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# Agriculture, Manufacturing and Economic Growth in Nigeria



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**ABSTRACT:** This research work address the positive effect of Agriculture on the manufacturing sector in Nigeria. The study made used of Ordinary Least Square Method estimation techniques. The findings showed that Agricultural output, government spending on agriculture, and real gross domestic product all have positive effects on the manufacturing sector. The effects is RGDP 66percent, AGRQ by 63%, and GOEXA by 96 percent. The study recommends among other things that government should allocate more resources to the Nigerian agricultural sector and ensure that the funds are judiciously use and that the government should also seek to strengthen its incentives for the manufacturing sector in order to promote increased industrial production and growth.

#### I. INTRODUCTION

Agriculture is a vital part of the Nigerian economy, with enormous potential for job creation, food security, and poverty alleviation. However, these potentials have largely gone untapped, resulting in the agricultural sector's declining output both domestically and internationally over time. According to Anyanwu, Oaikhenan, Oyefusi, and Dimowo (1997), Nigeria was the world's leading groundnut exporter, with a 42 percent market share. As the largest West African cotton exporter, the country also exported 27 percent of the world's palm oil, 18 percent of cocoa, and 1.4 percent of cotton. This glory, however, has waned over time, with China, the United States of America (USA), and Argentina eclipsing Nigeria's supremacy in groundnut exports as of 2008. In palm oil, Indonesia and Malaysia have taken over; in cocoa, Côte d'Ivoire and Ghana have overtaken Mali and Burkina Faso; and in cotton, Mali and Burkina Faso have overtaken Mali and Burkina Faso (CBN, 2017). Strong marketing organizations connected farmers to markets and provided help in the form of improved planting material, fertilizer, credit, and rural infrastructure, enabling competitors to retain their dominance.

Low fertilizer and increased seed use, as well as insufficient government spending and the failure to compete with others, have contributed to Nigeria's low productivity over the years when compared to leading countries like Malaysia, Thailand, Indonesia, and Brazil. Nigeria uses 13 kilograms of fertilizer per hectare, compared to a global average of 100 kilograms per hectare and 150 kilograms per hectare in Asia. Just 5% of Nigerian farmers had access to improved seeds, and they were able to work with just 10 tractors per 100 hectares, compared to 241 tractors per 100 hectares in Indonesia. As a result of the continuous decline and stagnation in their exports, it is estimated that Nigeria has lost over US\$10 billion (1.6 trillion Naira) in annual export opportunities from groundnut, palm oil, cocoa, and cotton alone. As a result, food imports are increasing at an unsustainable rate of 11% per year. With an annual import of 635 billion naira, Nigeria is the world's largest importer of US hard red and white winter wheat. It is also the world's second largest importer of rice (356 billion naira), sugar (217 billion naira), and fish (97 billion naira) (Anyanwu, 2000).

If Nigeria is to achieve long-term economic development, it must build an agricultural sector that drives income growth through viable manufacturing industries, accelerates food and nutritional protection, creates jobs, and transforms Nigeria into a global food market leader, while also growing wealth for millions of farmers. The traditional approach to the agricultural sector will have to shift in order to realize this dream. Procurement and distribution of fertilizers, marketing institutions, financial value chains, and the system for agricultural investment will all need to be restructured. The fertilizer strategy aims to create a flourishing private fertilizer industry to compensate for inefficiencies in the government distribution system and resource waste. Subsistence farmers will have to be transferred from their high poverty levels to a commercialized system that would promote trade and competition through market-

oriented/market surplus enabled by Nigerian Incentive-based Risk Sharing for Agricultural Lending (NIRSAL). This would be achieved through the Growth Enhancement Support (GES) investment that is targeted at 20 million farmers at an estimated cost per farmer per year of  $\frac{1}{45}$ ,000 (Anyanwu,2000).

Manufacturing operations have a major effect on a country's economy. They account for a significant portion of total economic activities in developing economies, such as Nigeria, where the subsector accounts for around 10% of total GDP annually. Manufacturing operations account for about 12% of the overall force in the formal sector of the national economy's output in terms of job creation (Chinweoke, Egwu&Nwabeke, 2015). Manufacturing involves a wide variety of operations, from light agro-based businesses to heavy iron and steel firms. Adediran and Obasan (2010) posited that in an advanced economy, the manufacturing sector is a leading sector in a different way: it is a channel for growing goods related to import substitution and growth, generating foreign exchange earnings and per capita income, and resulting in specific consumption patterns. Manufacturing companies' effectiveness, on the other hand, is dependent on the availability of resources such as raw materials and financial resources to meet demand. This necessitates the financial sector in Nigeria allocating a significant amount of resources to the development of the economy's subsector. According to Adediran and Obasan (2010), agriculture has a higher productivity growth pattern than manufacturing in both developed and developing countries, but manufacturing continues to outperform agriculture in terms of production growth. In response, Nigeria's federal government prioritized agriculture and manufacturing, directing commercial banks to contribute a certain percentage of their loanable funds to these sectors through the Central Bank of Nigeria. To encourage commercial banks to meet their goals, the Central Bank of Nigeria established the Agricultural Credit Guarantee Scheme (ACGS) in 1979 to guarantee loans to farmers, with the sole purpose of channeling credit to preferred sectors such as agriculture and manufacturing (Adeyinka, Daniel&Olukotun, 2015). Despite all of the federal government's efforts to build a viable economy that is sustainable through the synergy between agriculture and manufacturing, why is the agricultural sector still performing poorly and why is the manufacturing sector not receiving the necessary raw materials from the agricultural sector for optimal functioning. Nigeria's industrial growth and manufacturing past is a textbook example of how a country can ignore a crucial sector due to policy contradictions and distractions brought about by the discovery of oil. Agriculture has been largely ignored, denying many producers and businesses access to their primary source of raw materials (Anyanwu,2000). The agricultural sector's shortage of locally sourced inputs has resulted in low industrialization.

### II. Literature Review

Agriculture is characterized by a number of authors and writers, but Anyanwu, Oaikhenan, Oyefusi, and Dimowo (1997) describe it as "the cultivation of land, the raising and rearing of animals for the production of food for man, feed for animals, and raw materials for industries." Cropping, cattle, forestry, finishing, manufacturing, and selling of agricultural products are all included. Agriculture's importance in changing an economy's social and economic system cannot be overstated. It is a source of food and raw materials for the industrial sector, as well as a necessary component of job creation.

The agricultural sector's contribution to the Nigerian economy is incalculable. Agriculture remains the mainstay of the Nigerian economy, contributing about 40% of GDP and employing about 77 percent of the working population, according to the National Bureau of Statistics (2018). (Anyanwu, 2000). Nigeria was self-sufficient in food production when it gained independence in 1960; agriculture accounted for around 64% of total GDP at the time. However, due to the urbanization of a rural labor force, the rise in crude oil revenue, the lack of agricultural growth policies, and inadequate execution, this remarkable achievement could not be maintained. These issues posed a significant challenge to self-sufficiency.

#### Manufacturing and Industrialization

A community of companies manufacturing broadly similar products is referred to as an industry. As a result, industrialization is characterized as the process of increasing a country's capacity to turn raw materials and other inputs into finished goods and to produce goods for use in other products or for final consumption. According to Anyanwu et al., there are four types of industries: refining, manufacturing, art, and mining (1997). Manufacturing, on the other hand, is a branch of the industrial sector (others being processing, craft, and mining sub-sectors). As a result, manufacturing entails converting raw materials into finished consumer products, intermediate goods, or producer goods. Manufacturing, like other manufacturing operations, generates jobs, helps to improve agriculture, and diversifies the economy, all while growing the country's foreign exchange earnings and allowing local workers to learn skills. Furthermore, it eliminates the risk of overdependence on international trade and encourages the most effective use of available capital.

# Manufacturing and Industrialization in Nigeria

It has been suggested that the fastest way for a country to achieve sustainable economic growth and development is through technological innovation, enterprise development, and industrial capacity, rather than its endowed material resources or vast human resources. For example, despite its limited natural resources and the challenges posed by chronic inflation in the 1920s, Germany has successfully exploited the manufacturing sector and risen to become Europe's and the world's fourth largest economy (Kayode, 1977).

### Agriculture and Food Supply

Nigerian agriculture has been unable to satisfy the country's food needs in recent years. Food production per capita, on the other hand, has been declining. The per capita food production index for 1980 is 13 points lower than the base era, as shown in Table 1a. Food imports have risen dramatically to supplement the low domestically produced food supply. Nigeria's rapid transformation from a low-food-importing to a high-food-importing nation, with food accounting for 19.5 percent of total imports in 2007 compared to 18.1 percent in 2009, was a sign of the agricultural sector's collapse (NBS, 2013). This situation does not bode well for the Nigerian economy, particularly given the fact that there are resources available that could be used to boost local food production.

### **Agriculture and Employment**

More than 80 percent of Nigeria's rural population is involved in some kind of agricultural activity. This approximately reflects how much of the country's labor force is consumed by the agriculture sector. According to a World Bank report from 1970, the agricultural sector employed 71 percent of Nigeria's total labor force in 1960, but by 1977, it had fallen to 56 percent. In 1980, this figure was 68 percent, but it fell to 55 percent in 1985, 53 percent in 1986, 55 percent in 1987, 55 percent in 1988, and 57 percent annually from 1989 to 1992. One of the most commonly accepted dogmas of economic growth is that the agricultural population and labor force, as well as agriculture's share of GDP, are decreasing over time. The decline in the proportion of the workforce working in agriculture is therefore technically possible, and it is the product of structural changes in the economy, in which other industries are taking on new dimensions and hiring more workers than before. While it is unavoidable that the proportion of the national labor force employed in agriculture decreases over time as a result of economic development, it is critical that agricultural labor productivity rises at a rate not less than that of natural increases in labor migration in order to compensate for the outflow of labor and to provide expanding non-agricultural jobs. Given the importance of labor in agriculture in most African countries, including Nigeria, and the low labor absorption ability of their industrial sectors, rapid outflows of labor from the agricultural sector have resulted in not only social but also economic problems. Agriculture in Nigeria has been declining in recent years as a result of a high labor outflow from the sector. As a consequence, rising agricultural labor productivity should be a national target.

### Agriculture and Gross Domestic Product (GDP)

One of the dogmas of economic growth is that agriculture's share of GDP decreases over time. This is clearly illustrated here. This is because, as can be seen from the tables, agriculture's relative share of GDP has been decreasing over time. Agriculture contributed as much as 61.50 percent of GDP in 1963/64. In 1983, this figure had dropped to 14.63 percent. (Anyanwu *el ta*; 1997)

Although this pattern is logically possible in the course of economic growth, there are other factors at play in Nigeria's rapid decline in agriculture's share of GDP. The comparative contributions of the major sectors to GDP are shown in Table 1f. Since the 1973/74 fiscal year, the mining sector, which is dominated by petroleum, has gained in importance in the economy and has not only increased but also retained its lead. The Middle East Crisis of 1973, which culminated in dramatic rises in oil prices, can be blamed for the sudden rise in mining sector contribution to GDP. Nigeria, as an oil producer, benefited from these increases. Because of the oil glut, agriculture's overall contribution fell to 14.63 percent in 1983 (2000, Anyanwu))

Despite its relative decline in importance, the agricultural sector continues to play an important role. Furthermore, because petroleum is a wasting asset, the oil sector may not continue to dominate the economy in the future. This is especially true given that, due to a severe oil glut in February 1986, the price of oil per barrel plummeted from \$28.00 to \$14.0. (National Bureau of Statistics, 2013). Furthermore, as oil becomes scarcer in the future, the agricultural sector will continue to play a critical role in the economy. It is therefore critical to revitalize agriculture by providing the necessary incentives and inputs, especially financial resources, to transform it from its current state.

### Agriculture and Export Earnings

Agriculture's importance can also be assessed in terms of its contribution to export earnings. Agriculture increased its contribution in absolute terms from N282.4 million in 1960 to N13852.7 million in 1995. However, its relative share fell from 83.2 percent in 1960 to

just 1.8 percent in 1995. The low productivity output and relative importance of the petroleum sector are generally cited as reasons for this function. (NBS, 2013).

Apart from these factors, the relative decline of agriculture can be attributed to a decrease in global demand for primary products, which account for the majority of Nigerian agricultural exports, as well as increased use of major proportions of some of these products as raw materials due to domestic industrial development in Nigeria. To ensure increased export earnings and an adequate supply of raw materials for the growth of local industries, a strategy for increased production is needed. Agriculture's Terms of Trade dropped from 1.76 in 1970-74 to 0.48 in 1975-79, 0.22 in 1980, 0.19 in 1985, and then 0.55 in 1990 and 0.21 in 1992, before rising to 0.55 in 1990 and 0.21 in 1992. (Anyanwu, et al 1997).

### CAPITAL FUNDING OF AGRICULTURE

Between 1970 and 1995, there was a strong rise in federal capital expenditure on agriculture. Capital expenditure on agriculture increased from N5.6 million in 1970 to N2,414.2 million in 1995 in absolute (nominal) terms. The negligible share of agricultural expenditure in total federal expenditure, which grew from 2.54 percent in 1970 to 11.53 percent (peak) in 1990 to just 1.99 percent in 1995, is one point that stands out. (Anyanwu, et al.)

### The Contributions of the Banking Sector in Financing Agriculture in Nigeria

In recognition of the agricultural sector's significance, successive governments have devised and introduced a range of financial programs aimed at ensuring that funds are available to the agricultural sector in order to boost real-economy growth and development. The Nigerian Agricultural Cooperative Bank (NACB) was established in 1973, the Agricultural Credit Guarantee Scheme Fund (ACGSF) was established in 1977, the obligatory sectoral allocation to agriculture was introduced in 1972, the rural banking scheme was launched in 1977, and the Commercial Banking Scheme was launched in 1978. In 2009, the Agriculture Credit Scheme (ACSS) was launched, and in 2000, the Nigerian Agricultural Cooperative and Rural Development Bank (NACRDB) was formed by merging NACB, People's Bank, and the Family Economic Advancement Programme (FEAP) (NBS,2008).

A variety of government policies and programs have been developed to promote the flow of credit to farmers in order to mechanize and expand agricultural activities, with the aim of increasing food security, increasing farmer income, providing necessary raw materials for local agro-based industries, and reducing agricultural product importation. To accomplish this, the CBN has issued directives to commercial banks, which are part of the financial institutions tasked with mobilizing credit for agriculture (CBN, 2010). Despite the existence of several financial institutions, farmers' credit needs are frequently unmet. Delays in disbursement of loans approved by the government are an impediment in most cases where funds are provided by banks (Aku, 1995). The majority of the time, these loans are delivered to the farmer after the planting season, resulting in diversion and default. Due to the high rate of loan default in developing countries, commercial banks seldom grant loans to farmers, and when they do, they typically do so at higher interest rates and with other strict conditions, such as the availability of collateral (Helleiner, 1966). Commercial banks are discouraged from devoting their attention to the agricultural sector, according to Omawale and Rogrigues (1979), because of the economic existence of land holdings, agriculturists' limited capital, and the lack of suitable securities. The size and scope of this credit has had a negative impact on farmers and has weakened their position over time.

### **Challenges of Agricultural Sector Financing in Nigeria**

Nigeria is now mostly an agrarian society. Approximately 70% of the population is engaged in subsistence agricultural production. The decline in agricultural production in Nigeria started in the early 1970s with the advent of the petroleum boom, and contradictions in government policies have made agriculture unattractive. Inadequate technology for farmers to use in order to produce in large quantities to satisfy local and international demand, natural disasters such as drought and pests damaging farm produce, inadequate transportation, weak and absent infrastructure, and trade restrictions all led to a substantial drop in agricultural production. Food production in Nigeria has been unable to keep up with the country's growing population, resulting in a rise in the amount of imported foods and the cost of importation. The government regularly imports vast quantities of equipment without a single service station to provide maintenance and replacement parts. Apart from hiring 51.3 percent of Nigeria's workforce and accounting for 70% of the non-oil sector's GDP (Bureau of Statistics, 2008). Nigeria still has vast swaths of fertile agricultural land, as well as other resources that could be used to turn the economy. In the 1970s, for example, its contribution to GDP averaged 12 percent, resulting in increasing import bills and a massive balance of payment deficit. As a result, the country's ability to fulfill its traditional position of food provision, jobs, and foreign exchange generation has been hampered by a slew of socioeconomic and financial issues, including a lack of

financing, insufficient credit to local farmers and agro-business owners, and insecure macroeconomic policies. (National Bureau of Statistics, 2013)

### The importance of the Manufacturing sector

Manufacturing operations have a large effect on a country's economy. For example, in developed economies, they account for a large portion of total economic activities; in Nigeria, the subsector accounts for around 10% of total GDP annually. Manufacturing operations recruit roughly 12% of the total workforce in the formal economy. Manufacturing encompasses a wide range of activities, from light agro-based businesses to heavy iron and steel firms. In a developed economy, the manufacturing sector is a leading sector in a different way: it is a way of growing goods related to import substitution and growth, generating foreign exchange earnings and per capita income, and causing distinct consumption trends (Anyanwu, 2000). However, manufacturing companies' effectiveness is dependent on the availability of capital, such as raw materials and financial resources, to meet demand; this necessitates the financial sector in Nigeria investing a significant amount in developing the subsector of the economy.

As a result, manufacturing entails converting raw materials into finished consumer products, as well as intermediate and producer goods. Manufacturing, like other manufacturing operations, generates jobs, helps to improve agriculture, and diversifies the economy, all while growing the country's foreign exchange earnings and allowing local workers to learn skills. Furthermore, it reduces the risk of overdependence on international trade and promotes the most efficient use of available capital.

#### The structure of the Manufacturing industry in Nigeria

Nigeria's manufacturing industry is one of the most competitive in the world. Using the index of manufacturing production, the manufacturing sector expanded between 1970 (when the civil war ended) and 1982. Manufacturing's average annual growth rate was faster in the second millennium of the 1970s than in the first, and it started to accelerate in the first half of the 1980s, before declining after 1982. For the years 1982, 1984, 1985, and 1986, the industrial output index posted a negative growth rate of 28.6, 12.0, 64.3, and 21.8 percent, respectively (Anyanwu et al,1997). Manufacturers Association of Nigeria (Manufacturers Association of Nigeria, 2012). Nigeria's manufacturing industries have done well in the manufacture of products for the country so far. Latest, study has shown that Nigeria products are been exported to other countries. Nigerians are increasingly purchasing products manufactured in the country. The industrial sector's output improved marginally in the first half of 1997, with the industry's production index 132.6 rising by 0.69 over the same period in 1996, but declining by 0.2 percent in the second half of the same year. Mining and manufacturing production rose by 1.0 and 0.4 percent, respectively, to account for the rise in output compared to the same period in 1996. (National Bureau of Statistics, 2008).

Since the food, beverage, tobacco, beer, spirit, and textile industries dominated the structure of manufacturing operations, the structure of industrial development was strongly distorted in favor of consumer goods industries. It is clear that the consumer goods market dominates both in terms of value added and employment. By 1985, the durable consumer goods industry, which had started to grow rapidly in the middle of the 1970s, had yet to make a major impact. Similarly, the manufacturing value added contribution of machinery and transportation, equipment, metal fabrication, chemicals, energy, and engineering industries was negligible. The industrial sector's production plummeted in 1981 as a result of a slump in the international oil market. This poor output reveals the sector's inherent vulnerability, which had been largely shielded from competition by the country's post-independence Import Substitution Industrialization (ISI) scheme. The pyramid tariff structure characterized the ISI phase, with relatively low duties on intermediate and capital goods imports and increasingly growing duties on consumer goods imports. (1993, Anyanwu).

#### STRATEGIES OF INDUSTRIALIZATION IN NIGERIA

Nigeria and other West African countries have implemented a variety of industrialization policies as part of their growth efforts. According to Anyanwu et al., 1997, the following industrialization strategies were implemented in Nigeria: Import Substitution Strategy,

- (a) Export Promotion Strategy,
- (b) Balanced Development Strategy,
- (c) Local resource-based Strategy.
- (a) Import Substitution Strategy:

Following independence, Nigeria moved its policy from importing primary goods from colonial masters to manufacturing those items that were originally imported. The key goal was to reduce overdependence on foreign trade while also conserving

foreign exchange. However, rather than manufacturing, it turned out to be a simple assemblage of those products. Since almost every item needed by the so-called industries was imported, the original argument was refuted. (b)Export Promotion Strategy:

Nigeria added an export promotion policy after recognizing the apparent drawbacks of the import substitution strategy. This includes the development and exportation of new goods as well as those that were previously imported. The Nigerian Export Promotion Board (NEPB) was formed to promote and enforce this policy. This policy failed due to a lack of rewards and raw materials. Since 1986, export promotion incentives have placed a renewed emphasis on this strategy.

(c) Balanced Development Strategy

This policy was adopted as a result of the lopsided development of the industrial sector. The main of balanced development of all industries is promoted greater linkages and inter-sectional linkages so that the intra-industry transaction could increase.

(d) Local resource-based Strategy:

Due to declining oil revenues and foreign exchange for the importation of raw materials and spare parts, the government agreed to focus on an industrialization policy based on local raw material sourcing. As a result, industries are urged to seek out local substitutes or alternatives for their raw materials. Breweries, for example, are now growing and using local millet and maize, and the prohibition on wheat has necessitated the baking of cornbread. This policy would aid in the most efficient use of local resources as well as the conservation of foreign exchange, among other benefits.

### **Empirical Literature**

The evidence for a connection between agricultural productivity and industrial growth is contradictory. Because Nigeria is an importdependent country, especially for capital goods, and because the rate of exchange of a country's currency to its trading partner's currency is so significant, a number of writers have expressed their interest and positions on this subject. The fluctuating and depreciating nature of such an important economic variable, as well as its effect on other sectors of the economy, has sparked a significant increase in interest in this area over the years.

Using an ordinary least squares methodology, Chinweoke, Egwu, and Nwabeke (2015) investigated the effect of commercial bank loans and advances to the agricultural and manufacturing sectors on economic growth in Nigeria from 1994 to 2013. Bank loans and advances to the agricultural and manufacturing sectors have a statistically important effect on economic development, according to the findings of the report. From 1980 to 2011, Uzomba, Chukwu, Jumbo, and Nwankwo (2014) investigated the effect and determinants of Deposit Money Banks' loans and advances to Nigeria's agricultural sector. The researchers used the Multiple Ordinary Least Square (OLS) Regression, Stationary Test, Co-integration Test, Parsimonious Error Correction Mechanism, and Granger Causality Test. The study found that deposit money bank loans and advances have a positive effect on the agricultural sector.

Adeyinka, Daniel, and Olukotun (2015) investigated the role of commercial bank credits in financing Nigeria's agricultural sector, using secondary data from 2002 to 2014 on sectoral distribution of commercial bank loans and advances to the agricultural sector, commercial bank liquidity ratios, cash reserve ratios, and money market minimum rediscount rates. The data was analyzed using Multiple Regression of OLS to estimate the model, and it was discovered that the cash reserves ratio and rediscount rate are not statistically significant, while the liquidity ratio is statistically insignificant. The study recommended that banks have a means of monitoring the end use of the loans given to farmers so that they can manage the loans effectively and efficiently.

Toby and Peterside (2014) looked at the position of banks in financing Nigeria's agriculture and manufacturing sectors from 1981 to 2010. Commercial banks' lending to agriculture, merchant banks' lending to agriculture, commercial banks' lending to manufacturing, and merchant banks' lending to manufacturing were all variables included in the study. Two levels of analysis were used in the study, with descriptive analysis directly on the panel data 1 and 2 through multiple regression analysis. They discovered that banks' position in promoting the agricultural and manufacturing sectors' contributions to economic growth is still small. As a result, it is recommended that monetary policy instruments emphasize mandatory sector credit allocation with sufficient incentives in order to increase the flow of funds from banks to the real sector.

The effect of commercial bank loans on manufacturing sectors was investigated by Ogar, Nkamene, and Effiong (2014). Secondary data was used in the analysis, including manufacturing production, commercial bank loans, and commercial bank interest rates. The models were used to evaluate the relationship between dependent and independent variables using ordinary least square of multiple regressions, and the results indicate that commercial bank credits have a significant relationship with the manufacturing sector. It was

suggested that the government work to ensure that there are enough and usable credits for the manufacturing sector in Nigeria, all at a reasonable interest rate.

Sogules and Nkoro (2016) looked at how bank loans to the agricultural and manufacturing sectors affected economic development. They analyzed annual time series data from 1970 to 2013 using co-integration and the Error Correction Mechanism (ERM). It was discovered that there is a long-term connection between bank credit to the agricultural and manufacturing sectors and economic development. According to the ERM findings, bank credits to the agricultural sector had a marginal negative impact on economic growth, while bank credits to the manufacturing sector had a major negative impact on economic growth in Nigeria. According to the report, bank credits to the agricultural and manufacturing sectors should be closely monitored to ensure that funds intended for these sectors are not diverted to other uses. To - the risks associated with lending to agricultural and manufacturing sector entrepreneurs, bank credits should be subjected to entrepreneurial growth training.

Several empirical studies have looked at the relationship between agricultural credit and economic development all over the world. Rhaji (2008) used OLS to examine the effect of agriculture on the Nigerian economy. He discovered that one of the major factors contributing to the structural decline in agriculture's contribution to the Nigerian economy is a lack of sufficient, available, and affordable credit. Ayoola and Oboh (2006) investigated the impact of agricultural development on economic growth. They discovered that adequate capital is needed for every segment of agricultural production because capital determines access to all other resources on which farmers depend. Agricultural credit, when used properly, promotes capital formation and diversification in agriculture, as well as increased resource production, farm scale, farming technologies, marketing effectiveness, value added, and net farm incomes, all of which contribute to economic development. In a similar vein, Oboh (2008) used an error correction model approach to examine farmers' locative actions in credit usage in Benue State. The study found that the usefulness of any agricultural credit program is determined not only by its availability, accessibility, and affordability, but also by its proper and effective allocation and use by beneficiaries for the purposes intended. Despite the value of credit in agricultural development, there are a slew of issues with its procurement, management, and repayment.

Oboh and Ekpebu (2010) studied the determinants of structured agricultural credit allocation to the farm sector in Nigeria using OLS. The study discovered that factors influencing the rate of credit allocation by beneficiaries of the Nigerian Agricultural Cooperative and Rural Development Bank must be critically assessed (NACRDB). A thorough understanding of these factors could provide crucial information for developing a more efficient and long-term credit system that better serves poor farmers. Akintola (2004) used autocorrelation to investigate the role of the banking industry in agricultural financing. Banks' conventional positions, according to him, include financing agriculture, manufacturing, and syndicating credit to productive industries. Adekanye (2005), for example, used a panel data threshold to examine the position of banks in the Nigerian economy's development. According to the report, banks provide a valuable social service by making credit accessible because their activities result in increased development, increased capital spending, and a higher standard of living.

In a similar way, Enoma (2010) used the ordinary least squares method to examine the effect of agricultural credit on economic growth in Nigeria. Agricultural credit and the exchange rate also have a positive effect on economic growth over time, according to the findings.

The manufacturing sector is used to assess a country's economic performance in the modern world (Amakom, 2012). However, since the discovery of crude oil in Nigeria in the late 1950s, the country has shifted away from its preeminent developing industrial production base and placed a heavy emphasis on crude oil production (Englama, 2010); this has jeopardized the country's economic activities and exacerbated unemployment. Nigeria, as a giant of Africa, has long been regarded as a country endowed with vast human and material resources; however, the country's under-utilization of these resources has exacerbated widespread poverty, a low standard of living at the individual level, and rising unemployment as a result of the country's constant mono-economic practices and severe neglect of other economic sectors such as agriculture.

### III. METHODOLOGY

The primary data collection method used in this study is secondary. Secondary data can be found in books, unpublished articles, journals, government reports, magazines, and the internet, among other places. The data for this study are secondary time series spanning the years 1986 to 2019. They were gathered from a variety of sources, including the Central Bank of Nigeria Statistical Bulletin(2018),(2019), the Central Bank of Nigeria Statistical Bulletin, and the National Bureau of Statistics (2018). Quantitative data is the type of data used in this study. As previously stated, numerical values for the variables are obtained from various sources.

Manufacturing Value Added, Real Gross Domestic Product, Agricultural Output, and Government Expenditure on Agriculture will all be collected.

### MODEL SPECIFICATION

Multiple regression model is formulated and estimated, using Ordinary Least Square method, which assumes a linear relationship between variables.

The functional relationship between the variables is presented thus:

MVA= f (RGDP, AGRQ, GOEXA.).

The functional relationship is translated into an econometric model for regression:

MVA=  $\beta_0 + \beta_1$  RGDP +  $\beta_2$  AGRQ +  $\beta_3$  GOEXA + $\mu$ 

Where

MVA= Manufacturing Value-added

RGDP= Real Gross Domestic Product

AGRQ= Output of the Agricultural Sector

GOEXA= Government Expenditure on Agriculture

 $\mu$  = The stochastic error term

 $\beta_0,\,\beta_1,\,\beta_2 \text{and}\,\beta_3 \text{are parameters of the model to be estimated.}$ 

The technique of analysis employed in this study includes; The Ordinary Least Square estimation technique, which is used to estimate the relationships between the variables.

### **RESULTS OF STATIONARITY TESTS**

Variables	ADF	Test	Mackinnon	order of	Remark
	Statistics		value (5%)	integration	
RGDP	-3.720837		-2.967767	1(0)	Stationary
MVA	-7.429004		-2.971853	1(0)	Stationary
AGRQ	-4.833201		-2.981038	1(0)	Stationary
GOEXA	-6.289343		-2.976263	1(0)	Stationary

**Source:** author's computation from E-view 20, 2021.

From the results, RGDP, AGRQ, MVA and GOEXA, were all stationary at a level. Thus, RGDP, AGRQ, MVA, and GOEXA were all integrated of order zero.

### **Regression Result and Analysis**

The result of the OLS is presented below

Dependent Variable: MVA Method: Least Squares Date: 10/21/17 Time: 11:59 Sample: 1986 2015 Included observations: 30

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	133.4478	10.93505	12.20367	0.0000
GOEXA	0.963032	0.569553	1.690857	0.1028
AGRQ	0.045142	0.009023	5.002933	0.0000
RGDP	2.866311	1.782425	1.608096	0.1199
R-squared	0.767974	Mean dependent var		197.8433

Adjusted R-squared	0.741202	S.D. dependent var	85.77570
S.E. of regression	43.63602	Akaike info criterion	10.51321
Sum squared resid	49506.65	Schwarz criterion	10.70003
Log-likelihood	-153.6981	Hannan-Quinn criteria.	10.57298
F-statistic	28.68544	Durbin-Watson stat	1.003694
Prob(F-statistic)	0.000000		

Source: Author's computation using Eview 20

The coefficient of the constant parameter (133.4478) is correctly signed and statistically significant, according to the estimated results, with a probability of (0.0000). This means that if all of the explanatory variables remain constant, MVA will equal 133.4478 units. GOEXA's coefficient is (0.963032), confirming the a priori expectation of a positive sign. At 5%, it is statistically insignificant. Because the probability is greater than 0.05 percent, this is the case. This equals (0.1028>0.05). This implies that a unit increase in GOEXA will lead to a 96% increase in Manufacturing Value Added.

The agricultural production coefficient also verified the a priori expectation. It has a positive symbol, suggesting that MVA and agricultural production have a positive relationship. The AGRQ coefficient is (0.045142), meaning that a 5% shift in AGRQ would result in a 5% change in Manufacturing Value Added. At the 0.05 percent mark, the result is also statistically important, with a likelihood of (0.0000). The coefficient of Real Gross Domestic Product is correctly signed (2.866311), which satisfies the apriori assumption of a positive sign and is statistically insignificant with a likelihood of 0.1199 at the 5% level of significance. The coefficient of determination R-Squared (R2) is 0.767974, indicating that variations in the explanatory variables (GOEXA, AGRQ, and RGDP) account for around 77% of the difference in Manufacturing Value Added, while the dummy variables account for the remaining 23%. That is, in Nigeria, there is a close link between the manufacturing sector and agricultural production.

The F-Statistics with the value of 28.68544 and the Probability of 0.0000 indicated a strong linear relationship between the dependent and the independent variables.

# IV. DISCUSSION OF FINDINGS

Agriculture production, government spending on agriculture, and real gross domestic product all have a positive effect on Nigeria's manufacturing sector, according to the findings. The manufacturing sector in Nigeria is affected by the RGDP by 2066.6 percent, AGRQ by 4%, and GOEXA by 96 percent. The likelihood of the F-statistic, which is 0.0000 and less than 5%, shows the overall importance. As a result, the agricultural sector has a very strong and important effect on the manufacturing sector. The findings are consistent with Enoma (2010), who found a positive effect on agricultural credit and Nigerian economic development. Sogules and Nkoro (2016) discovered that the agricultural sector had a negligible negative effect on economic growth in Nigeria, while bank credits to the manufacturing sector had a substantial negative impact. However, contrary to Sogules and Nkoro, this study finds a positive and important effect of agricultural production on Nigeria's manufacturing sector. As a result, governments in Nigeria must do more to support the agricultural sector financially.

# V. CONCLUSION

Agriculture had a positive effect on the manufacturing sector, according to the report. Agriculture spending by the government has a positive but minor effect on the manufacturing sector. As a result, the government could raise funding for the agricultural sector, which is Nigeria's main source of raw materials for manufacturing.

### VI. RECOMMENDATIONS

The following recommendations were made based on the study's findings: The government should allocate more resources to the Nigerian agricultural sector and ensure that the funds are used wisely. The government should also seek to strengthen its incentives for the manufacturing sector in order to promote increased industrial production and growth, including: Tax Holiday: The government can exempt infant or new industries from paying benefit tax for a certain number of years, such as five. The goal is to shield them from foreign competition and enable them to save enough money to expand. Tariff Protection: To shield local industries from international competition, the government should enforce high import tariffs on foreign products. Import Duty Relief: For the importation of capital

equipment, the government should grant import duty relief to industries, especially new ones. Total Import Ban on Certain Foreign Goods: The government could impose a total import ban on certain foreign goods in order to protect local industries producing similar goods and to promote increased local production and consumption. The formation of special industrial development financial institutions, such as the Nigeria Industrial Development Bank (NIDB), would aid in the promotion and development of Nigeria's manufacturing sector.

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