became disbursement effective in May 2004 and has passed the mid-way of project life. The government jointly with the world Bank, carried out a mid-term review of the project in June 2007. The review assessed compliance with implementation procedures as well as the performance of participatory entities for the purpose of re-planning the project (if necessary) and re-allocation of funds.

The evaluation of the fadama 11 program indicates its primary development objectives (PDO) increased incomes of Fadama users and reduced conflicts arising from competition to access scarce land and water resources –being achieved. Micro-level analysis showed that the PDO of increasing incomes of fadama users by 20 percent has already been achieved (average real incomes increased 25.7 percent by January 2007) and

resource conflicts have virtually been eliminated due to rapid internalization of the principles and mechanism of social inclusion.

Fadama II has made meaningful contribution to both the quality of life of the beneficiaries and the local economy. Localized improvements of feeder roads and construction of fadama access roads to link farms to primary and secondary markets and investments in community –owned productive infrastructure and improvement in live hood opportunities have transformed the socio – economic outlook of entire communities in all the participating 12 states.

From the field surveys it can be concluded that the objective for communities to plan their own development agenda has been achieved. Women, the poor and disadvantaged groups have been given a voice through the project. The project is to pro – actively support women's organizations involved in project –related activities. The project has rehabilitated disabled men and women and trained them to be useful economic agents. The FADAMA II project is followed up by the FADAMA III

The FADAMA III is more like an agricultural diversification Programme, which is a paradigm shift under the FADMA project. It targets beneficiaries and the private economic units/small holders, who earn their living directly or indirectly from exploitation of natural resources in a given area. Though, effort have been made by successive government through policies and Programmes to boost food production, ensure food security and reduce rural poverty. Through fadama III agricultural Programme, effort is on –going to establish fadama microfinance Bank across all the state of the federation, affer train – the trainers workshop to facilitate their efforts to expand the scope of their farming activities, educate farmers on when and where they can sell their produce affer harvest (i.e. engage in business farming), provide them (farmer) and

ensure that farmers contribute five percent of their interest for such fadama micro – finance Bank. By so doing, the Fadama III project has supported has supported ramping up of production of four prioritized staple crops. -rice, cassava, sorghum and tomatoes across the states where projects are launched Financing of such venture is drawn from the federal government and World Bank.

The project facilities are applied to support graduates, unemployed youth and women to become agro –Prenueurs in life with the Green Alternative Road Map Agriculture promotion policy. The federal Government argues that the Green alternative recognizes the key role of both the small holder farmers in maximizing agricultural output and increased efficiency in agricultural operations. Some finance is dedicated to improving farmer productivity performance of clusters of farmers engage in priority food staples. This new strategy seeks to attract private investments in production, processing, milling and other aspect of agriculture. Through the world Bank, the federal government obtains funds to scale up all the six component of the parent project namely:

- Component 1: capacity building, communication and information support.
- Component 2: Small scale community – owned infrastructure.
- Component 3: support to agricultural Development programmes, sponsored research and on –farm Demonstration;
- Component 4: Matching grant facility for Assets Acquisition through groups;
- Component 5: Project management, monitoring and evolution

In terms of approaches and financing mechanism, the Third National fadama project is designed to empower fadama communities with resources and needed technical training and support to properly manage and control their resources for their own benefit in particular and community development in general. The

approach used in fadama 111 is community development approach / community Driven Approach (CDA), which is bottom – up as against top –bottom. Participatory community associations are empowered to develop participatory and socially inclusive Local Development plans (LDPs). Also under the fadama project, participants collectively identify their development priorities and agree on their investment activities.

Recently, the World Bank has decided to extend its funding of Fadama project in Nigeria. It has provided the sum of $200m US Dollars for Nigeria in August 2013 (World Bank, 2013). Agbarevo and Obinne (2010) observed that Community Development assumes that rural development would be better achieved by assisting people to identify, define and limit their problems and needs, and then plan and implement selected action to arrive at a solution. It takes the form of problem solving approach by the community or group facilitated by government/NGOS. The model has the advantage of active participation of people in projects of which they are the beneficiaries. Previous government efforts aimed at reducing rural poverty, and hunger were not very impressive. They largely used top-down approach in implementing programmes designed to increase food production, income and standard of living of rural people (Baldwin cited in Agberevo 2015). Fadarna project on the other hand is demand-driven in which the beneficiaries or participant determine their priorities, analyze their problems, plan how to solve them, choose between alternative courses of action and implements the chosen course of action with government officials acting as facilitators in a very participatory manner.

This paradigm shift, it is believed, would succeed where previous programmes have failed in increasing food production, rural income and

consequently reduce rural poverty. But the extent of success or otherwise, of the project increasing crop yield/food production and food security is apparently not known in his paper and this constitutes the problem of this work.

- The project approved by the World Bank's Board of Directors in July 2008, has six main component.
- Capacity building Local Government and communication.
- Small scale community-owned infrastructure
- Advisory services and input support development
- Support to the Agricultural Development Programme (ADPs) sponsored research and on-farm demonstration.
- Asset acquisition for individual Fadama Users Groups (FUG) Economic Interest Groups (EIGS).
- Project Management, Monitoring and Evaluations.

The project implementation is being monitored by civil society and media.

Furthermore, It empowers FADAMA communities with resources and needed technical training and support to properly manage and control their resources for their own benefits in particular and community development in general. The approach used in FADAMA III is community development approach/community driven approach (CDA), which is bottom-up as against participatory community associations are empowered to develop participatory and socially inclusive local development plans (LDPS).

3.2 IMPACT OF FADAMA ON FOOD SECURITY IN CROSS RIVER STATE

The National FADAMA Development Project which was initiated in the early 1990s is now in its third phase (FADAMA III). The first phase has only six participant state with only Jigawa as a "core", state where FADAMA I was fully implemented.

Today, however, the National FADAMA project is currently found in all the 36 states of the federation including the FCT, Abuja.

In Cross River State, FADAMA III was officially lunched on the 8th of June, 2011 and was expected to close on the 31st December, 2013. The state project cost envelop has been $57.85 million. Drawdown projects line to 31 December 2013 revealed USSD 7,068, 896, 66 or N1, 060, 334, 449.00. This was expected to cover the entire (18) Local Government Area spanning across the three senatorial districts of the state.

The essence of FADAMA III project was to build on the foundation of FADAMA I and FADAMA II even though Cross River State participated in FADAMA I as a facility state, but did not participate in FADAMA II. The Local Government within the three senatorial districts (Bekwarra, Yakurr, Akpabuyo) grossly rural had FADAMA projects registered by some willing beneficiaries. These projects are reflected in agricultural and non-agricultural sectors like crop farming, fisheries, and livestock (poultry, goat, and piggery), agro-processing (cassava, yam, rice, oil, agro-cocoa, groundnut, millet), foresting (snail,bee, bush, mango), and then marketing cold room,/market/bridge/culvert, feed mill construction etc).

Under FADAMA project, three local governments but one each from the three identify their development priorities and agreed on the investment activities funding. Funding is by World Bank contributing 55.6%, Federal Government of Nigeria 5.1% Sate Government 17.1% and Local Government 8.9%. The project is poised to tackle food shortage and food insecurity. The structure to achieve this objectives includes using the state FADAMA, technical committee and the local FADAMA technical committee. The participants also had to constitute themselves into groups and association called the FADAMA USER GROUPS (FUGS) that is a group of an average of twenty (20) persons

within the same locality who have common economic interest and registered as a FADAMA cooperative while the FADAMA COMMUNITY ASSOCIATION represents apex organization of economic interests group which drive live hood from the share natural resources of the FADAMA land. This explains why most scholars maintain that FADAMA III projects was designed to increase the production efficiency of FADAMA users (farmers, pastoralists, hunters etc.) and consequently, their income. The so called additional financing (AF) for the third National FADAMA development project for Nigeria has also made its clear in its objective that is poised to increase the income for users of rural lands and water resources within the FADAMA areas in a sustainable manner will focus on the recipients territory.

It will focus on improving farm productivity performance of clusters of farmers engaged in priority of FADAMA rural people of Cross River State. In central senatorial zone, we have the Alive MPCs Snail farm which is almost one of the biggest in the country. The farm produces not only meet for Local consumption but for commercial purposes. Still within the central senatorial district, we have the Lesodar MPSc fish farming. The farm produces and supplies fish for the people of Gebodor FCA and even some neighbouring communities. Also produce in this farm are the ducks, paw-paw, bush mango, oil palms. The farms, in other words combines agro-processing, livestock and fisheries. We also have FADAMA rice farmers in Igbo Ekureku. This is large commercial agricultural production. Other places where we have crop farmers, fisheries, livestocks, agro processing agro-forestry and marketing are anong communities, Adadama, Equity Ediba, Ebor and Igbo Imabana.

In yakurr Local Government, we have FADAMA agricultural productions in Assigha, Epenti/ Afrike, Mkpani 1, Okrubong, Ijom, Ijere, Rosephdock, Ikpaka, pit, Biko Biko and Agoi Ekpo. See table 3 for project disbursement on the basis of communities.

In Etung Local Government area, we have the presence of FADAMA projects for food production, food processing and non – agricultural enterprises in communities like Deh Ejoe Anoh, Offa Obre, Onor Mfamg, Mkpot Otura Ngum and Ayuk Abha. For Crop farmers, only a total of 7869.00, livestock, got 8,060,000, Agro processing (Cassava, rice cocoa etc.) got N7, 500, 00; Agro foresting, N1, 500,000 and marketing (cold room/market/bridge/culvert) got N13,800,000 vulnerable got N2,400,000 totaling N44, 720,000.

In Bekwarra Local Government area, the FADAMA beneficiaries had also engaged themselves in crop farming, fisheries, livestock, agro processing, agro foresting, marketing activities and even provision for vulnerable. For the first one which is crop farming, it look N5,240, 000, fisheries had disbursement of 2,800.000, livestock had N6,448,000; Agro-processing had N11,000,000; Agro forestry took N300, 000; marketing had N 11,150,000; vulnerable engulfed N2,000,00 bringing the ground total to N38,938.000. The location fort his projects include Nyanya, Abuchiche. Ukpah & Gakem.

In conclusion, Fadama programme has contributed significantly to food security in terms of food availability, affordability, accessibility and culturally acceptable food in Cross River State. Also, Fadama programme has provided gainful employment and stem rural-urban migration. The programme promote major shift from the current subsistence nature of agriculture to modernized agricultural production, storage, processing and marketing. Through, Fadama programme our peasant farmers via cooperative society have benefited financially from the Government and this has help to reduced rural poverty in Nigeria.

3.3. Challenges of the implementation of fadama programmes in Cross River State

However, these beneficiaries within the three senatorial districts of cross River State are not without some challenges ranging from diseases, physical insecurity, tribal wars, (herdsmen attacks, local thieves etc. poor storage facilities, poor technical base, poor funding methods, process and delay involve in disbursement, bureaucracy in the process of membership registration,(international passport, resident issues etc.) Government regulations and over taxation, disease such climate changes pest, rodent among others. Furthermore, the Executive Governor of Cross River State, His Excellency Senator (Professor) Ben Ayade fail to pay the state counterpart fund for the effective implementation of FADAMA III progamme and this has affected the effective execution of the programme in the state. Now, most of the coordinators at various senatorial districts or zones are hardly seen in their offices due to the lack of fund to meet the day-to-day activities of the programme.

Finally, Fadama III programme in Cross River State was not adequately monitored and evaluated as most of their programs activities were rather evaluated in the state office of the programme not in the field of operation. Also, through Fadama programme it has contributed to increase food security in terms of food availability and acceptable culturally but majority of the people in Cross River State cannot access or afford available food supply to the markets.

CHAPTER FOUR

RESEARCH METHODOLOGY

4.1 Research design

A research design is a plan or blueprint on how a research proceeds. According to Ndiyo (2005), the choice of a research design that will be suitable for a study is determined by many factors among which are the type of research, research hypotheses, scope of research and the sensitive nature of the research.

This study is basically a survey research. Hence, the survey inferential research design has been adopted for the study. This permits the researcher to extract information from a targeted population through the use of questionnaire, observations or interview, and subjecting the data that is generated to statistical analysis for the purpose of drawing conclusions. Survey design is considered appropriate for the study because it is focused on the ideas, facts, opinion, perceptions and views of the people who have the wealth of experience on issues under investigation. Also, it is more economical, in terms of cost and time effective. The design permits the drawing of inferential conclusion on the population based on sample evidence.

In line with the above explanation, the use of survey method was necessitated by the fact that the study was a case study analysis where data were sought from the respondent through the use of questionnaire instrument to evaluate the impact of FADAMA programme as an agricultural policy on food security and rural poverty reduction in Cross River State.

4.2 Area of the study

The study areas covers the Bekwarra local government area in the northern senatorial district or zone in Cross River State, the Yakkur local government area in the central senatorial district of the state as well as Akpabuyo local government representing

the southern senatorial district of Cross River State. Also, Ministry of Agricultures especially the FADAMA office in Cross River State.

4.3 Population of the study

The term "population" has been defined by Odo (1992) as the entire number of people, objectives, events and things that all have one or more characteristics of interest to a study". The population of this study is 695,622 derived from the three (3) Senatorial District (Zone) of Cross River State. Also, the population is drawn from the ministry of Agriculture both at Federal, State and Local government levels as well as FADAMA offices and programme beneficiaries in the affected areas.

4.4 Sampling technique

In this study, the stratified random and purposive sampling technique was adopted for the study. The technique allows the researcher draw respondents based on three strata according to the three Senatorial Districts (Zone) of Cross River State, representing Northern, Central and Southern Senatorial Districts. On this basis, one Local government from each Senatorial District will form a strata. That is, one Local Government in Northern Senatorial District was selected to form strata (A) one Local Government area in Central Senatorial was selected to form strata. (B), while strata (C) was made up of one Local government area from Southern Senatorial District of the State. These Local Government Areas were randomly selected across the three Senatorial Districts by the researchers. The researcher thus adopted the purposive sampling technique to select the respondents for the study. Purposive sampling technique is used when the researcher uses his judgment to select a group of respondents based on the defined characteristics of the population. Thus, five hundred respondents were purposively selected from each senatorial district.

4.5 Sample size

This study adopted a non-probability sampling technique to determine the sample size for this study. This was done through equal allocation 500 targeted respondents to each Local Government Area that were selected for this study. Thus, a total of one thousand five hundred respondents were used for the study.

4.6 Methods of data collection

The researcher made use of two methods of data in accomplishing this study namely: Primary and Secondary Data.

The primary sources of data used for the analysis of the study are those collected from the respondents through the designed questionnaire and interview. The questionnaires were administered by the researcher, while oral interview was conducted on some senior staff in FADAMA Offices in the Ministry of Agriculture both at the State and Local Government levels as well as the beneficiaries of the FADAMA programme. This was done to elicit further information from them on issue under investigation.

4.7 Secondary sources of data

The secondary data for this study were collected from already written books both published and unpublished that were found to be relevant for this study. These include: textbooks, journals, magazines, government documents, internet, conference materials, seminar papers, and pasts research work by students and research institution.

4.8 Methods of Data Analysis

The statistical computations that will be used by the researcher include the simple percentage analysis, descriptive analysis and t-test of one sample mean (also known as population t-test) was employed to test the hypotheses. The t-test of one sample mean (also known as population t-test) is used to test the hypotheses has only one variable.

Analysis of relevant data was done with the use of Statistical Package for Social Sciences (SPSS, Version 23.0)

4.9 Reliability Test

Zeller and Carmines (1979) define reliability as "the degree to which a measuring instrument provides similar outcomes when it is repeated". Both the preliminary test and the main research results will be similar especially in the pattern of response from respondents to fundamental questions relating to employee job satisfaction. Cronbach alpha was used to test the reliability. The reliability coefficient ranges from 0.72 to 0.83 which high enough.

CHAPTER FIVE

PRESENTATION OF RESULT AND DISCUSSION OF FINDINGS

Introduction

This chapter attempt to test the validity or otherwise of the stated hypothesis that guide the study. In this chapter, we shall start our analysis by analyzing the frequency of the demographic variables. We shall also examine the mean response of respondents across the statements of the questionnaire and reliability test conducted.

The spread of respondents across the three selected local government under study shows the 575 respondents representing 38.33 percent were from Akpabuyo Local Government in the Southern Senatorial District of Cross River State, 459 respondents representing 30.61 percent were from Yakkur Local Government in Cross River Central Senatorial District and 466 respondents representing 31.06 percent were from Bekwarra Local Government in Northern Senatorial District of Cross River State. The distribution table indicate a fairly and normal distribution across the three selected local government.

Table 5.2 indicate the gender statistics of respondents. The distribution of gender indicates 53.26 percent males and 46.74 percent females. As indicated in the above table, shows that the number of participants who responded to our survey were more of males than females. The data is presented in Fig I

Table 5.1

Spread of Respondents Across Selected Local Government

LGA	**Frequency**	**Percent**
Akpabuyo	500	38.33
Yakkur	459	30.61
Bekwarra	466	31.06
Total	1500	100

Table 5.2

Gender of the Respondents

	Frequency	Percent	Valid Percent	Cumulative Percent
Male	799	53.26	53.26	53.26
Female	701	46.74	46.74	100
Total	1500	100	100	

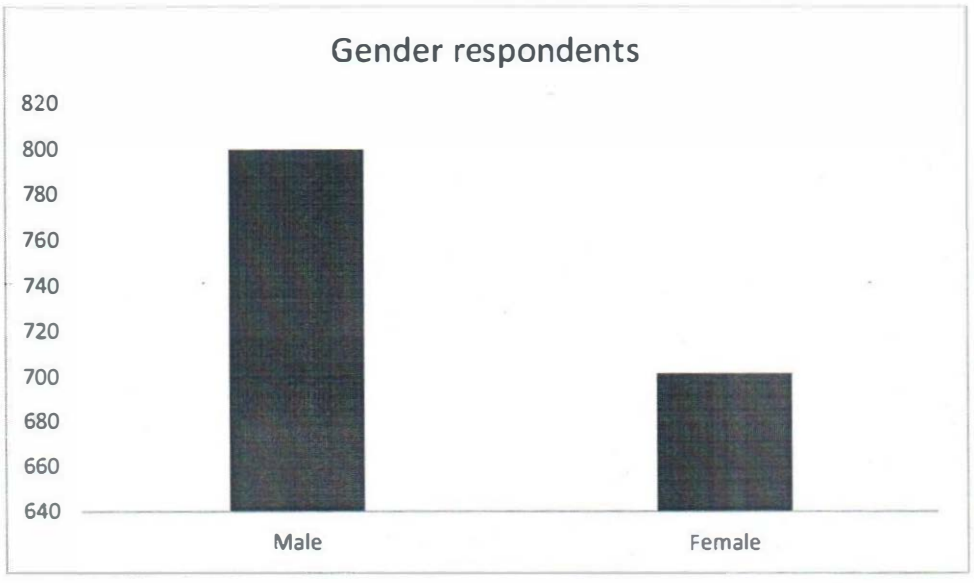

Fig 1. Bar chart analysis of respondents by gender

Table 5.3

Age of Respondent

	Frequency	Percent	Valid Percent	Cumulative Percent
18-30yrs	590	39.33	39.34	39.34
31-40yrs	622	41.46	41.46	80.8
41-50yrs	134	8.93	8.93	89.73
Above 51yrs	154	10.27	4.97	100
Total	1500s	100	100	

Table 5.3 depict the distribution age of respondents. The largest respondents are between the age group 31-40years. Specifically, the age distribution shows that 590 respondents representing 39.34 percent were within the age group of 18-30years, 622 respondents representing 41.64 percent were within 41-50years and134 respondents representing 8.93 percent were within 41-50yrs and 10.27 percent representing 50-above years . the result is further presented in Fig 2. With respect to marital status, 530 of total respondents representing 35.33 percent are yet to be married while 970 respondents representing 64.67 percent are married. The result os further presented in Fig 3 . Educational qualification of respondents shows that 426 respondents representing 28.40 percent had primary education as the highest educational qualification, 438 respondents representing 29.20 percent had secondary education as the highest qualification, 440 respondents representing 29.33 percent had post-secondary education and 196 respondents representing 13.07 percent had university/tertiary education.

From the above table, the frequency analysis shows that 913 of total respondents which account for 60.86 percent were rural farmers, 283 respondents accounting for 18.87 percent were staff of Cross River State Ministry of Agriculture and/or FADAMA, 151 respondents accounting for 10.07 percent belong to a political party and claimed to be a politician and 153 respondents accounting for 10.20 percent were civil or public servants. The result is further presented in Fig 4

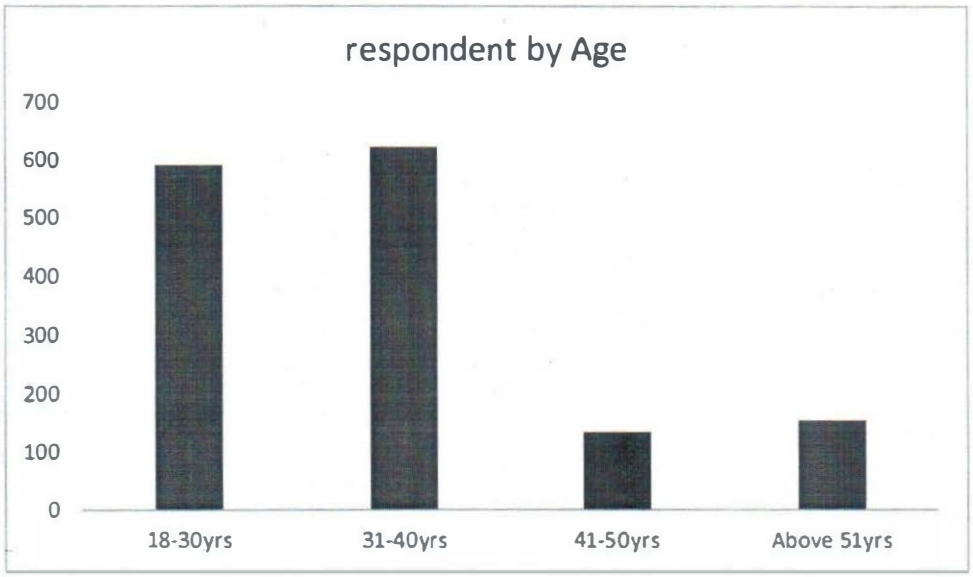

Fig 2. Bar graph of the respondents by age

Table 5.4

Respondents Marital Status

	Frequency	Percent	Valid Percent	Cumulative Percent
Single	530	35.33	35.33	35.33
Married	970	64.67	64.67	100
Total	1500	100	100	

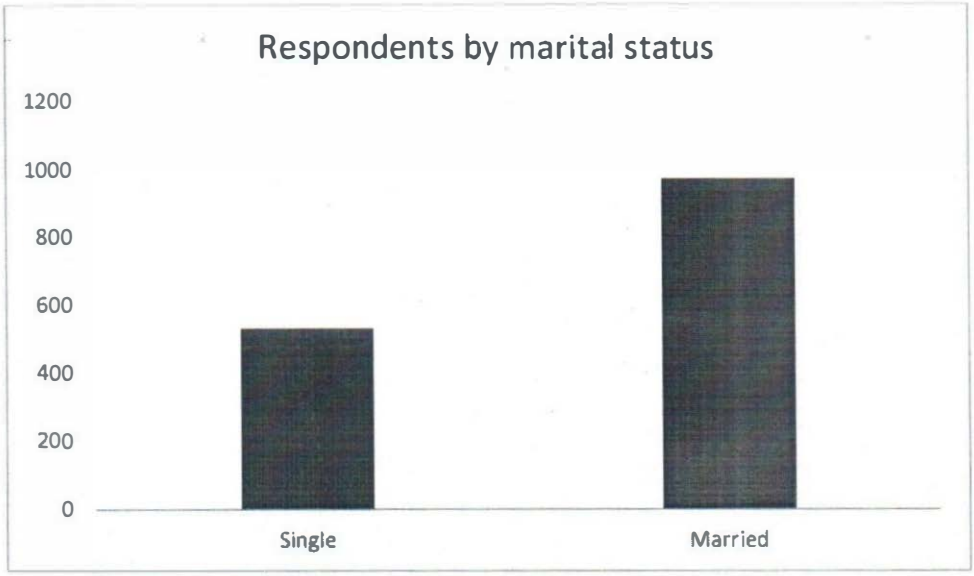

Fig 3. Bar chart analysis of respondents by marital status

Table 5.5

Educational Qualification

	Frequency	Percent	Valid Percent	Cumulative Percent
Primary	426	28.40	28.40	28.40
Secondary	438	29.20	29.20	57.60
Post-Secondary	440	29.33	29.33	86.93
Tertiary Education	196	13.07	13.07	100
Total	1500	100	100	

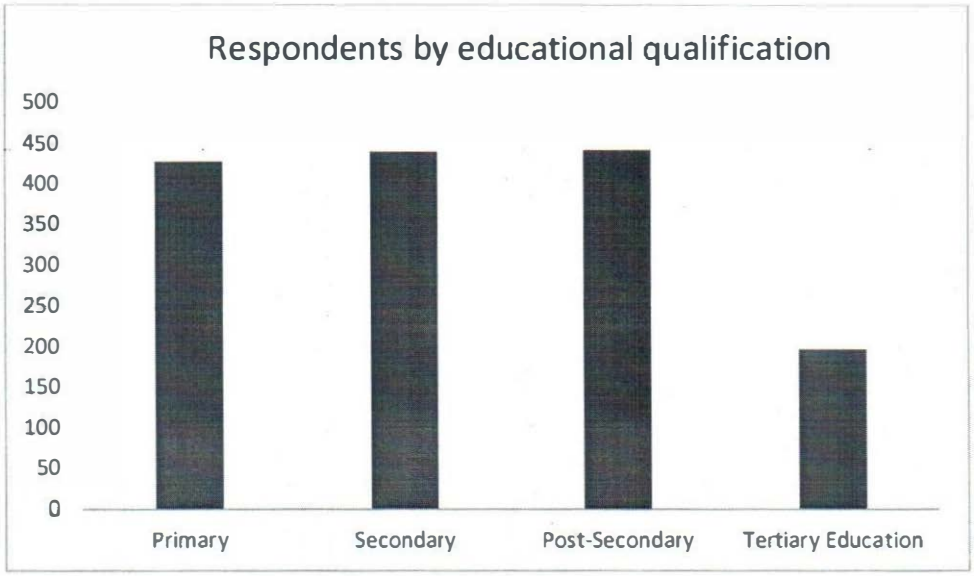

Fig . 3 Bar graph analysis of respondents by educational qualification

Table 5.6

Occupation/Organization

	Frequency	Percent	Valid Percent	Cumulative Percent
Rural Farmer	913	60.86	60.86	60.86
Ministry of Agric./FADAMA Office	283	18.87	18.87	79.73
Politician	151	10.07	10.56	90.29
Civil/Public Servant	153	10.2	10.20	100
Total	1500	100	100	

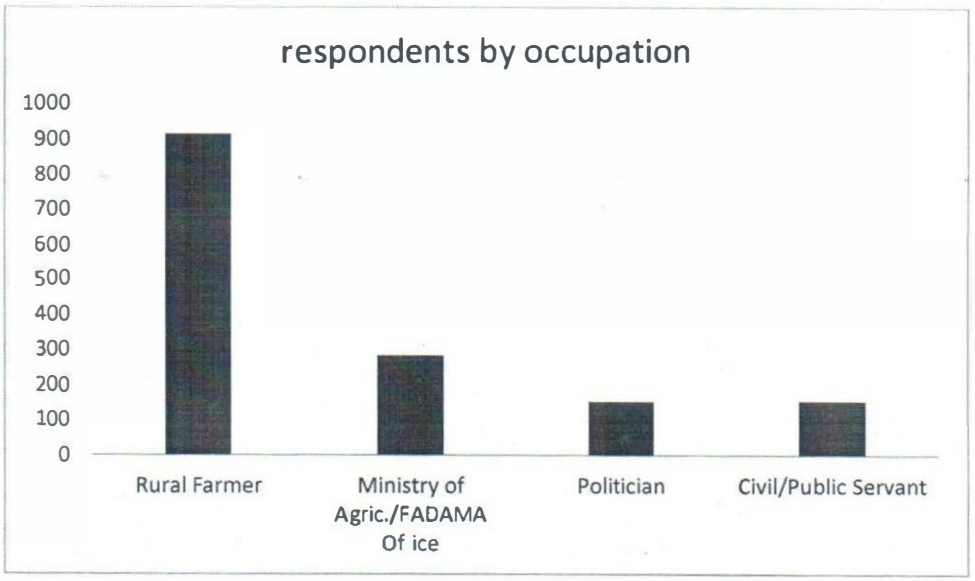

Fig 4. Bar graph analysis of respondents by occupation

5.2 Presentation of results

In this section each hypothesis is re-stated, and the result of data analysis carried out to test it is presented. Each hypothesis of the study was tested at .05 level of significance.

5.2.1 Hypothesis one

The contribution of FADAMA programme to availability of food supply in Cross River State is not significantly high. There is only one variable in this hypothesis, which is the contribution of FADAMA programme to availability (sufficient) of food supply in Cross River State. Test statistics: t-test of one sample mean (also known as population t-test) was employed to test this hypothesis. This involves comparing the mean obtained from the study sample with a hypothesized or reference mean. This reference mean score was obtained by multiplying the average of the scores assigned to the four response categories for each of the items on the questionnaire by the number of items used to measure the contribution of FADAMA programme to availability of food supply in Cross River State (which was 9). Thus, the Reference mean score = (4+3+2+1) X 9 /4=22.5

Testing hypothesis 1 involved comparing the sample mean on the contribution of FADAMA programme to availability of food supply in Cross River State with the reference mean score of 22.5. The statistical technique deployed to do this comparison was the on sample t-test of one sample mean (also known as population t-test). The results of the analyses are presented in Table 4.7.

TABLE 5.7

Population t-test analysis of the contribution of FADAMA programme to availability of food supply in Cross River State is significantly high (N=1500)

Variables	$\bar{X}$	SD	df	t-value	p-val
Sample mean	35.09	5.89			
			1499	70.07*	.000
Hypothesized mean	22.5	0.00			

* Significant at .05 level, critical t = 1.96, df = 1498.

The results of analysis presented in Table 5.7 have shown the mean and standard deviation of the sample of the contribution of FADAMA programme to availability (sufficient) of food supply in Cross River State as focus in this study. The comparisons of the sample mean with the reference mean score of 22.5 yielded t-values of 70.07. The calculated absolute t-values are each higher than the critical t-value of 1.96 at .05 level of significant with 1499 degrees of freedom. With this result, the null hypothesis is rejected. This implies that the contribution of FADAMA programme to availability (sufficient) of food supply in Cross River State is significantly high.

5.2.2 Hypothesis two

The contribution of FADAMA programme to accessible and affordable food distribution in Cross River State is not significantly high. There is only one variable in this hypothesis, which is the contribution of FADAMA programme to accessible and affordable food distribution in Cross River State. Test statistics: t-test of one sample mean (also known as population t-test) was employed to test this hypothesis. This involves comparing the mean obtained from the study sample with a hypothesized or reference mean. This reference mean score was obtained by multiplying the average of the scores assigned to the four response categories of the items on the questionnaire by the number of items used to measure the contribution of FADAMA programme to accessible and affordable food distribution in Cross River State (which was 8).

Thus, the Reference mean score = (4+3+2+1) X 8/ 4= 20.00

Testing hypothesis 2 involved comparing the sample mean on the contribution of FADAMA programme to accessible and affordable food distribution in Cross River State with the reference mean score of 20.00. The statistical technique deployed to do this comparison was the t-test of one sample mean (also known as population t-test). The results of the analyses are presented in Table 5.8

TABLE 5.8

Population t-test analysis of whether assessment of the contribution of FADAMA programme to accessible and affordable food distribution in Cross River State is significantly high (N=1500)

Variables	$\bar{X}$	SD	df	t-value	p-val
Sample mean	30.76	4.89			
			1499	55.46*	.000
Hypothesized mean	20.00	0.00			

* Significant at .05 level, critical t = 1.96, df = 1499

The results of analysis presented in Table 5.8 have shown the mean and standard deviation of the sample on the contribution of FADAMA programme to accessible and affordable food distribution in Cross River State at focus in this study. The comparison of the sample mean with the reference mean score of 20.00 yielded t-value of 55.46. The calculated absolute t-value is higher than the critical t-value of 1.96 at .05 level of significant with 1499 degrees of freedom. With these results, the null hypothesis is rejected. This implies that the contribution of FADAMA programme to accessible and affordable food distribution in Cross River State is significantly high.

5.2.3 Hypothesis three

The contribution of FADAMA programme to acceptable (culturally acceptable and nutritionally adequate) food production in Cross River State is not significantly high. There is only one variable in this hypothesis, which is the contribution of FADAMA programme to acceptable (culturally acceptable and nutritionally adequate) food production in Cross River State.

Test statistics: t-test of one sample mean (also known as population t-test) was employed to test this hypothesis. This involves comparing the mean obtained from the study sample with a hypothesized or reference mean. This reference mean score was obtained by multiplying the average of the scores assigned to the four response categories for each of the items on the questionnaire by the number of items used to measure The contribution of FADAMA programme to acceptable (culturally acceptable and nutritionally adequate) food production in Cross River State (which was 9).

Thus, the Reference mean score = (4+3+2+1) X 9/ 4 =22.5

Testing hypothesis 3 involved comparing the sample mean on the The contribution of FADAMA programme to acceptable (culturally acceptable and nutritionally adequate) food production in Cross River State with the reference mean

score of 22.5. The statistical technique employed to do this comparison was the t-test of one sample mean (also known as population t-test). The result of the analysis is presented in Table 5.9.

The results of analysis presented in Table 5.9 have shown the mean and standard deviation of the sample on the contribution of FADAMA programme to acceptable (culturally acceptable and nutritionally adequate) food production in Cross River State at focus in this study. The comparison of the sample means with the reference mean score of 22.5 yielded t-values of 62.29. The calculated absolute t-value is higher than the critical t-value of 1.96 at .05 level of significant with 482 degrees of freedom. With these results, the null hypothesis is rejected. This implies that the contribution of FADAMA programme to acceptable (culturally acceptable and nutritionally adequate) food production in Cross River State is significantly high.

5.2.4 Hypothesis four

The contribution of FADAMA programme to ecologically sustainable (appropriateness) food production in Cross River State is not significantly high. There is only one variable in this hypothesis, which is the contribution of FADAMA programme to ecologically sustainable (appropriateness) food production in Cross River State.

The results of analysis presented in Table 5.10 have shown the mean and standard deviation of the sample on the contribution of FADAMA programme to ecologically sustainable (appropriateness) food production in Cross River State at focus in this study. The comparison of the sample means with the reference mean score of 20.00 yielded t-values of 10.00. The calculated absolute t-value is higher than the critical t-value of 1.96 at .05 level of significant with 1499 degrees of freedom. With this result, the null hypothesis is rejected. This implies that the contribution of FADAMA programme to

ecologically sustainable (appropriateness) food production in Cross River State is significantly high.

TABLE 5.9

Population t-test analysis of whether the contribution of FADAMA programme to acceptable (culturally acceptable and nutritionally adequate) food production in Cross River State is significantly high (N=1500)

Variables	$\bar{X}$	SD	df	t-value	p-val
Sample mean	31.22	3.02			
			1499	62.29*	.000
Hypothesized mean	22.5	0.00			

* Significant at .05 level, critical t = 1.96, df = 1499

Test statistics: t-test of one sample mean (also known as population t-test) was employed to test this hypothesis. This involves comparing the mean obtained from the study sample with a hypothesized or reference mean. This reference mean score was obtained by multiplying the average of the scores assigned to the four response categories for the items on the questionnaire by the number of items used to measure . The contribution of FADAMA programme to ecologically sustainable (appropriateness) food production in Cross River State (which was 8).

Thus, the Reference mean score = (4+3+2+1) X 8/ 4 =20.00

Testing hypothesis 4 involved comparing the sample mean on the Undergraduates' Utilization of databases for information retrieval with the reference mean score of 20.00. The statistical technique employed to do this comparison was the t-test of one sample mean (also known as population t-test). The result of the analysis is presented in Table 5.10.

TABLE 5.10

Population t-test analysis of whether the contribution of FAD AMA programme to ecologically sustainable (appropriateness) food production in Cross River State is significantly high (N=1500)

Variables	$\bar{X}$	SD	Df	t-value	p-val
Sample mean	29.00	2.07			
			1499	10.00*	.000
Hypothesized mean	20.00	0.00			

* Significant at .05 level, critical t = 1.96, df = 1499

5.2.5 Hypothesis five

The contribution of FADAMA programme to sufficiency of food supply in Cross River State is not significantly high. There is only one variable in this hypothesis, which is the contribution of FADAMA programme to sufficiency of food supply in Cross River State. Test statistics: t-test of one sample mean (also known as population t-test) was employed to test this hypothesis. This involves comparing the mean obtained from the study sample with a hypothesized or reference mean. This reference mean score was obtained by multiplying the average of the scores assigned to the four response categories for each of the items on the questionnaire by the number of items used to measure the contribution of FADAMA programme to availability of food supply in Cross River State (which was 9).

Thus, the Reference mean score = (4+3+2+1) X 5 /4=12.5

Testing hypothesis 5 involved comparing the sample mean on the contribution of FADAMA programme to sufficiency of food supply in Cross River State with the reference mean score of 12.5. The statistical technique deployed to do this comparison was the on sample t-test of one sample mean (also known as population t-test). The results of the analyses are presented in Table 4.7.

The results of analysis presented in Table 5.7 have shown the mean and standard deviation of the sample of the contribution of FADAMA programme to sufficient of food supply in Cross River State as focus in this study. The comparisons of the sample mean with the reference mean score of 12.5 yielded t-values of 16.98. The calculated absolute t-values are each higher than the critical t-value of 1.96 at .05 level of significant with 1499 degrees of freedom. With this result, the null hypothesis is rejected. This implies

that the contribution of FADAMA programme to sufficient of food supply in Cross River State is significantly high

TABLE 5.11

Population t-test analysis of the contribution of FADAMA programme to sufficiency of food supply in Cross River State is significantly high (N=1500)

Variables	$\bar{X}$	SD	df	t-value	p-val
Sample mean	20.77	4.87			
			1499	16.98*	.000
Hypothesized mean	12.5	0.00			

* Significant at .05 level, critical t = 1.96, df = 1498.

5.3 Discussion of Findings

Empirical findings from this study shows that provision of funds to farmers through programs such as FADAMA has significant impact on poverty reduction and enhancement of improved standard of living. The study thus shows that there is a positive impact of funds provision at reduction and improvement of lives and living conditions of farmers particularly those residents in the rural areas. Albeit, findings from the conducted survey show that benefits of agricultural programs such as FADAMA have not trickled down to stimulating living conditions of farmers due to inadequate funds and failure of government, particularly states government, to release funds for such programs as encapsulated in the policy document of some of these programs.

Also, empirical findings from the study shows the interconnection and significance of agricultural programs such as FADAMA to ensuring abundance of agricultural produce that enhance food security for humans. However, despite the importance and significance of agricultural programs such as FADAMA, there are growing concerns about the cost of living especially for urban farmers whose incomes are insufficient at meeting basic needs.

Similarly, findings from the study shows that financial commitments and support of government is sine qua non to effective execution of agricultural programs that ensure, enhance and stimulate sufficient food production for the teeming masses. However, the survey carried out revealed lack of funds provision needed to effectively formulate, support, implement, monitor and evaluate agricultural programs, particularly from state governments. Essentially, findings from the study shows that sufficient funds from governments has a positive and significant impact on execution, monitoring, evaluation of agricultural programs and guarantees all-inclusive participation by all stakeholders

resulting in a catalyst growth in food security needed to improve lives and ensure improved living conditions and wellbeing and reduction of poverty.

5.4 Recommendations for further research

Due to the limited scope of this study, the following recommendations for further research may be necessary.

a. This study can be replicated with a larger sample for better generalization.
b. Agricultural sector should be given adequate attention by the government, if food security must be guaranteed.

CHAPTER SIX

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

This chapter discusses the summary and description of findings from the study. It also provides detail conclusions and necessary recommendations.

6.2 Summary of Findings

The main thrust of this study is to evaluate FADAMA programme as an agricultural policy for food security and reduction of rural poverty in Cross River State, Nigeria. The work adopts a primary and secondary data research approach with the primary data acquired through the instrumentality of questionnaire administered on beneficiaries of FADAMA programs as well as some senior staff members of the Ministry of Agriculture both at the state and local government levels who served as our targeted sampling population for the research work

The sample size adopted for the work was 600, with 600 questionnaires distributed and 483 retrieved. Exploratory analysis of our demographic variable was done using simple percentage and frequency analysis. Also, survey response analysis was conducted using frequency tools and measures of central tendency. The method of estimation technique adopted in ascertaining the veracity of our stated hypothesis was the population T-test technique.

Particularly, empirical findings obtained from the study are stated as follows;

i. There is significant impact of FADAMA's financial incentives to farmers on the reduction of rural poverty in Cross River State.

ii. Agricultural programs such as FADAMA significantly affect and boost the achievement of food security.

iii. Effective execution of FADAMA program and other agricultural programs that ensure food security is significantly determined by the level financial commitments of governments.

iv. Effective monitoring and evaluation of FADAMA projects and similar agricultural programs ensures and stimulates the achievement of food security.

v. Proper execution of FADAMA projects and similar agricultural programs is enhanced by an all-inclusive and accommodating involvement of beneficiaries in program formulation and implementation.

6.3 Recommendations

Based on the study's data analysis and empirical findings, we thus recommend that;

i. Government and relevant authorities should through agricultural programs such as FADAMA ensure adequate provision of financial incentives to farmers that is sufficient to boost food production and gearing of rural farmers' incomes in the upward direction that consequently ensures reduction in rural poverty.

ii. Government should ensure holistic and sincere policy execution and implementation of planned and formulated agricultural programs that stimulates and boost food production and consequently ensuring improved food security.

iii. There is need for involvement and participation of all stakeholders, especially the beneficiaries and farmers, in the design, formulation and implementation of agricultural programs that enrich food security.

iv. Adequate monitoring and evaluations are required for agricultural programs and policies with the objective of enhancing the future agricultural programs and policies that guarantees food security.

v. Lastly, government should ensure provision of lands and other agricultural tools that assist farmers in growing of agricultural products in a bid to ensure food security. Also, ensure there is a reform on land and property rights in a bid to achieve and ensure adequate and sufficient food production needed to be ensure food security.

6.4 Conclusion

Agricultural policy in Nigeria has gone through history of changes. Several governments and in conjunction with world's multilateral organizations have over the years formulated different agricultural policies and programs in an effort to ensure creating sufficient food production that create necessary conditions for the achievement and maintenance of a high possible rate of improvement in the living standards and conditions of people. Some of these agricultural development strategy plans requires active and whole government involvement in direct food production and subsequently stimulates agricultural sector of the economy needed to enhance growth and development.

However, findings from the study indicate that government full involvement in the implementation of agricultural programs is inadequate particularly the provision of funds, tools and lands that is essential to achieving food security.

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APPENDIX

RESEARCH QUESTIONNAIRE

Dear Respondent,

The purpose of this questionnaire is to gather information on Agricultural policies and food security in Nigeria, using FADAMA programme in Cross River State as a case study. Kindly tick the option that best suit your opinion.

Your response shall be treated with maximum confidentiality and will be used mainly for research purposes. God bless you for taking part in this study.

Yours sincerely,

Adie, Hilary I.
(Researcher)

Part A: Personal information

1. Sex: Male ( ) Female ( )
2. Age: 18-30 ( ), 31 – 40 ( ), 41-50 ( ), 51 and above ( )
3. Marital status: Single ( ) married ( )
4. Educational qualification: Primary education Post Secondary Education ( ) University Education ( ).
5. Occupation/organization: Rural Farmer ( ), Ministry of Agric/FADAMA office ( ) Politician ( ), Civil/Public servant ( )

Part B: This part is divided into sections:

Read each statement carefully and place a tick (√) to indicate whether you Strongly Agree (SA), Agree (A), Disagree (D), Strongly Disagree (SD)

Section 1:

S/N	ITEM	SA	A	D	SD
	Contribution of FADAMA programme to availability of food supply in Cross River State (CRS)				

1	There is availability of sufficient food supply in Cross River State.				
2.	If the food is sufficient, is it affordable by all people in Cross River State.				
3.	There is availability of food all through the year in Cross River State.				
4.	Nigeria is one of the largest food importers in sub-Sahara Africa.				
5.	In Cross River State food is not sufficient enough for the people.				
6.	There is provision for irrigational system for farmers in Cross River State.				
7.	Nigeria is far from being completely food secured.				
8.	Availability of food alone does not means attainment of food security in Nigeria.				
9	In Cross River State food is expensive because it's insufficient.				

Section 2:

S/N	ITEM	SA	A	D	SD
	Contribution of FADAMA programme to accessibility and affordable food distribution in Cross River State				
1	Access to food is the right to food by all people regardless of status				
2.	Low income households have no access to food.				
3.	People have access to the basic food that they need in Cross River State				
4.	In Cross River State people have access to sufficient, safe and nutritious food to meet their dietary needs.				
5.	In Cross River State people do not have adequate physical, social and economic access to food.				
6	In Cross River State, people lack secure access to sufficient, safe and nutritious food.				
7.	In Cross River State people have lack of resources to produce or acquire food.				
8	The main problem of food security is lack of access to food.				

Section 3:

S/N	ITEM	SA	A	D	SD
	Contribution of FADAMA programme acceptability (culturally acceptableand nutritionally adequate) food production in Cross River State				
1	Food acceptability is an essential component of food security in Nigeria				
2.	In Cross River State, no all the food are socially and culturally acceptable by the people.				
3.	In Cross River State, food si available but is it acceptable by all.				

4.	People accept more of staple food like yam, rice, beans and garri than other food items.				
5.	In Cross River State everyone has standard of living for himself and their families.				
6.	In Cross River State there is enough food for an active and healthy life.				
7.	In Cross River State, food intake is continuously insufficient.				
8	In Cross River State, people lack sufficient, safe and nutritious food.				
9.	Majority of Nigerians suffers from unbalanced diets.				

Section 4:

S/N	ITEM	SA	A	D	SD
	Contribution of FADAMA programme to ecologically sustainable (appropriateness) food production in Cross River State				
1	To reduce food insecurity, food production, supply and procurement have to be sustainable.				
2.	When food security is dependable then it becomes sustainable.				
3.	There is fluctuation in food production and its prices in Cross River State.				
4.	Drought, drought, floods and poor irrigation affects food sustainability.				
5.	In Cross River State, there is provision of appropriate channels for food marketing and distribution.				
6.	Contribution of FADAMA programme to food security can only be sustained if government continue to pay their counterpart funds.				
7.	Cross River State has been paying their counterpart funds for food sustainability.				
8	Environmental factors like floods, droughts, lack of irrigational system and even wars affects food sustainability in Cross River State.				

SSPS OUTPUT

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
sufficent	483	25.00	36.00	33.0062	3.28488
accessible	483	21.00	32.00	27.2050	2.95776
cultural	483	25.00	36.00	31.2153	3.01848
ecological	483	26.00	32.00	29.0000	2.06532
Valid N (listwise)	483				

T-Test

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Adequacy	483	33.0062	3.28488	.14947
accessible	483	27.2050	2.95776	.13458
cultural	483	31.2153	3.01848	.13735
ecological	483	29.0000	2.06532	.09398
sufficient				

One-Sample Test

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
sufficent	220.826	1499	.000	33.00621	32.7125	33.2999
accessible	202.143	1499	.000	27.20497	26.9405	27.4694
cultural	227.276	1499	.000	31.21532	30.9455	31.4852
ecological	308.591	1499	.000	29.00000	28.8153	29.1847
sufficient	221.982	1499	.000	30.98111	25.0986	31.0982