EFFECT OF AGRICULTURAL OUTPUT IN ECONOMIC PERFORMANCE ON UNEMPLOYMENT AND INFLATION IN NIGERIA (1981 - 2019)

BY

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TO

DEPARTMENT OF ECONOMICS
FACULTY OF SOCIAL SCIENCES
UNIVERSITY OF BENIN
BENIN CITY.

AUGUST, 2021.

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BEING A PROJECT SUBMITTED TO THE DEPARTMENT OF ECONOMICS AND STATISTICS, FACULTY OF SOCIAL SCIENCES, UNIVERSITY OF BENIN, BENIN CITY, NIGERIA. IN PARTIAL FUFILMENT OF THE REQUIREMENT FOR THE AWARD OF BACHELOR OF SCIENCE (B.SC) DEGREE IN MATHEMATICS AND ECONOMICS

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CERTIFICATION

This is to certify that the project titled **EFFECT OF AGRICULTURAL OUTPUT IN ECONOMIC PERFORMANCE ON UNEMPLOYMENT AND INFLATION IN NIGERIA (1981 - 2019)** was carried out by **CHRISTOPHER EGBON** of the department of Mathematics with matriculation number **PSC1607572.** It has been read and recommended for acceptance in partial fulfilment of the requirement for the award of Bachelor of Science (B.Sc) Degree in Mathematics and Economics.

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DEDICATION

This research commission is solely dedicated to GOD ALMIGHTY who has been my backbone; He is the spring from which the inspiration and wisdom expended in this work is derived, and to JESUS CHRIST who has been my help in times of trouble.

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TABLE OF CONTENTS

ABSTRACT

Unemployment and inflation are major forerunners of underdevelopment in developing countries. Agriculture was known to be one of the major contributors to national development. The economic burden of unemployment and inflation on a country necessitates this study. The objectives of the study were to examine the dimension and linkage between agricultural growth and inflation and also unemployment and to evaluate the effect of inflation and unemployment on agricultural production in Nigeria. Time series data were employed for the study from the year 1981-2019 (38yrs).the research compiled data from the Central Bank of Nigeria(CBN)statistical bulletin, Nigeria Bureau of Statistics(NBS),International Financial Statistics and data files,CIA World Factbook and International Monetary Fund's.(IMF).the project utilized the Ordinary Least Square(OLS) model were the analytical tool used, it shows that agricultural output, unemployment and inflation are related. Some of the recommendations given are that agriculture in Nigeria should be given a top priority and that government bodies should

encourage the poor farmers by absorbing the excess inventory of agricultural output in order to distribute it to the total populace and thus increase in agricultural production will create more employment, reduces inflation and as a result alleviate poverty.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Nigeria, though depends largely on the oil industry, the country is still predominantly agrarian. At independence, agriculture used to be the main stay of the Nigeria economy until 1971 when she shifted her productive base from agriculture to crude oil and ever since then, Nigeria's economy has been vulnerable to external shocks as a result of fluctuations in international price of crude oil. Agriculture remains the major source of food for most of the Nigerian population, providing the means of livelihood for over 70% of the population and a major source of raw materials for the agro-allied industries (Okumadewa 1997, World Bank 1998). The percentage contribution of agriculture to Gross Domestic Product (GDP) has declined tremendously from 55% in 1965 to 17% in 2004, thus leading to decline in its contribution to national development (Okuneye, 2002, World Bank Indicator 2006, Encyclopaedia of the Nation 2006).Agricultural production in Nigeria is characterized by multitudes of small-scale farmers scattered over wide expanse of land area, with small holdings ranging from 0.05-3.0 hectares, rudimentary farming system, low capitalization, low yield per hectare, poor access to modern inputs, poor infrastructure, land/environmental degradation, inadequate research, inadequate extension services and poor response to technology adoption

strategies with poor returns on investment (Olayemi 1994, Manyong *et al*, 2005). These small-scale farmers who provide about 85% of total agricultural produce (National Bureau of Statistics website) are resource-poor and they also depend largely on agricultural labour market. The farmers usually have little or no form of savings, poor storage facilities and the farming practices adopted are highly labour intensive. The socio-economic and production characteristics of the farmers in conjunction with unfocused government policies and poor infrastructural base, all interact in affecting the production in the agricultural sector, thus resulting in low production, high prices of food items underdevelopment and concomitant poverty in the country (Okuneye, 2002).

Nigerian Government has made a number of attempts to redirect its focus on agriculture resulting in the implementation of several strategies including National Accelerated Food Production Programme (1972), Agricultural Development Projects (1974), Guaranteed Minimum Price Scheme (1975), Operation Feed the Nation (1976), Agricultural Credit Guarantee Scheme (1977), River Basin Development Authorities (1979) and Structural Adjusted Programme (1985). These were large scale agricultural projects specializing in the production of grains, livestock, dairies and animal feeds. The Nigerian Agricultural and Co-operative Bank (NACB) was also established in 1973 as part of government's effort to inject the oil wealth into agricultural sector through the provision of credit facilities to support agriculture and agro-allied businesses (Olagunju, 2000). In spite of all these efforts, as at mid 70's, Nigeria became a net food importer. In 1982 alone, Nigeria imported as much as 153,000 metric tons of palm oil at the cost of 92

million USD and 55,000 metric tons of cotton valued at 92 million USD (Alkali, 2007). Since the 1990's and until the recent ban on rice importation, Nigeria has been spending an average of 60 million USD on the importation of rice annually. Between 1995 and 1998, the government further embarked on the reformation of the lending policies of the Agricultural Credit Guarantee Scheme (ACGS) for easier access to agricultural credit schemes. The government also established the Calabar Export Processing Zone (EPZ) and initiated the Enugu, Kaduna, Jos and Lagos EPZ's with each specializing in specific food and cash crops. In fact the National Rolling Plan for 1996-1998 assumed that by year 2000, Nigeria would have been able to feed its population, develop the capacity to process agricultural raw materials both for local industries, for export and thus significantly increase the contributions of the agricultural sector to the GDP (Lawal, 1997). These lofty objectives have rather turned to be a mirage (Olukoya, 2007). The current status of agricultural production has not met the need of the ever increasing population couple with the increase in cost of production by inflating prices (Braun, 2008, Manyong *et al*, 2005) and as such, unemployment and inflation still remain a great problem to the Nigeria economy.

Unemployment and inflation are widely seen as a great problem to global economic development. Both developed and developing countries, in recent years, have witnessed different degrees of these problems, but the developing countries witnesses the most shock. In Nigeria, unemployment rate is about 6.4% (World Bank 2012), the unemployment rate in Nigeria rose to 33.3% in the last quarter of 2020 from 27% in the

second quarter of 2020 (National Bureau of Statistics website) and unemployment has been identified as one of the major causes of poverty (Obadan 1997; FAO 2006 and Ayinde 2008, Ayinde et. al. 2015). Ogwumike (1998) and Adekoya (2014) observed that productive employment poses a major way out of poverty. In most developing countries like Nigeria, governments and policy makers are finding it increasingly difficult to deal successfully with the problem of unemployment which has risen continuously, culminating in reduction of household income and living standards and concomitant rise in the level and incidence of poverty (Kareem 2006). Food price has been rising in the country since food expenditure constitutes a larger share in the basket of consumer prices. On the global level, food inflation accounted for 44% of global inflation in 2007 up from 27% in 2006 (Durmus, 2008). On the supply side, the amount of resources allocated for agricultural production has been dwindling for a while due to rapid urbanization and industrialization. A shift in labour force from agricultural to non-agricultural sectors has been experienced in many developing countries- including Nigeria resulting in inflation. Agriculture is the foundation and bedrock upon which the development of stable human community has depended on throughout the whole universe such as rural and urban communities. It is concerned with the husbandry of crops and animals for food and other purpose. The study of the history of economics provides us with ample evidence that agricultural revolution is a fundamental pre-condition for economic development. Through its spheres of activities at both the macro and micro levels, the agricultural

sector is strategically positioned to have a high multiplier and linkage effect on any nation's quest for socio-economic and industrial development.

The growth of the agricultural sector in Nigeria was not smooth. Anyanwu (1967) held that during the colonial period 1861 to 1960, attention was given to agricultural research and extension services. Among the activities that were done was the establishment of a research station in Lagos by Sir Claude Mc.Donald in 1893: Landmark of 10.4 km was acquired by the British Cotton Growing Association (BCGA) in 1899 for experimental purpose strictly for cotton and was named "Moore Plantation" in Ibadan. In 1912, the Department of agriculture was established in each of the then southern and Northern Nigeria, but the activities of the department were virtually suspended between 1912 and 1921 as a result of the First World War and its aftermath. The period between 1929 and 1945 was a difficult one for the agricultural sector of Nigeria. This was the period of great depression when the world prices on commodities fluctuated. This affected the agricultural sector negatively because the volume of agricultural product increased but the value did not increase proportionally.

The period 1929 - 1945 marked the period of expert boom, because countries were just recovering from the Second World War and these countries needed to develop. They depended on primary production for the beginning stage of industrialization. They needed to revitalize their industrial sector by demanding primary goods. Prices of primary products rose higher again because there were speculations that there would be a third world war due to the outbreak of the Korean War. However, after this period, there

came another period of price instability. This made the reliance on agriculture and its products to fall, leading to the establishment of a market board. This board bought these products from the local farmers and sold them overseas.

In spite of all the period, Nigeria made great revenue from agriculture. In the pre-independence era, the agricultural sector contributed most to the GDP of Nigeria. Helleiner (1966) said that in 1929, export production amounted to 57% of Nigeria's revenue of which agriculture contributed about 80% of the export. On attainment of political independence in 1960, the trend was still very much the same, the Nigeria economy could reasonably be described as an agricultural economy, because agriculture served as the engine of growth of the overall economy (Ogen, 2003). Ekiran et al. (2014) examined the relationship between agricultural export and economic growth in Nigeria: A multivariate Johansen co-integration analysis, within the period of 1980 to 2012. Ekiran et al. (2014) approach was adopted in the spirit of Hwa (1988) stationarity test was conducted using Phillips-Peron unit root test, Johansen cointegration and Error Correction Method was use to estimate long-run and short run relationship among agricultural export and economic growth. The findings from this research revealed that agricultural export and agricultural output has long run relationship and seen as a key driver of economic growth and development of Nigerian economy. It was advocated that government should pay attention to agricultural export, as it serves as a stimulant for the much canvass economic expansion and development in Nigeria.

1.2 Statement of Problem

The literature has reported that in spite of Nigeria's rich agricultural resource endowment, there has been a gradual decline in agriculture's contributions to the nation's economy (Manyong et al., 2005).

According to Alkali (1997) Nigeria was the world's second largest producer of cocoa, largest exporter of palm oil during the period and was also a leading exporter of other major commodities such as cotton, groundnut, rubber and hides and skins. Between 1964 and 1965, agricultural output accounted for 55% of GDP and employed 70% of the adult workforce (Matton, 1981). In 1970, agricultural export crops like cocoa, groundnut, cotton, rubber, palm oil, palm kernel, etc. accounted for an average of between 65% and 75% of Nigerian foreign exchange earnings and provided the most important source of revenue for the federal as well as state government through expert products and sale taxes (Ekund are 1973). Despite the reliance of Nigerian peasant farmers on traditional tools and indigenous farming methods, these farmers produced 705 of Nigerian's exports and 95% of its food needs (Lawal, 1997).

However, the 1967 to 1970 civil war in Nigeria coincided with the oil boom era, which resulted in extensive exploration and exportation of petroleum, replacing strong agricultural sector with an unhealthy dependence on oil. Ever since then, Nigeria has almost neglected the non-oil sectors and showed less concern to the development of the non-oil sectors which has led to increased unemployment, extreme poverty and

insufficiency of basic food items leading to inflation. The agricultural sector contributions now accounts for less than 5% of Nigeria's GDP (Olagbaju and Fashola, 1996). It is against this backdrop that this study is set out.

As noted earlier, the neglect of the agricultural sector and the dependence of Nigeria on a mono-cultural crude oil based economy had not augured well for the well-being of the Nigerian economy. It becomes therefore imperative to study the effect of agricultural output on economic growth in Nigeria specifically on unemployment and inflation.

1.3 Research Questions

This research work therefore is aimed at answering the following questions:

1. Does agricultural output have effect on employment?
2. Does agricultural output have effect on inflation?

1.4 Objectives of the Study

The broad objective of this study is to:

1. To determine the impact of agricultural sector output on employment in Nigeria.
2. To determine the effect of agricultural sector output on inflation in Nigeria

1.5 Statement of Hypotheses

For the purpose of this study, the following hypothesis is tested;

1. H_0; Agricultural output has no impact on employment creation in Nigeria.
2. H_0; Agricultural output has no effect on inflation in Nigeria.

1.6 Significance of the Study

The significance of this study depends on the fact that with improved economy, Nigeria stands to gain in its effects toward development characterized by increased employment generation, stable inflation and appreciation of the Naira currency as a result of increased exportation and reduced importation. This work stands to benefit:

i. Nigeria as a whole: This study will be relevant to the government as it helps the government have a better understanding of the policies that will bring firth ways to increase agricultural output both for the purpose of consumption and exportation which ultimately will bring about an increased favorable balance of payment (BOP) for the nation thereby creating employment and reducing the prices of food.

ii. This study will be advantageous to Nigerians and will help them understand the importance of farming no matter how small the scale of production may be.

iii. This study uses Augmented Dickey Fuller (ADF) to test for unit root, and Ordinary Least Squares method to provide estimate regressions.

1.6 Scope of the study

This study focus on the effect of agriculture on employment and inflation in Nigeria between the periods of 1981 to 2019 and the scope of this study is limited to Nigeria. The use of Nigeria is based on the fact that Nigeria is endowed with a large land mass, population, a good weather and soil.

1.7 Organization of study

This study will be subdivided into five chapters. Chapter one represents the introduction of the study. Chapter two represents the review of relevant literatures to this study. Chapter three represents the methodology used by this study. Chapter four represents the presentation and analysis of the result and Chapter five wraps up this study with the summary of findings, recommendation and conclusion.

CHAPTER TWO

LITERATURE REVIEW

2.1 Conceptual Literature Review

2.1.1 Concept of the Agricultural Sector

Various people have defined Agriculture in different ways but common among these definitions is the fact that it is the production of food, feed, fiber and other goods by the systematic growing and harvesting of plants and animals. Akinboyo (2008) defines Agricture as the science of making use of the land to raise plants and animals. It is the simplification of natures food webs and the rechanneling of energy for human planting and animal consumption. Until the exploitation of oil reserves began in the 1980s, Nigeria's economy was largely dependent on agriculture. Nigeria's wide range of climate variations allows it to produce a variety of food and cash crops. Ikala (2010) has describe that agriculture is the profession of majority of humans. The United Nations Organization (2008) estimated that the world as a whole, over 50% of the world population is engaged in agriculture or dependent of it for a living, this is a general description of the sector. On the other hand, it includes farming, fishing, animal husbandry and forestry.

Development economists have focused on how agriculture can best contribute to overall economic growth and modernization. They laid more emphasis on agriculture in the development of an economy. In their views, the development of an economy depends on the growth of the agricultural sector. The source of national wealth is essentially agriculture. They believe that the fate of the economy is regulated by productivity in

agriculture and its surplus is diffused throughout the system in a network of transactions. The agricultural sector to them is the only genuinely productive sector of the economy and the generator of surplus upon which all depends.

Todaro and Smith (2003), while looking at Lewis theory of development, assume that the underdeveloped economies consist of two sectors. These sectors are the traditional agricultural sector characterized by zero marginal labour productivity and the modern industrial sector. The primary focus of the model is the labour transfer and the growth of output and employment in the modern sector. Todaro and Smith (2003) argued further that, if development is to take place and become self-sustaining, it will have to include the rural area in general and the agricultural sector in particular.

Rostow (1960) as cited in Oji-okoro (2011) argued that in the process of economic development, nations pass through several stages namely: traditional stage, the precondition for take-off, the take off stage, drive to maturity and the high mass consumption stage. Agriculture played crucial roles in the first three stages (Traditional society, pre-conditions for take-off and take-off stages). The agricultural sector has the potential to be the industrial and economic springboard from which a country's development can take off. Indeed, more often than not, agricultural activities are usually concentrated in the less- developed rural areas where there is a critical need for rural transformation, redistribution, poverty alleviation and socio-economic development. (Stewart, 2000 welcome Address "proceeding of the 7th World sugar Farmers Conference Durban).

Tombofa (2004) reported that the state of agriculture is of paramount importance to the development process. He pointed out that agriculture provides the basis for the world's great civilization in the past and the increase in agricultural productivity in England laid the basis for, and sustained the first industrial revolution. The agricultural sector is known to employ over 75 percent of the labour force in developing countries and provide the purchasing power over industrial goods.

Agriculture is known to be an extended age practice in the third world and developing nations. The importance of agricultural development to socio-economic growth and development in many third world countries is keen on their transition to economic prosperity. Agriculture contributes over one quarter of the GDP in the most developing nations of the world, especially in Nigeria. The statistics are much higher in the least developed countries (United Nation, 2007). According to the World Bank development report (2007, 2008), agriculture serves as a haven for source sustenance of life, for over 2.5 billion people in the world. The agricultural sector engages a large number of the world population directly or indirectly in the value chain.

Some of the role agriculture in any country includes;

i. Agriculture is capable of providing employment. One of the key benefits of developing the agriculture sector is that agriculture sector is that agriculture is capable of utilizing labour. Even in the case of mechanization where machines are being introduce as replacements for human labour , given a properly

regulated process , there will still be need for engineers and maintenance crews Besides the obvious employment in field directly affected by agriculture. An instance is the business opportunity that could be available in the retailing subsector where the middlemen would be need to sell farming surpluses. In transportation, there would be need for distribution of agricultural products. The employment possibilities with agricultural development and proper regulation is significant, especially to the economic of less developed countries.

ii. Infrastructural. Development is another role of agriculture can play in the development process of any country. One essential condition for the progress of agriculture is a sustainable environment. Access to water and proper irrigation implements, a viable and functioning transportation system with transportation varieties available, stable and constant electricity to elongate the functioning life of employed machineries and preservative tools like industrial freezers for meat and rice milling machines and such. All of these things also double as infrastructure for public welfare. There will need to be good roads, proper traffic management system affordable transportation, constant electricity, clean water, and so on to enable agricultural progress, which will also have positive effect on economic growth and development.

iii. Agriculture is also a key source of raw materials. Through agriculture a variety of raw materials can be obtained. Leather, wood, rubber, cotton, and

more. Factories, textile, companies, flour mill, oil refineries, lumber mills, and other industries require raw materials that can be gotten from agro based activities to operate.

iv. Industrialization. Before the industrial revolution of England in 1760, their agricultural revolution proceeded it, starting in the 16th century from 1500. Many studies have concluded that the agricultural revolution aided and enabled the industrial revolution. In*dustrializations is the process of developing industries as in a country.it is characterized by a change from a pre-industrial era to an industrial period. The provision of raw materials would naturally encourage industrialization as an increase in the supply of raw materials would cause the prices to lower and become more affordable which would in turn encourage industries making use of those cheaper materials to operate. Industrialization can be said to be the natural and subsequent consequence of agricultural development.*

v. *Agriculture can benefit the economy as a foreign exchange earning sector. Agricultural excesses can be commercialized to meet not just domestic demand of foreign market. It would place the country as a competitor in the international market like cocoa does for Cote D`Ivoire and Ghana, and help earn foreign exchange through international trade.*

The Central Bank Of Nigeria release a bulleting listing contribution sectors of Nigeria's economic growth (2017) and the agricultural sector was listed among the most significant five.

As a result, agriculture's primary role is to provide food and manpower to the expanding industrial economy and thus it leads to creation of employment and decline in the prices of food

2.1.2 Concept of Economic Growth

The leading aim of every developed and developing nations of the world is economic growth and development. Economic growth is one of the general aims of the governments of every nation of the world which is usually depicted by the increase in the value of marketed goods and services produced overtime. It is mainstreaming measured as the percentage increase in the Gross Domestic Product (or Gross National Product) of a country over a period of time usually a year (IMF, 2012).

Professor Simon Kuznets (1971) in his Nobel Memorial lecture defined economic growth as a long-term increase in the capacity to supply increasingly diverse economic goods to its population. The increasing capacity is hinged on advancing technology and the institutional and ideological adjustments that it demands. Kuznets's view of economic growth was cited as having stimulated new insights into the world economic and social structure. He developed the concept of Gross National Product, the total sum of goods

and services produced in a nation by both nationals and non-nationals, which is used to determine the rate of economic growth of a nation (Iyoha, 2004).

The term economic growth is often used interchangeably with the term economic development when analysing economic performance and variations in economic conditions in a country. Although, the two terms are used to describe the process of sustainable economic progress in less developed countries (LDCs), they are not the same strictly speaking (Iyoha, 2004). Professor Charles Kindleberger (1965) of the Massachusetts Institute of Technology, USA has suggested a useful way of differentiating both of the terms. According to Kindleberger, "economic growth means more output and economic development implies both more output and changes in the technical and institutional arrangements by which it is produced". Simply put, economic development goes beyond mere economic growth to include changes in the structure of outputs and in the allocation of inputs by subsectors and various sectors in the overall economy.

Although, it may seem as if the changes in the economy are sudden, there are certain characteristics economists use to forecast impending changes and modern economic growth. The primary characteristics of modern growth are increases in gross domestic product (GDP) and retail sales. The status of these indicators can help shape public policy and in a weak economic period, many of the policies will usually be aimed at increasing the flow and exchange of money. An indicator of growth of the economy is always measured mostly by a change in the gross domestic product. During a period of

modern economic growth, the GDP is used to determine the total market value of everything produced and sold within a calendar year. To determine the change in GDP, the amount of goods produced is compared to consumer, government and investment spending (Kesha, 2013).

To promote economic growth and development, the Nigerian government would do well to aid improved agricultural productivity. There are several ways this can be accomplished;

i. Education: incorporating into the educational sector knowledge about evolved agricultural practices and techniques is one way to ensure productivity increase in the agricultural sector. Education has to be far spread to affect more citizens and ensure that the techniques are well understood and practicable. An improvement in the literacy level of the country would do plenty t improve agricultural productivity.

ii. Fertilizer: A fertilizer is a natural substance or a created chemical compound that is used to revitalize soil and its plant growing process. Constant soil use will naturally cause subsequent loss of fertility which would invariably lead to a lowering of productivity without the farmers' intervention. The government should endeavor to ensure that the required types of fertilizers are available for use at affordable prices and at the requited times. Education about fertilizer is also advised as it reduces the negative effect of fertilizers on the environment as well.

iii. Advance High Yield Varieties Production; High yield are crops that have been cultivated, modified or fertilized, to better production yields. Crops like beans, groundnut, lettuce, cucumbers, tomatoes, etc. are crop with high yields. Cultivating a variety of them is an advice method to ensure an improvement in the agricultural productivity as a whole.

iv. Irrigation: the world economic forum foundthat the average productivity ratio of irrigated farms were 90% higher than those of rain-fed farm nearby. Irrigation is the process of artificially applying measured amounts of water to land as a means of aiding crop productivity. A rain-fed is a farm that depends on rain as the source of water for their plants. In Nigeria where there are three seasons: Rainy season, dry season, and harmattan, the rain-fed practice is very popular though it is hardly as efficient. In south-south states in the country the more tropical states, usually characterized by their rain forest climate the rainy season is usually marked by heavier rainfalls. Annually, the average amount of rainfall in the south-south region of Nigeria is about 236.2 inches and is featured with two high rainfall peaks. The crops would be overwatered during the rainy season, causing problem for crops that do not required that level of water for growth, and there will scarcely be any rain during the dry season though there will be a large amount of dust which would not favors crops that require constant water for growth and yield. Without irrigation, crop productivity is likely to be very unstable and low.

v. Agricultural Mechanization: mechanization is the introduction of machine to activities, processes, or places to replace human or animal labour. It is a very sure way of improving productivity since machine can be encoded in line with set goals and objectives. They can also run on for longer periods. Though they will require expert maintenance or be at risk for having a short functioning life, introducing machines to agriculture is capable of serving phenomenal purposes. However, mechanization of agriculture might temper with the employment opportunities agriculture is supposed to create since the core purpose of mechanization is the replacement of human labour. To counter this, the government should enforce strict policies guiding the agricultural mechanization.

There are many justifications for encouragement agricultural development, one of them is that the farmer produces the most basic goods for continuous human livelihood: they also provide social stability through the structure of immediate societies, they are stable, necessary, yet vulnerable part of the world's economy as well as the economies of various countries, including but not at all limited to Nigeria.

2.1.3 Concept of Inflation

Inflation has various definitions depending on how people see it. It is regarded as a rise in general level of prices. The tendency of rising prices and a fall in the value of money is known as inflation. But inflation could be defined as a sustained rise in general

price level. This phenomenon occurs when the aggregate demand in normal value is greater than the real productive capacity of the economy.

(a) **Causes of Inflation**

According to Friedman (1968) who is a monetarist, inflation is seen as basically a monetary phenomenon which is caused by an increase in the quantity of money supply. It is important to stress that although inflation is a monetary phenomenon. It is caused by both monetary and non-monetary factors.

Monetary Factors

i. Excessive money supply: Excessive creation and injection of money into the economy by the monetary authorities could cause inflation. This results to a situation where there is too much money in circulation. This leads to rising prices of goods and services.

ii. When the central bank purchases a lot of treasury bills on the open market. When payments are made by the central bank, this increases the level of money in circulation and inflationary results.

iii. When the central bank reduces the bank rate or discount rate charged on loans obtained by the commercial banks. This will cause the commercial banks to reduce the interest rate charged on loans and advances and this will lead to an increase in demand for money.

iv. Another cause of inflation is the expansionary fiscal action by government. The increase in budgetary expenditure by government contributes in no small measure to inflationary spiral in the economy.

Non-monetary factors

i. Increase in demand: Inflation is induced by an increase in the aggregate demand for goods and services. There is always a rise in prices of goods when the aggregate demand exceeds aggregate supply.

ii. Cost of production: Inflation could also be caused by an increase in cost of production of goods. If the cost of raw materials increases, there will be an increase in cost of production and this will have an effect on the prices paid by the final consumers.

iii. Action of Trade Union: Trade unions are always in the habit of demanding for increase in their salaries. If government approves it, it will result inflation to the economy.

(b) Types of Inflation

According to P.B. Dubon 2013, "Introduction to Macro Economics", the types include;

i. **Demand Pull Inflation:** This occurs when aggregate demand for goods and services rise faster than aggregate supply. This is when the demand for goods keeps rising without corresponding increase in the supply.

ii. **Cost Push Inflation:** This is the type of inflation that is induced by rising cost of production. This situation arises when higher production costs are passed on to consumers in the form of higher prices in order to maintain their profit.

iii. **Imported Inflation:** this result when goods are imported from countries that have rising cost of living. This results to inflation at home when the goods are brought in.

iv. **Structural Rigidities:** Inflation results when there is a problem in the distribution of goods. The prices of goods may be rising not because there is fall in production but due to the problem of the distribution system.

Effects of Inflation

i. **Loss of value of money:** The inflationary period is characterized by continuous fall in the purchasing power of money. Each unit of money buy fewer goods. The value of money falls in exact inverse proportion to the increase in the level of prices.

ii. **Fixed income earners suffer:** A fixed income earner suffers during this period because the rising price makes none sense of their income. It means all their income is consumed and this does not allow for savings.

iii. **Penalize money lenders:** Money lenders are always penalized because they cannot get the actual value of money since the value of money falls during inflation. Borrowers of money as they will repay less in value of what they borrowed.

iv. **Expectation effect:** Any anticipation of future price will lead to more purchases or demand for goods today to take advantage of expected price increase.

v. **Loss of confidence in money:** Money cannot effectively function as a medium of exchange and a standard of deferred payment during inflationary period.

2.2 Theoretical Review

This section will be subdivided into economic growth model, employment model, and inflation model.

2.2.1 Harrod-Domar Model of Growth and Employment

The Harrod-Domar Growth Theory is the simplest and best-known production function used in the analysis of economic development. It explains the relationship between growth and employment in advanced capitalist societies. The model is also employed in developing countries as an easy way of studying the relationships between growth and capital requirements. It explains the differences in growth performance between countries and it allows for the prediction of growth estimates for a nation. Employment generation assumes a frontline position in the development goals and programmes of most countries (whether developed or developing) because of its primacy. Job creation translates to more residents in a country, more spending on goods and services, increased economic activities and more tax revenues for all tiers of government. Growth in job creation thus permits the expansion and improvement in public goods and

services, leading to an improved quality of life and enhanced prospects for future employment growth. In addition, a vibrant labour force provides incentive for education, since the rewards of education are evident in better employment opportunities. An expanding labour market encourages workers to upgrade their skills in order to qualify for available higher wage jobs. Sustained employment growth stimulates improvement in the education and skills of the labour force, making the nation increasingly attractive for businesses in the future (Barkley 2001).

2.2.2 Solow Growth Model

The Solow-Swan neoclassical growth theory and its extensions is a popularly adopted framework for analyzing the process of economic growth and development. Assuming a constant-return-to-scale aggregate production functions expressed as:

$$Y_t = K_t L_t B_t \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (1)$$

Where:

Y, K, L and B represent real GDP per capital, real gross capital, labor and the Hicks-neutral productivity term, respectively. The contribution of agriculture to aggregate economic growth could be modeled via its effects on total factor productivity or as an intermediate input in the industrial production sector (Timmer, 1995: Ruttan 2000). Early development theories viewed agriculture as an important source of resources to finance the development of the industrial sector. Thus, agricultural production growth serves as an engine of growth for the overall economy.

Hwa (1988) argues that agriculture is an engine of growth and added agriculture to the standard solow-swan growth equation as a measure of linkages between the rural and industrial sector of the economy. Similarly, we also include additional determinants of growth (experts and inflation rate) that have been found to be robust in explaining aggregate productivity growth (Hwa 1988; Barro and lee, 1994). Thus, B in equation (1) is assumed to be a function of agriculture (A), exports (X) and inflation (P), a proxy for other macroeconomic factors.

$$B = f(At, Xt, Pt) = A \times P \quad \ldots\ldots (2)$$

Next, substituting (2) into (1) yields the following:

$$Yt = Kt = Lt = At = Xt = PYt \quad \ldots\ldots (3)$$

Taking natural logs of equation (3) and including an error term yield:

$$\text{In } Yt = \text{Ink}t + \text{InL}t + \text{InA}t + \text{InX}t + \text{In } Pt + t \quad \ldots\ldots (4)$$

According to the export-led growth literature, exports growth is a measure of outward orientation and could also serve as a proxy for internationally competitive cost structure. Export expansion can be a catalyst for output growth both directly, as a component of aggregate output, as well as indirectly through efficient resource allocation, greater capacity utilization, exploitation of economies of scale and stimulation of technological improvement due to foreign market competition (Helpman and Krugman 1985; Awokus 2008). Also, higher level of investment (gross capital formation) should stimulate growth while agricultural productivity is expected to have a positive effect on aggregate economic growth. Similar to Hwa (1988), export expansion is expected to have a positive

effect on growth while macroeconomic instability, captured by high inflation rates, should have a negative effect on economic growth.

It has been observed that countries at the early stages of development depend almost fully on agricultural growth for employment, foreign exchange, government revenue and food supply to the teemed population. In this sense, agricultural growth is the key impetus to the growth of underdeveloped and developing countries (Business and Economic Journal, Volume 2010).

2.2.3 Lewis Theory of Agricultural Development

Named after Authur Lewis who develop the model, this modern theory of growth attempts to use labour transition as a means of explaining the growth of developing economy. Also as the dual-sector model, it was was specified by Authur Lewis at its beginning in his article "Economic Development with Unlimited supplies of Labour'' in May 1954.

Lewis, with this theory, divided the economy of a country into two sector;

i. The capitalist sector
ii. The substance (agricultural) sector.

The capitalist sector, as its name suggest, employs and reward capital. It is mostly controlled by capitalist who utilizes labour service, include manufacturing and mining, and could be private or public. This sector is assume to use capital-intensive processes that would make investment and capital formation in the manufacturing sector possible over time as capital reward are invested in the capital stock. This

sector is characterized by high wage rate, marginal productivity, and a high demand for labour.

The Lewis explained the subsistence sector to be the sector that does not use "reproducible capital". It is the self-employed sector, the indigenous traditional sector, where the output per head is comparatively lower since the output is not producible with the use of capital. In the model, this sector is featured with low wages low productivity due to labour-intensive production processes, and an abundance of labour.

The dual-sector theory is a developmental theory where surplus labour in the subsistence agricultural sector is mobilized to the capitalist sector whose periodical growth over the time is absorbs the excess labour and boost sustainable development and industrialization. Surplus labour can be directed into emerging industries which are usually labour-intensive at their beginnings, and can be used in place of capital in order to create new industrial investment projects. Because the supply of labour exceeds the demand for labour in the subsistence sector, such growth would not be able to increase the value of labour wages in the subsistence sector, and advance labour production techniques has the ability of reducing the capital coefficient.

This model was propounded in correspondence with some assumptions. The assumption are as follows;

i. The economy can be divided into two sectors: the capitalist sector and the subsistence agricultural sector.

ii. A developing economy has a surplus of unproductive labour in the subsistence agricultural sector.

iii. Surplus labour is attracted to the expanding capitalist sector where labour wages are higher.

iv. The wages in the capitalist sector are fixed.

v. Entrepreneurs' in the capitalist sector earn profits by fixing their prices above the fixed labour wage.

vi. Saving in the capitalist sector are reinvested in the form of capital stock to encourage further expansion. The propensity to save in the subsistence sector is lower than that of the capitalist sector.

vii. A growing capitalist sector means that the economy has moved from a traditional one to an industrialized one.

2.2.4 Endogenous Growth Theories

Endogenous theories of economic growth argue that economic progress is a direct result of faster innovative and increasing investment in human capital from government and private sector. They maintain the ideology that economic growth is affected by internal forces rather than external ones. This view of endogenous growth theories challenged the views of neoclassical theories of economic growth.

In these theories, they believe in the following;

i. Government policy's ability to increase a country's growth rate through making more intense competition in markets and helping to stimulate products and processes.

ii. There is increasing return to scale from capital investments.

iii. Investment in human capital is a vital component of growth.

iv. The government is capable of creating source of innovation, investment, and new jobs.

The biggest criticism of the endogenous growth theory is that it is very difficult to validate with empirical evidence. The theory has been accused of being built on assumption that cannot be accurately measured.

2.2.5 Keynesian Theory of Inflation

According to Keynesian theory, inflation can be caused by increased in demand and/or increase in cost (Jhingan, 2010). Demand-pull inflation is a situation where aggregate demand persistently exceeds aggregate supply when the economy is near or at full employment. Keynesian theory of cost-push inflation attributes the basic cause of inflation to supply side factors. This means that according to Keynesian, rising production costs will lead to inflation.

2.3 Empirical Review

Using social accounting matrices, Vogal (1994) examined the strength of agriculture as a factor of growth for 27 countries. He discovered that agriculture through its linkages leads to positive integration of the sector with the broader economy and in all 27

countries, agriculture served as a great source of economic growth in the early stages of development and its significance begins to diminish as the countries started advancing industrially. Iyoha and Oriakhi, (2002) identified the sources of economic growth in Nigeria using the growth accounting model and found that agriculture contributes more than expected to GDP growth. According to the paper, this indicates a lag in the nation‟s industrialization process. They also find that the share of labour involved in agriculture is too high and suggest that labour be reallocated to other sectors to accelerate economic growth.

Collin et al (2002) showed the importance of agriculture in the early stages of development. Analyzing data for 62 countries for the period of 1960 to 1990, the authors found that growth in agricultural productivity was quantitatively important in understanding growth in GDP per worker. Both the Gross- section and panel data analysis showed that countries experiencing increase in agricultural productivity were able to release labor from agriculture into other sectors of the economy. This paper investigates the effect of agriculture spending on economic growth in Nigeria over a period from 1977 to 2010 with particular focus on sectional expenditure analysis. The broad objective of this study is essentially to examine the effect of agriculture spending on economic growth in Nigeria. The study used *ex-post facto* research design and employs some econometric techniques such as Augmented Dickey Fuller (ADF) and

Phillips Perron (PP) unit root tests, as well as Johansen Cointegration and followed by Error Correction Model (ECM) tests. The empirical results indicate that RGDP was particular influenced by changes in AGR, INF, INT and EXR, these variables as they stand contributes or promotes economic growth in Nigeria. Accordingly, we recommend amongst with others that government should increase spending on agriculture, since most of the poor but active people still reside in the rural areas and their main source of livelihood is agriculture which can provide food security, generate employment for the teeming youths and creates wealth for the citizens in Nigeria. And that as a policy measure, we strongly suggest the reduction of unproductive government consumption spending habit and effectively control inflation, interest and exchange rates in the economy so as to attract investment. Furthermore, despite the political issues in a small island of Northern Cyprus, Katircioglu (2006) in his analysis on the impact of agricultural sector on the economy of Cyprus posited the importance of the agricultural sector on the economy of Northern Cyprus. According to his findings, agricultural sector has a crucial role to play in the development of any economies, especially that of a tiny island of Northern Cyprus. His study revealed that, there exist bi-directional and long-run dynamic causality relationships between the macroeconomic variables. That is, the feedback from agricultural sector has a huge role to play in the development of the economy.

Akinbobola and Saibu (2013), examined the sources of changes in poverty index and unemployment rates through the computation of variance impulse response functions (IRFs), and decompositions (VDCs), which in turn, are based on the moving-average

representations of the VAR model and they reflect short-run dynamic relationships between variables. They found that the variations in unemployment can be attributed to changes in per capita income. In contrast to poverty, relatively little proportion of variation in the unemployment rate can be attributed to changes in government capital spending. Similarly, as the growth in government capital expenditure rises, unemployment falls and the human development index improves. Therefore, infrastructure based policies, which initially reduce unemployment within the economy, improve the living conditions of Nigerians in the end. An increase in per capita income in Nigeria leads to poverty reduction. In fact, changes in per capital income explain most of the variation in poverty. It was recommended that policy focus in Nigeria should therefore emphasize infrastructural development leading to more job opportunities, higher level of income per capita and a lower level of poverty.

Adekoya (2014) did a more specific study on "Analysis of Farm Households Poverty Status in Ogun States, Nigeria" and found that poverty incidence was higher among male headed (60%) and farming (63.9%) households and those having over five members (66.1%). The logit regression indicated that the likelihood of being poor was more in farming households, and it was recommended that government should strengthen the various government credit agencies in order for them to make enough credit available to farmers and encourage farmers to expand their farm land for increased production. In recent decades, the main and potential contribution of agriculture to economic growth has been a subject of much controversy among development economists. As some contend

that agricultural development is a pre-condition for industrialization, others strongly object it and argue for a different path. Taking advantage of ordinary least square method (OLS), the research carried out by means of secondary data and using the independent variables.Agricultural Development (AGD), Capital Formation (CFN) Inflation Rate (INF), and Interest Rate(INT) to re-examine the question of whether agriculture could serve as an engine of Economic growth in Nigeria. The result gotten from the empirical analysis shows that, the productivity in agricultural sector has appreciably impacted positively on the economic growth in Nigeria. The paper investigates the impact of Agricultural output on economic growth in Nigeria. The Ordinary Least Square regression method is used to analyze the data. The results reveal that a positive and significant relationship exists between gross domestic product (GDP) and agricultural output in Nigeria. Agricultural sector is estimated to contribute 2.247 percent variation in gross domestic product (GDP) from 1981 to 2014 in Nigeria. The Agricultural sector suffers neglect during the hey-days of the oil boom in the 1970s. In order to improve agriculture, government should ensure special incentives to farmers, provide adequate funding, and also provide infrastructural facilities such as good roads, pipe borne water and electricity.

In a similar study carried out by Bekun (2011) titled “Economics of Yam Marketing in Minna, Nigeria.” The study revealed that over 31.5 million metric tons of yams were produced in the study areas. This is overwhelmingly huge, enough to engage more than half of the population in the coverage area. Regardless of the vast potentials

the agricultural sector possesses, the industry endowment has not been fully harnessed. There has been a downturn in the late 1970s and figures have dropped significantly to 20% at the end of the 1990s. The decline in the agricultural sectors' contribution is explained by the oil discovery in the 1970s. The 1970s outlined the period when oil was discovered in commercial quantity. This discovery has led to the neglect of the agricultural sector and more focus on the petroleum sector (oil sector). This is one way or the other turned Nigeria into an oil dependent and a monoculture economy.

Agriculture is a panacea for economic growth (Myrdal, 1897). The battle for long-run economic growth is either won or lost in the agricultural sector. However, how this path births economic prosperity has been the subject of debates among economist and development scholars. This study empirically examines the impact of agricultural sector on the economic growth of Nigeria, using time series data from 1981 to 2013. Findings revealed that real gross domestic product, agricultural output and oil rents have a long-run equilibrium relationship. Vector error correction model result shows that, the speed of adjustment of the variables towards their long run equilibrium path was low, though agricultural output had a positive impact on economic growth. It was recommended that, the government and policy makers should embark on diversification and enhance more allocation in terms of budgeting to the agricultural sector.

Oji-Okoro (2011) employed multiple regression analysis to examined the contribution of agricultural sector on the Nigerian economic development. They found

that a positive relationship between Gross Domestic Product (GDP) vis a vis domestic saving, government expenditure on agriculture and foreign direct investment between the period of 1986-2007. It was also revealed in the study that 81% of the variation in GDP could be explained by Domestic Savings, Government Expenditure and Foreign Direct Investment.

Ekiran et al. (2014) examined the relationship between agricultural export and economic growth in Nigeria: A multivariate Johansen co-integration analysis, within the period of 1980 to 2012. Ekiran et al. (2014) approach was adopted in the spirit of Hwa (1988) stationarity test was conducted using Phillips-Peron unit root test, Johansen cointegration and Error Correction Method was use to estimate long-run and short run relationship among agricultural export and economic growth. The findings from this research revealed that agricultural export and agricultural output has long run relationship and seen as a key driver of economic growth and development of Nigerian economy. It was advocated that government should pay attention to agricultural export, as it serves as a stimulant for the much canvass economic expansion and development in the Nigerian.

Besides, some researchers (Gardner, 2005 ; Chebbi, 2010) have raised a lot of questions regarding the impact of agricultural sector on economic growth. Lavorel et al. (2013) addressed the question raised by Gardner (2005) for 85 countries “is agriculture an engine of growth” by investigating causality relationship between agricultural value added per worker and gross domestic product (GDP) per capita. Though, their findings revealed enormous claim. According to them, they find a causality relationship between

agricultural valued added and growth for the developing countries while that of developed countries remained unclear.

There been no consensus in the literature on the subject of agricultural sectors contribution on economic growth. Izuchukwu (2011) found a positive causality i.e. a positive relationship between the agricultural sector and the Nigerian economy while Dim and Ezenekwe (2013) found contrary results. Several scholars found positive causality using varying econometric techniques ranging from cross sectional to panel approach (Oluwatoyese, 2013; Ahungwa et al., 2014; Olajide et al., 2012; Ebere , 2014) while (Dim, 2013; Aggrey, 2009; Oluwatoyese & Applanaidu 2013) found a negative relationship between agriculture and economic growth.

According to Lawal (2011) in his study, where he analyzed government expenditure on agricultural sector contribution to growth (GDP) and subsequent development, for a period of 30 years between 1970 and 2007. His study was in affirmation with Okoro (2011) where it was revealed that a direct relationship exists between the agricultural sector and economic growth. Ukeji (2003) who also conducted a research on the relationship between the variables in question also agreed with (Lawal. 2011; Okoro, 2011) that there exist a positive relationship between gross domestic product and the agricultural sector. Ukeji (2003) x-rays that in the 1960‟s agriculture accounted for over 65-70 percent of the total gross domestic product. Nevertheless, there have been a nose

dive to 48 percent in the 1970‟s and still decline to overwhelm 19 percent in the 1990‟s this outcome is explained by the oil boom.

Simeon (2009) opinioned in his paper titled, “the role of agriculture in Nigerian economic growth; general equilibrium analysis”. He pointed out that, Nigeria is endowed with abundant resources. The agricultural sector has the prospect for growth, but this is not the reality as the Nigerian agricultural sector is characterized by small farm size, mainly subsistence base and also threatened by fluctuations in climatological agro conditions. The study also reveals that, numerous unsuccessful progress and policies that have not yielded the desired results were due to the misappropriation of funds budgeted to the sector. Simeon (2009) using the global trade analysis project (GTAP) approach found out a growth capacity of Nigerian agricultural sector. The study submitted that the bias towards the agricultural sector should be discarded and meaningful contribution in terms of funding and the entire well-being should be made available because, the agricultural sector holds the capacity for job creation, food sufficiency and foreign exchange earnings from exportation.

Moreover, Matahir (2012) took a different stand on his study on the role of agriculture on economic growth and how it interplays with other sectors in the economy. Time series Johansen cointegration techniques was employed to investigate the non-causality relationship between agriculture and other economic sectors of Tunis. From their findings, it was posited that, policy makers should see agricultural sectors as vital tools in their analysis of inter-sectorial growth policies. Though, agricultural sectors has not benefited

immensely from the growth of service and commerce sector of Tunisia but it contribution to economic growth of the economy can never be overemphasized. This lend support from the study carried by out on Thailand economy by Jatuporn et al. (2011). They are also of the opinion that, policy makers should embrace agriculture and see it as a major contributor to Thailand economy.

Olajide et al. (2012) in his studies of agricultural resources and economic growth in Nigeria also discovered a positive causality between GDP and agricultural output, where he used Ordinary Least Squares (OLS) econometrics techniques, precisely between 1970 and 2010. From his studies, it was revealed that agricultural sector accounted for about 35 percent of the variation in GDP. Even though the agricultural sector suffered a high level of setback, immediately after which oil was discovered in commercial quantity. He recommends that government should make available infrastructural facilities such as constant power supply, pliable road, opening of feeder roads to rural farmers and access to financial support with small payback return.

Onunze (2012) in his empirical work examined the impact of agricultural development on Nigerian growth within (1980 to 2010) the period of 30 years. Over several decades, there have been many debates amidst development economist, whether agricultural sector holds the key to national development and industrialization. The study employ the use of OLS technique, by using agricultural development, capital formation, inflation rate and interest rate to investigate the question if agricultural sector serves as an engine room to

drive growth and development. The study revealed empirically that, there exist a positive relationship between the agricultural sector and economic growth. The study also submitted that government should develop and apply contemporary policies to aid the industry match up with other sectors of the economy.

A research conducted by Aremu (2014) covering a time span of 30 years within the period of 1981 to 2012, where he investigated the role of agriculture in economic growth and development. He examined the role that the agricultural sector played in the advancement of the Nigeria economy, considering the years of neglect by government and decision makers. Aremu‟s research use of econometrics to validate his hypothesis where he used the Solow growth model that included gross capital formation (GCF) as the proxy for capital, labor proxy by post-secondary enrollment, while agricultural output and economic growth and development was proxy by real gross domestic product (RGDP). Restricted Error Correction Approach was employed for the long-run relationship. The study revealed that agriculture plays a remarkable role in economic growth and development of Nigeria. From his findings, it was shown that agricultural sector still contributed to gross domestic product, though, there has been a decline since the 1990‟s explained by the arrival of the new bride (oil discovery) in the late 1970‟s.

2.4 Agricultural Sector in Nigeria

Agriculture has been the backbone of the economy in Nigeria providing employment and source of livelihood for the increasing population it accounts for over

half of the GDP of the Nigerian economy as at independence in 1960. However, the role it plays in the regional and economic development of the country has diminished over the years due to the dominant role of the crude oil sector in the economy. With the increasing food demand in Nigeria, the country has available natural resources and potential for increasing the volume of crop production towards meeting the food and nutritional requirement of the rapidly increasing population and guarantee food security in the country. Therefore, the source of national wealth is essentially agriculture.

Agriculture has a strong hold in an economy, for without it a country will always depend on foreign countries to feed its population, the potential contribution of agriculture to economic growth has been an on-going subject of much controversy among development economist, several authors argue that growth in the overall economy depends on the development of agricultural sector (Schuttz, 1964, Gollin, Parente and Rogerson 2002). The growth in the agricultural sector could be a catalyst for national output growth via its effect on rural incomes and provision of resources for transformation into an industrialized economy (Eicher and Staatz, 1984; Dowrick and Gemmmell, 1991; Datt and Ravallion, 1998; Thirtle, Lin and Piesse 2003).Johnston and Mellor (1961)) postulates that agriculture contributes to the economic growth and development through five inter-sectoral linkages. The sectors are linked via,

i. Supply of surplus labor to firm in the industrial sector,
ii. Supply of food for domestic consumption,
iii. Provision of market for industrial output,

iv. Supply of domestic savings and industrial investment and

v. Supply of foreign exchange from agriculture export earnings to finance import of intermediate and capital goods.

In addition to these five direct market-based linkages, Timmer(1995) observed that agriculture indirectly contributes to economic growth via its provision of better caloric nutrient intake by the poor, food availability, food price stability and poverty reduction.

2.4.1 Agricultural Sector Policies and Programmes

Agricultural policy- making in Nigeria has been through review overtime. During each phases of review, the characteristics of policy have reflected the roles expected of the sector and the relative available resources, especially since petroleum became a major source of revenue for funding programme. It then means that agriculture no longer command the same amount as in the past. These notwithstanding, agricultural policy have been dynamic. The Federal Government established some policies and programme such as the Structural Adjustment Programme (SAP).

Structural Adjustment Programme (SAP)

SAP was launched in July 1986, to remove several administrative bottlenecks and adopting a free market oriented economy that would encourage private enterprises and more efficient use of resources.

The objectives of SAP:

(i) To increase the production of exportable cash crop thereby diversifying the export base of the economy

(ii) To raise rural employment and income

(iii) To increase domestic food production and raise nutritional status and standard

The following policy instruments of SAP were design to influence the sector indirectly or directly such as the

(i) Fiscal policies,

(ii) Monetary and

(iii) Trade and foreign exchange rate policies.

Before the introduction of SAP in 1986, The Federal Government of Nigeria has implemented several agricultural policies and programme. While some of the programme were abandoned or restructured, some are still in place. These policies are

1) Operation Feed the Nation (OFN),
2) Green Revolution Programme
3) River Basin Development Authorities (RBDAs)
4) Agricultural Development Projects (ADPs),
5) Directorate of Foods, Roads and Rural Infrastructures (DFFRI)
6) National Accelerated Food Production Programme (NAFPP),
7) Farm Settlement Scheme,

8) National Economic Empowerment Development Strategies (NEEDS, 1999)

9) Nigerian Agricultural, cooperation and Rural Development Bank (NACRDB),

10) Agricultural Credit Guarantee Scheme Fund (ACGSF).

Here are some short explanations on the policies listed above:

1. Operation Feed The Nation (OFN, 1967-1980) was introduced by the federal military government headed by General Olusegun Obasanjo in 1976. OFN was launched on 20th May, 1976. It was recognized after the war precisely in the mid-seventies that most of the fundamental economic problems such as youth unemployment, inflation and rural-urban migration stemmed mainly from the neglect of the agricultural sector. Hence, the government considered it necessary to mount a nationwide campaign and appeal with emotional flavor addressed to all Nigerians to take to farming in order "to feed themselves to feed the nation". It had the specific focus to increasing food production on the premise that availability of cheap food would ensure a higher nutrition level and invariably lead to national development.

The objectives of the scheme as state by the head of state at the launching include:

i. To mobilize the nation towards self sufficiency and self reliance in food
ii. To encourage the section of the population which relies on buying food to grow its own food.

iii. To create a general pride in agriculture through the realization that a nation which cannot feed itself cannot be proud

iv. To encourage balanced nutrition and thereby produce a healthy nation.

The areas of focus under the program include; fertilizer procurement and distribution, pest control, use of improved seed grains, tubers and vegetables, livestock feed, poultry, fisheries, guaranteed minimum price for crop and equipment.

OFN lasted till the civilian government of Alhaji Shehu Shagari in 1979. Although the Operation Feed the Nation succeeded to some extent in arousing national concern for the growing decline in food producing, it failed to encourage increased agricultural productivity on a more sustainable basis.

2. Green Revolution Programme (GRP, 1981-1983) as a follow up to the operation feed the Nation Scheme, the green revolution program was launched by the Shagari –led civilian administration in April 1980 with the following objectives.

i. To increase the production of food and other raw materials to meet the needs of growing population and rising goal of attaining self-sufficiency in basic food staples in about five years.

ii. To increase the production of livestock and fish to meet domestic demand and create surplus for export.

iii. To increase the production and processing of export crops with a view to expanding and diversifying the country's foreign exchange earnings with the aim of restoring our crop export capability in about seven years.

Under the green revolution program serious efforts were made to correct some of the lapses in the OFN programe such as in the supply of fertilizer to farmers at the right time and in the provision of storage facilities. More importantly, there was a more sustained and co-ordinate campaign aimed at mobilizing the vast majority of Nigerians towards cultivating every available piece of land, grow vegetables and establish poultry units at their backyards. Schools at all levels were also encouraged to establish viable farms and produce food for schools' consumption and for sale.

Green revolution programme was too theoretical and suffered setback due to problems bordering on finance, input supplies, distribution and inadequate credit to farmers.

Although there were initial vigorous pest control programme in the northern areas involving the use helicopters and ground spraying equipment, mechanized farming through the green revolution failed as few of requisite equipment were supplied by government. There was also general lack of basic infrastructural facilities in the rural areas.

3. River Basin Development Authority (RBDA) The existing abundant water resources in the country and its potential for increasing agricultural production prompted the establishment of River Basin Development Authority (RBDA). The scheme became necessary because of persistent short rainy seasons in many parts of the country which has continued to restrict cultivation to single cropping pattern the year round. However,

the establishment of various large-scale irrigation facilities the country witnessed unprecedented multiple cropping patterns.

4. Agricultural Development Programmes (ADPs) The idea of Agricultural Development Programmes is an offshoot of the concept of integrated agricultural and rural development. It started in 1972 in Northern Nigerian towns of Gombe and Gusau with two pilot projects assisted by the World Bank. This became necessary because of the need for the application of knowledge and skills in all the relevant areas of agriculture. This concept involves the provision of Infrastructural facilities such as roads, schools, water supply in the rural areas at the right times in required quantity to farmers.

5. Directorate of Food, Road and Rural Infrastructure (DFRRI) Trends in the transformation of the rural sector shows that despite the huge investment in the agricultural sector, which was assumed will automatically bring about eradication of rural poverty and isolation has not been achieved. This is partly due to the deplorable conditions of rural areas, enormous size and dwindling economic resources to address the problem of rural under development in Nigeria. In 1987, the Babangida administration established the Directorate of Foods, Road and Rural Infrastructure (DFRRI). On establishment, DFRRI attempted to open the rural areas through the construction of access roads, and provision of basic amenities of modern living.

6. National Accelerated Food Production Programme (NAFPP) National Accelerated Food Production Programme (NAFPP) was an agricultural extension programme initiated

in 1972 by the Federal Department of Agriculture during General Yakubu Gowon's regime. The programme focused on bringing about a significant increase in the production of maize, cassava, rice and wheat in the northern states through subsistent production within a short period of time. The programme was designed to spread to other states in the country after the pilot stage that was established in Anambra, 2 Imo, Ondo, Oyo, Ogun, Benue, Plateau and Kano states. Mini–kit, production-kit and mass adoption phases were the three phases of the programme. The policy goal of NAFPP was to make Nigeria selfsufficient in food production.

7. Farm Settlement Scheme (FSS) This was initiated by some regional governments in Nigeria and was a critical element of Western Nigeria Policy of Agricultural and Natural Resources of 1959. The main objective of this scheme was to settle young school leavers in a specified area of land, making farming their career thereby preventing them from moving to the urban areas in search of white collar jobs. These settled farmers were also to serve as models in good farming systems for farmers residing in nearby villages to emulate. The programme initiated in old western Region; aimed at solving unemployment among primary school leavers.

8. National Economic Empowerment Development strategy (NEEDS**, 1999)** is described as a Nigeria's plan for prosperity, popularly Christened a "Home grown programme" by the formal president of Nigeria Chief Aremu Olusegun Obasanjo, it is a four years medium term plan for the period of 2003 to 2007.1 NEEDS is a Federal Government plan,

which also expects the state and local governments to have their counterpart plan i.e State Economic Empowerment and Development Strategy (SEEDS) and the Local Government Empowerment & Development Strategy (LEED) respectively.

Despite all these policies framework and programme, it been noted that the sector performance has not been impressive enough, in terms of its contribution to the country's development. In 2004 the Federal Government launched another economic reform by name National Empowerment and Development Strategies (NEEDS). The programme was aimed at promoting growth as well as reduces poverty through a participatory process involving civil society and development partners. In agricultural sector, NEEDS was aimed at promoting and improving production, distribution and processing of agricultural products.

2.4.2 Contributions of Agriculture to Economic Development in Nigeria

Notwithstanding Nigeria's rich endowment in oil and other mineral resources, the wellbeing of her economy still largely depends on agricultural sector. The Nigerian economy is essentially agriculture in terms of national output and employment generation. It is the largest contributor to Gross Domestic Production (GDP) (average 38% in the last 8 years) with crops accounting for 80%, forestry 3% and fishery 4%. It provides employment for about 65% of the adult labor force and the food and fiber needs of a large and increasing population. The agro-industrial enterprises depend on the sector for raw materials whilst 88% of the non-oil exports earning come from the sector. The sector contributes a great deal to the development of the economy in various ways:

Agriculture contributes significantly to national food self –sufficiency by accounting for over 90% of total food consumption requirements, its helps to maintain a healthy and peaceful population and also a source of food and nutrition for households. Furthermore the ultimate objective of interest of economists in productivity should be to find ways of increasing output per unit of input and attaining desirable inter-firm, intra-firm and inter sector transfers of population resources thereby providing the means of raising the standard of living.

In Nigeria, agriculture export has played an important role in economic development by providing the needed foreign exchange earnings for other capital development project. Ekpo and Egwaikhide (1994) observed that Nigeria agricultural export has enlarged to include cocoa beans and palm kernel. Statistics indicate that in 1960 agricultural export commodities contributed well over 75% of total annual merchandise exports. In 1940‟s and 50‟s Nigeria was ranked very high in the production and exportation of major crops in the world. For instance, Nigeria was the largest exporter of palm oil and palm kernel, second to Ghana in cocoa and third position in the exportation of groundnut. Olayide and Essang (1976) report that Nigeria export earnings from major agricultural crops contributed significantly to the Gross Domestic Product (GDP).

In terms of employment, the sector is still leading in economic activities, while accounting for one-third of the Gross Domestic Product (GDP). It remains the leading employment sector of the vast majority of the Nigerian population as it employs two-

third of the labor force Bola (2007). Olatunji (2002) observed that in Nigeria today, farming still remains the sources of employment of majority of the adult population, its productivity is the most important single factor influencing the standard of living of both the rural and urban centers.

Agriculture indeed has remained the major sources of income to the economy. About 90% of the rural population is involved in activities related to the crop sub-sector which provides the bulk of agricultural income. Similarly the crop sub-sector supports the processing industry by providing raw materials.

2.5 Gap in Literature

The various studies reviewed although are quite elaborating on the role agriculture play in economic development. But the studies did not specifically examine the impact agriculture has on both employment and inflation. This is very necessary because, it narrows down the impact of agriculture and this is the gap this study attempts to fill. Hence, this study is embarked upon to examine empirically the impact of agriculture on employment and inflation using time series data from 1981 – 2019.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Theoretical Framework

Studies in the past have adopted different theories to support their analysis of the impact of agriculture on economic growth. Thus this study will be utilizing the Keynesian theory as its support.

3.1.1 Keynesian theory

The Keynesian theory states that government spending can positively contribute to sectorial growth and in this case the agricultural sector of Nigeria. Therefore, this study will adopt the Keynesain theory developed by the British economist J. M. Keynes in the 1930s. Nigeria heavily rely on agriculture and in order to fully take advantage of the sector and to increase national income by generating more employment opportunities, the multiplier effect of government spending on income will be taken into account. Nigeria will profit from the government spending through increased mechanization, better outputs and sustainable employment which will lead to higher productivity and consequently foster economic growth.

3.2 Model Specification

This research shall employ econometric method. According to Modalla (1992), this method gives the best technique for the verification and reputation of theories. It also

provides quantitative estimation of the relationship among variables without much subjective judgment. The specification of econometric model is always based on economic theory or any available information relating to the phenomenon being studied (koutsoyiannis 1997). Hence, the specification of the model adopted for this investigation is implicitly stated as follows:

Model I

UNEM = F (AGO) ……... (1) .

Equation (i) can be stated in econometric form as:

$UNP = \alpha_0 + \alpha_1 AGO + \Sigma_i$ ……. (2)

$\alpha_0, \alpha_1 > 0$; Where:

UNP – Unemployment rate

AGO - Agricultural Output

Σ - Stochastic Error Term

Σ represents other factors that may determine agricultural output which are not captured in the model.

α_0 = Constant

α_1 = Parameter of the slope.

The above equation (2) can be written in natural logarithm form as:

$LogUNP = \alpha_0 + \alpha_1 LogAGO + \Sigma_i$ …….. (3)

Model II

INF = F (AGO, UNP)…….. (4)

This equation can be stated in econometric form as:

$INF = \beta_0 + \beta_1 AGO + \Sigma_i$ ……..... (5)

$\beta_0, \beta_1 > 0$, Where:

IFN - Inflation Rate

AGO - Agricultural Development

Σ represents other factors that may determine agricultural output which are not captured in the model.

β_0 = Constant

β_1 = Parameter of the slope.

The above equation (2) can be written in natural logarithm form as:

$LogINF = \beta_0 + \beta_1 LogAGO + \Sigma_i$ ……..... (6)

3.3 Method of Analysis

The methodology adopted in this study is the linear regression employing the technique of ordinary least squares (OLS). The choice of OLS is guided by the fact that it has optimal properties which include linearity, neutrality, and sufficient least variance and mean square error.

These desirable properties of estimators can be obtained from any techniques but minimum variance property distinguishes the ordinary least square (OLS) estimators as the best when compared with other linear neutral estimators from econometric techniques. This particular property of smallest variance is the reason for the popularity of the OLS method. (koursoyiannis 1997)

3.5 Data Sources

The study uses secondary time series data sourced from the Central Bank of Nigeria(CBN)statistical bulletin, Nigeria Bureau of Statistics(NBS),International Financial Statistics and data files,CIA World Factbook and International Monetary Fund's.(IMF). Covering the period of 1981 - 2019.

3.6 Method of Evaluation

In this section, the researcher would proceed with all the evaluation of the results. The evaluation will be based on three criteria; economic criterion, statistical criterion and econometrics criterion.

- ***Economic or A priori Criterion***

This criterion is based on economic theory and it is aimed at determining whether the signs and sizes of the empirical results conform or are in tandem with economic theory postulates. Put differently, it is concerned with determining the consistency of our parameter estimates with the signs and magnitude. Therefore, given the variables under consideration, their parameters and respective a priori signs can be expressed as follows:

Model 1:

$\alpha_0, \alpha_1 > 0$

Where:

α_0 = Constant

α_1 = Parameter of the slope.

Model 2:

$\beta_0, \beta_1 > 0$

Where;

β_0 = Constant

β_1 = Parameter of the slope.

- ***Statistical Criterion (First Order Test):***

This test is based on statistical theory used in evaluating the reliability of the parameter estimates of a given model. According to Guajarati (2004), a test of significance is a procedure by which sample result is used to verify the truth or falsity of a null hypothesis. It encompasses the following tests:

a. *Standard Error Test:* This test is of high relevance arising from the fact that sampling errors tend to characterized parameter estimates of a given model. It is therefore essential to measure the size of the sampling error and subsequently determine the degree of confidence in the validity of the obtained estimates (Koutsoyiannis, 1977). The test helps us to know if our estimates are statistically significant or not, and also whether the sample from which we made estimates might have come from a population whose true parameter value are zero (Koutsoyiannis, 1977 p.80).

b. *The T-Test*: This test is carried out to ascertain the statistical significance of the individual parameters in an econometric model. It is used in testing the statistical significance of each regression coefficient at a given level of significance (say 1%, 5%, or 10%) with N–K degree of freedom. The table or critical value is given as; $t_{\alpha/2\,(N-K).}$ Where; t = t –critical, α = level of significance N = Sample size K = total number of estimated parameters. Decision Rule If $/t_{cal/} < t_{\alpha/2(N-K)}$ at a given level of

significance, we accept H_0 and reject H_1 but if $/t_{cal/} > t_{\alpha/2(N-K)}$ we reject H_0 and accept H_1. In the former, we therefore conclude that the parameter estimate is not statistically significant at a given level of significance while for the latter; we conclude that the parameter estimate is not statistically significant at a given level of significance.

c. *F – Test:*This test is used to test overall significance of the regression model. Simply put, it is used to test for the statistical significance of the coefficient of determination (R^2).The decision is that, if the computed F – test i.e. $Fc_{al} > F_{\alpha}$ (k-1), (N-K), then we say the overall model is statistically significantat a given significance level. If $Fc_{al} < F_{\alpha}$ (k-1), (N-K), then we conclude that the overall model is not statistically significant at a given significance level.

d. *R² and adjusted R² test:* the coefficient of determination (R^2) depicts the percentage variations in the dependent variable that is accounted for by the variations in the independent variables in a given single regression model. It is also known as the measure of the Goodness of Fit of a regression line. The adjusted R^2 depicts the variations in the dependent variable that is accounted for by the changes in the explanatory variables of a given model taking account of the degree of freedom associated with the sum of squares. The adjusted R^2 is used in a multiple regression model.

- ***Econometrics Criterion (Second Order Test)***

This criterion is based on the theory of econometrics and aimed at investigating whether the assumptions of econometric method employed are satisfied or not. Examples of tests under this criterion are heteroscedasticity test, Multicollinearity test, autocorrelation test, Normality test etc. for the purpose of this study; we will focus on autocorrelation test, and normality test.

a. ***Autocorrelation Test****:* The test is used to investigate if the error term of different observations is correlated or not. That is, testing for the randomness of the error term. Hence, the Durbin-Watson method was adopted for this test.

b. ***Normality Test****:* This test is carried out to ascertain whether the stochastic error term is normally distributed with a mean of zero and constant variance. This is expressed symbolically as; $\mu = N(0, \sigma_i^2)$.

CHAPTER FOUR

PRESENTATION AND ANALYSIS OF RESULTS

4.0 INTRODUCTION

This chapter presents the analysis result and its interpretation of statistics of the model, a correlation analysis to determine the relationship between the variables of the model as well as a preliminary check of the problem. The variables use in the model include agricultural output (AGO), inflation rate (INF) and unemployment rate (UNP).The period of observation is 38 years spanning from 1981-2019

INTERPRETATION OF ORDINARY LEAST SQUARES (OLS)

The dependent variable is UNP.

The equation of our simultaneous equation model can be specified as;

UNP= -72.7722 + 0.005AGO +μ

R-squared = 0.89

R-bar-squared = 0.85

F- statistic (2, 5) = 21.30

DW-statistic = 2.04

The constant term is = -72.7722 and it implies that unemployment rate in Nigeria will fall by 72.7722unit when the independent variable (AGO) in the model are assume to be

zero. The UNP is shown to have a positive coefficient impact on agricultural output (AGO) where a unit change in UNP will result in an increase of 0.01 units. The R-square value is 0.89 which shows that about 89% variations in the unemployment rate of Nigeria is explain by the independent variable in the model. While The R-bar-squared value is fairly high, and explains that the equation was able to account for about 0.85 of the variation in agricultural output. The F-statistic which is 21.30, with a probability value of 0.004, show that the overall test is significant at 5%level the calculated F-value was found to be greater than the critical F-value, by which the null hypothesis of the dependent variable being uncorrelated with the explained variable cannot be accepted. The T-test show that agricultural output is significant for 0.05> probability value. The Durbin Watson statistic values of 2.04 indicate the absences of autocorrelation however and may not have influenced in the analysis.

The dependent variable is INF.

The equation of our simultaneous equation model can be specified as;

INF= -10.8304 +0.001AGO +μ

R-squared = 0.32

R-bar-squared = 0.05

F-statistic (2, 5) = 1.18

DW-statistic = 2.0

The constant term is = -10.8304 and it implies that inflation rate in Nigeria will fall by 10.8304unit when the independent variable (AGO) in the model are assume to be zero. The INF is shown to have a positive coefficient impact on agricultural output (AGO) where a unit change in INF will result in an increase of 0.001 units. The R-square value is 0.32 which shows that about 32% variations in the inflation rate of Nigeria are explain by the independent variable in the model. While The R-bar-squared value was able to account for about 0.05 of the variation in inflation rate of Nigeria can be attributed to the explanatory variable taking into account the degree of freedom. The F-statistic which is 1.18, with a probability value of 0.38, show that the overall test is not significant at 5%level the calculated F-value is found to be greater than the critical F-value, by which the null hypothesis of the dependent variable being uncorrelated with the explained variable cannot be accepted. The T-test shows that agricultural output is not significant for 0.05< probability value. The Durbin Watson statistic value of 1.67is approximately 2, indicate the absences of autocorrelation

4.1 Test of hypotheses

The study sets two hypotheses for testing:

Hypothesis 1: Agricultural output has no impact on employment creation in Nigeria

From the regression result in model2 it is observed that agricultural output has a positive relationship with unemployment and it implies that agricultural output exert a negative impact on employment (jobs creation) in Nigeria. Hence, we reject the null hypothesis.

Hypothesis 1: Agricultural output has no effect on inflation in Nigeria

From the regression result in model1 it is observed that agricultural output has a negative effect on inflation. Hence, we reject the null hypothesis.

This test of hypotheses is consistent with the Philips curve which states that inflation and unemployment have a stable inverse relationship. The theory posits that with economic growth comes inflation, which in turn should lead to more jobs and less unemployment vis-à-vis when inflation is low, it should in turn lead to less jobs and more unemployment..

4.2 DISCUSSION OF FINDINGS

This study is to examine the impact of agricultural output in economic performance on unemployment and inflation in Nigeria. The means of evaluation was to first examine how the agricultural output affects unemployment and inflation with less concern about the sector. And how it affect productivity then impact economic growth.

Employing data on agricultural output (AGO) on INF and UNP rate, the first equation of our simultaneous equation model was formulated, with unemployment rate(UNP) as the dependent variable The a priori expectation was that unemployment would have positive impact on agricultural output. The coefficients of the agricultural output on unemployment were found to be significant by their t-values.the equation also had a fair R-bar-square alluded to the estimating and predicting prowess of the equation, indicating that it was accurately explain the variation in agricultural output.

The second equation had inflation as the dependent variable and the agricultural output as the explanatory variable. The a priori expectation was that agricultural output would have a positive effect, and it did. The Akaike information criterion and the Schwarz Bayesian criterion values were quite favorably low in both stages, with significant f-statistic value for both equations. the R-bar-squared of the second equation show that the variation in INF is explain by agricultural output.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

This chapter presents the summary of findings, conclusion and recommendations based on the study findings.

5.1 Summary of Findings

This study has provided evidence on the effect of agricultural output on unemployment and inflation using time series data for the period of 1981 to 2019. Below is the summary of the findings:

1. The ordinary least squares estimates have showed that agricultural output has a positive impact on inflation rate, since the low current income from farming motivates farmers to seek higher support prices and to extend price support policies to more commodities. Such policies result in further higher prices and higher rates of inflation. The high input prices lead farmers to take recourse to more credit, especially non-institutional credit for their farm operations which ultimately leads farmers into a debt trap (Okuneye, 2002).

2. It is found that agricultural output have a positive impact on unemployment. The reason is that if there is agricultural increase and the government now marginalize other sector to concentrate on the agricultural sector, although they maybe surplus of food but it will lead to underdevelopment of other skilled sector like the manufacturing sectors, oil and gas and every other service sector if the

government ignore this sectors and focus on just the agricultural sector, it can increase unemployment of skilled labour. like dose who may not be able to do farm work will be unemployed and they will be under utilize because they will be force to go into farming but the government should diversify, while the government is putting up policies to increase agricultural output the government should also make provision for establishing other sectors of the economy and this will lead to a diversify economy where all sectors are functioning very well and by extension will lead to economy growth and development.

5.2 Conclusion

In conclusion, inflation can be kept at a minimum in the country if there is good harvest of agricultural output with possible inventory absorbing mechanism in place. Hence the call for the following policy measures: Government, private institution and farmers association need to encourage farmers in times of surplus by absorbing the excesses and possibly distribute it to the appropriate quarters to curtail inflation. Government, Nongovernmental Agencies and farmers association should seek ways to adjust for the change In agricultural output overtime (inventory changes). This can be done through investment in storage and processing facilities. And unemployment are a major problem in Nigeria, but according to Philips curve which posits that these two problems have a negative relationship which means if policy makers decide to reduce inflation then it should in turn lead to less jobs and more unemployment but if they decide to reduce unemployment then it should in turn lead to more jobs and less inflation.

5.3 Recommendations

Based on the empirical findings of this study, the following recommendations are provided:

1. The Nigeria economy does not have to be mono-product (tied to either crude oil or agriculture) instead deliberate and sincere attempt should be made to diversify the productive base of the Nigeria economy to make it encompassing.
2. The infrastructures in rural areas should be developed. This will in turn reduce the rural-urban migration, increase retention of skilled labor in rural areas, and reduce cost of production, thereby boosting the productivity of agricultural industries in the rural areas. This will greatly reduce poverty and unemployment levels in the economy.
3. The Central Bank of Nigeria should come out with stable policy guideline to enable the commercial banks disburse loans to farmers at a very lower interest rate, in order to help them expand their production capacity. Training more extension workers to educate farmers in the use of modern production techniques to help boost the country's production capacity.
4. Establishment of more research institute to improve seedling production, encourage the use of irrigation farming system and provision of storage facilities for seasonal products as means of improving the country's agricultural output and reduces inflation.

5. Government should encourage more exportation of agricultural output as this in turn will enhance external foreign exchange earnings and improve the competitiveness of Nigerian agricultural produce in the international markets.

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DATA INFORMATION

SECONDARY TIME SERIES DATA USED FOR THIS STUDY

YEAR	AGO	INF	UNP
1981	2364.37	20.81	
1982	2425.96	7.70	
1983	2409.08	23.21	
1984	2303.51	17.82	
1985	2731.06	7.44	
1986	2986.84	5.72	
1987	2891.67	11.29	
1988	3174.57	54.51	
1989	3325.95	50.47	
1990	3464.72	7.36	
1991	3590.84	13.01	
1992	3674.79	44.59	
1993	3743.67	57.17	
1994	3839.68	57.03	
1995	3977.38	72.84	
1996	4133.55	29.27	
1997	4305.68	8.53	
1998	4475.24	10.00	
1999	4703.64	6.62	
2000	4840.97	6.93	
2001	5024.54	18.87	
2002	7817.08	12.88	
2003	8364.83	14.03	
2004	8888.57	15.00	
2005	9516.99	17.86	
2006	10222.47	8.24	
2007	10958.47	5.38	
2008	11645.37	11.58	
2009	12330.33	11.54	
2010	13048.89	13.72	
2011	13429.38	10.84	5.1
2012	14329.71	12.22	5.95
2013	14750.52	8.48	10.0

2014	15380.39	8.06	7.8
2015	15952.22	9.01	9.0
2016	16607.34	15.68	13.4
2017	17179.50	16.52	17.5
2018	17544.15	12.09	22.6
2019	17958.58	12.19	23.4

SOURCES: Central Bank of Nigeria (CBN) statistical bulletin, Nigeria Bureau of Statistics (NBS),International Monetary Fund,international financial statistic and data and data files And CIA World Factbook.