



Agricultural sector and economic development in Nigeria: Empirical evidence from Kebbi State

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Abstract

This research examined the effect of agricultural sector on economic development in Sokoto state, Nigeria. The research design used in this was survey. The population and sample size for this study are 142,741 farmers belonging to three senatorial districts in Kebbi state. However, a total of 399 were sampled using Taro Yamane's formula. A stratified sampling technique was used in selecting the three senatorial districts across the state. However, farmers were randomly selected for the study. The data collected from the respondents was analyzed using multiple regression. Empirical results show that food supply, poverty alleviation and job creation have significant effect on economic development. However, the results also indicate that there is positive insignificant relationship between foreign exchange and economic development. The study recommend that the current import and export regulations need to be revised in order to convince other countries to accept agricultural products from Nigeria.

Keywords: Agricultural sector, economic development, Nigeria

1. Introduction

From time immemorial, agriculture constitutes the predominant economic activity in Nigeria. The sector made a significant contribution to the economic development of the country up to the early years of independence (Shadrack & Yusuf, 2016) ^[18]. During that time, Nigeria has been a largest world producer and exporter of cocoa, palm kernel, palm oil, cotton, groundnut, rubber, and hides and skins throughout that time. In the 1960s, the agricultural sector supplied 95% of the country's food needs; produced 70% of Nigeria's exports; and contributed more than 60% of the GDP (Lawal, 1997) ^[9]. All these were realized with the reliance of Nigerian farmers on traditional tools and indigenous farming techniques. Alkali (2007) ^[4] states that the percentage of people's engagement in the agricultural sector across the six Geo-Political Zones in the country ranges from 24.4 to 85.1%. Nevertheless, despite these impressive percentages, the sector is rendered ineffective due to a number of problems militating against its contribution to economic development.

Consequently, from the hey-days of the oil boom in the 1970s to date, the agricultural sector has been neglected, leaving Nigerians to suffer from great poverty, unemployment and inequality. As the price of oil continuous to rise globally, there has never been a time in the history of the country that is more trying than now (Shadrack & Yusuf, 2016) ^[18].

The country is now regretting its failure to diversify its economy. Had it been that the agricultural sector has not been neglected, the sector would have by now provided the country a safe haven.

Additionally, the sector has a role to play in the process of economic development. Agriculture's consideration as a fundamental factor in issues relating to development, planning and policy framework as a common practice around the world demonstrates its important (Abdullahi, 2017) ^[11]. However, the agricultural sector has previously suffered setbacks in an economy like Nigeria, which contributed to the current state of widespread poverty and insecurity. Though no country that calls itself developed today actualized this status solely through agricultural transformation, in many, if not all, conscious efforts on agriculture at the early stage of development played a critical role in economic development (Ojeleye, 2018) ^[11].

In the light of the foregoing, the purpose of this study is to examine how agriculture sector effects economic development in Nigerian.

1.1 Statement of the Research Problem

The capacity of the agricultural research system has eroded in recent years, as that of the extension service. Even when improved technologies are available, they often fail to reach farmers. Farmers' lack of technical knowledge is compounded by deficiencies in input distribution systems, which limit the timely availability of improved seed, fertilizer, crop chemicals, and machinery. Where inputs are available, farmers' ability to use them is often compromised by a lack of credit, because rural financial institutions are in general poorly developed. Farmers who produce surpluses frequently lack access to reliable markets, and the high cost of transporting produce to distant buying points over bad rural roads reduces their competitiveness.

1.2. Objective (s) of the Study

The broad objective of this study is to examine the contribution of agricultural sector on the economic development of Nigeria. The specific objectives are:

1. To investigate whether food supply has significant effect on the economic development in Nigeria.
2. To assess whether poverty alleviation significantly affect economic development in Nigeria.
3. To examine whether job creation has significant effect on the economic development in Nigeria.
4. To determine whether foreign exchange has significant influence on economic development in Nigeria.

1.3. Research Hypotheses

The following null hypotheses were formulated and tested in the study

1. Food supply has no significant effect on economic development in Nigeria.
2. Poverty alleviation has no significant effect on economic development in Nigeria.
3. Job creation has no significant effect on economic development in Nigeria.
4. Foreign exchange has no significant influence on economic development in Nigeria.

2. Review of Literature Related

2.1. Clarification of Concepts

2.1.1. Agriculture

Agriculture involves cultivating land, raising and rearing of animals in order to produce food for people, animal feed and raw materials for industries. It involves cropping, livestock, and forestry, fishing, processing and marketing these agricultural products (Anyanwu, Oyefusi, Oaikhenan and Dimowo, 1997) ^[5]. It is the science and art of producing crops or animals under supervision of humans in a specific location (Acquaah, 2005) ^[2]. Undoubtedly, one of the most important economic sectors is agriculture (Penson, Capps, Rosson & Woodward, 2006) ^[17]. Agriculture provides man with food, raw materials for industries, shelter materials, drugs and fuel in addition to the from air and water that are naturally provided. Agriculture occupies a prime position in the economy (Opeke, 2006) ^[15]. From the foregoing, Agriculture is indispensable to the existence of man.

2.1.2. Economic Development

Economic development has been defined in different ways

and as such it is difficult to find a single definition that can be considered wholly satisfactory. Despite this, Okorontah and Odoemena (2016) ^[12] defined Economic Development as the process of improving the standards of living and well-being of the population through reducing poverty, unemployment and inequality. Economic development connotes the rate at which an economy is progressing using some specific factors. According to Okorontah and Odoemena (2016) ^[12], economic development means explicitly an increase in the value of goods and services produced by a country over the period. Gross Domestic Product (GDP) is used in measuring economic development. It includes all the value of all the goods and services generated in an economy in a particular period (Onyekwelu, Amalu, Emmanuel & Chukwuani, 2020) ^[14].

However, economic growth which is a process that is usually indicated by an increase in a country's Gross Domestic Product (GDP), can be differentiated from economic development on the grounds that not all economic growth is accompanied by economic development as GDP per capita may be rising while at the same time, the rate of poverty, unemployment and inequality might not be decreasing (Shadrack & Yusuf, 2016) ^[18].

2.2. Agriculture and Nigeria's Economic Development.

Agriculture is fundamental to human life and the provision of food for the world's growing population. In terms of development programme, the sector cannot be ignored and must be attention, especially in country like Nigeria. Shadrack and Yusuf, (2016) ^[18] states that agriculture provides the following benefits to any economy:

2.2.1. Food Supply

There is an African proverb that states "that once the problem of food is addressed in the life of a poor person's, their level of poverty has been significantly reduced (Ojeleye, 2018) ^[11]. Agriculture provides the basic food requirements for the teeming population of the world. However, the situation in Nigeria, is different because a huge amount of money has been spent yearly in importing food items such as rice, wheat, fish and sugar. For instance, between 2007 and 2010, the country spent NGN98 trillion on food importation; this is about NGN24 trillion annually. Chukwuma, (2014) ^[6] supports this by nothing that Nigeria spent NGN632 billion on wheat, NGN536 billion on rice, NGN217 on sugar and NGN97 billion on fish in 2010 and N155 billion was spent on the importation of rice alone in 2012. This huge amount of money could have been invested in improving infrastructure, among other things. As food security is a strategic objective for long term survival of any nation, the agricultural sector in Nigeria has to play this critical role.

2.2.2. Foreign Exchange

Agriculture contributed significantly to the economic development of so many countries by providing the needed foreign exchange earnings. This is clear from the fact that, prior to the oil boom, exportation of cocoa, palm kernel and palm oil, agriculture contributed greatly to the Nigeria's foreign exchange earnings (Ojeleye, 2018) ^[11]. Nigeria was the second largest producer of cocoa, largest exporter of palm kernel and largest producer and exporter of palm oil in the world in 1960s. Additionally, Nigeria was also a leading exporter of other major commodities like cotton, groundnut, rubber and hides and skins (Alkali, 1997) ^[3].

2.2.3. Job Creation

Agriculture is by far the largest source of employment in Nigeria in terms of nominal figures. In Nigeria, agriculture is still the main sector providing jobs. Izuchukwu (2011) ^[8] claims that agriculture not only meets the food and fiber needs of a large and increasing population, but also employs about 65% of the adult labor force and. Even though, majority are employed into the sector, most of them still live in poverty.

2.2.4. Poverty Alleviation

Evidence suggests that periods of high agricultural growth rates are associated with falling poverty (Mellor, 2001) ^[10]. According to a World Bank review, higher agricultural and rural growth rates are likely to have a significant, positive and immediate effect on reducing poverty (World Bank, 1996) ^[19]. Despite this, poverty remains persistent among the practitioners of this occupation.

2.3. Empirical Review

To authenticate the findings of any study, an empirical review of authorities who carried out studies in the area of discussion. However, the following studies of a similar nature were reviewed:

Ojeleye, (2018) ^[11] examined the effect of agriculture on the economic development in Nigeria with special focus to food crops production in the northern region of the country. As clearly depicted, the northern Nigeria's agricultural sector has a high potential for growth, but this potential is not being realized. The results discovered that major grain crops such as maize, rice, sorghum, and cowpea in the northern region contributes 68%, 73.5%, 100%, and 69.6% respectively to the total national crop output; based upon the National Agricultural Extension and Research Liaison Services (NAERLS) and Federal Department of Agricultural Extension (FDAE), 2014 Agricultural Performance Survey. Even though, most farmers produce mainly food crops using traditional extensive cultivation methods. The study recommended that in order to improve agricultural productivity in the region will require a coordinated strategy comprising policy reforms, institutional restructuring, and well-targeted strategic investments to upgrade degraded rural infrastructure.

Shadrack and Yusuf (2016) ^[18] examined the effect of Agriculture as a Tool for Economic Development in Nigeria: An Assessment of Problems and Prospects in Gombe State. In this research, the data were gathered through questionnaire and interview. The findings revealed that insufficient rainfall is the most debilitating factor affecting farming in Gombe State. The study recommended the need for the government at all levels to declare a state of emergency in the sector specifically with regards to linking farmlands with Dadinkowa and Balanga Dams through construction of water canals across the State to complement the insufficient so as to encourage irrigation (dry season farming).

Patrick E. (2014) ^[16] conducted a research on the impact of the agricultural sector on Ghana's economic growth and the

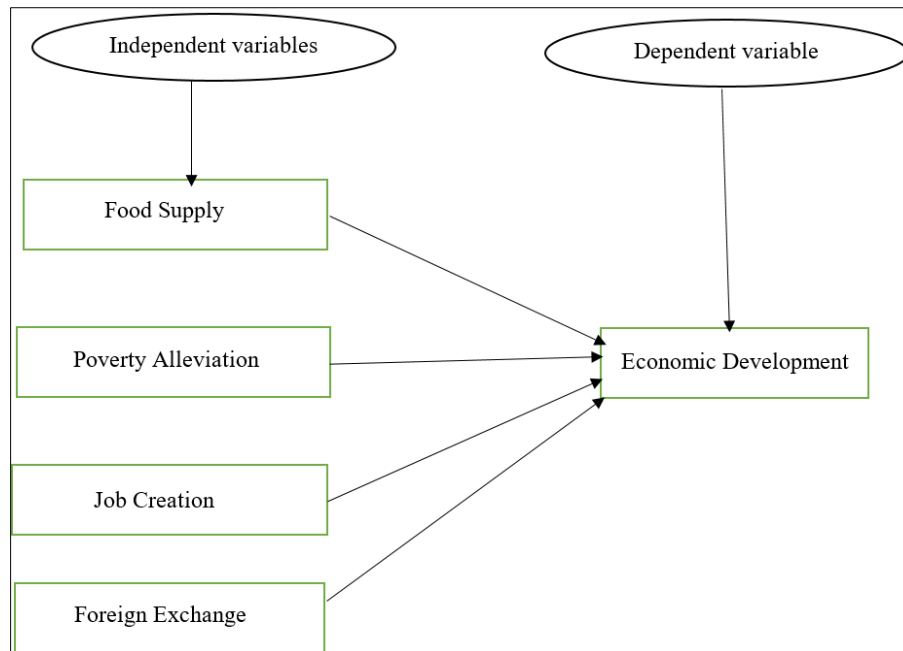
effect of the various sub- sectors of the agricultural sectors on Ghana's economic growth. The study employed time series (1996-2006) data on agriculture, service, industry and the various sub-sectors under agriculture, which includes forestry, fishery, crops/ livestock and cocoa. A regression model was specified and OLS was used to estimate the respective impact of agriculture, service and industry on GDP growth. The findings from the analysis revealed that agricultural output had a significantly positive impact on Ghana's growth as compared to the other sectors (agricultural output (0.354515); service output (0.283401); industrial sector (0.303257)). Moreover, the study analysed the effect of the various sub sectors under agricultural sector in GDP growth since the agricultural sector contributed more significantly to GDP. Cocoa subsector was identified to be vital to economic growth and development in Ghana. The study therefore recommended that the cocoa subsector should continue to be the priority even with the discovery of oil.

Omorogiuwa, Zivkovic and Ademoh (2014) conducted a study on the Role of Agriculture in the Economic Development of Nigeria and the factors that have had an impact on its agricultural productivity through each decade since its independence in 1960. The vision 20-2020 program this country is currently pursuing a major step to achieve this goal. Nigeria, according to its seven point agenda, is focussing on developing agricultural as an important strategic move. This paper proves that an in-depth research on the development of the agricultural sector is essential to the progress of the country. Therefore, the study recommended that it is important to find out what has not worked previously and why, before taking any steps to develop the agriculture or the economy.

3. Methodology

This study adopted quantitative research approach to assess the relationship between dependent and independent variables. The study has one independent variable, namely: contribution of agricultural sector and one dependent variable, namely: economic development. Contribution of agricultural sector are proxies by food supply, poverty alleviation, job creation and foreign exchange. Furthermore, a cross sectional research design was adopted in which data was collected once during the whole study. The data was analysed and interpreted statistically using multiple regression to examine the simultaneous effects of several independent variables on a dependent variable. It is the study of how a dependent variable *Y* is related to two or more independent variables. The population for this study is 142,741 farmers belonging to three senatorial districts in Kebbi state. However, a total of 399 were sampled using Taro Yamane's formula. For the purpose of this study, a stratified random sampling techniques was employed. Farmers were randomly selected for the study. However, stratified sampling technique was used in selecting the three senatorial districts across the state. Therefore, a total of 399 copies of questionnaires were administered in which 384 were returned and analysed.

Conceptual Model



4. Test Used For Data Analysis

The data were computed and analysed using SPSS version 23.0 (Statistical Package for Social Science).

4.1 Result and Analysis

The relationship between the independent variables, namely:

Food supply, poverty alleviation, job security and foreign exchange earnings and economic development was established using multiple regression model. The multiple regression measured the impact of the independent variables to the dependent variable.

Table 1: Predictors of Economic Development on agricultural Sector

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.145	.354		6.056	.000
	Food supply	.246	.071	.276	3.450	.001
	Poverty alleviation	.273	.110	.183	2.476	.014
	Job security	.600	.075	.742	8.044	.000
	Foreign exchange	.061	.057	.077	1.080	.282

a. Dependent Variable: Economic Development

The predictors of economic development are shown in the above table. It shows that all of the predictors, namely: Food supply, poverty alleviation, job creation and foreign exchange have positive relationship with economic development. Accordingly, farmers agreed with assertion

that Food supply, poverty alleviation, job creation contributed significantly to the economic development. Since all of the p-values are less than 5% level of significance. Foreign exchange on the other hand have positive but insignificant relationship with the economic development.

Table 2: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.596 ^a	.356	.339	.84085

a. Predictors: (Constant), food supply, poverty alleviation, job creation, foreign exchange.

Table 2 shows the summary of the model in table 1 which depicts how much of the variance in the dependent variable (customer satisfaction) is explained by food supply, poverty alleviation, job creation and foreign exchange. In this case the R square is 0.356 expressed by a percentage, this means that the food supply, poverty alleviation, job creation and foreign exchange explains 36% of the variance in the economic development.

4.2. Discussion of Findings

The study investigated the impact of agricultural sector on the

economic development using Kebbi state as a case study. Findings from the multiple regression model revealed that agriculture contributed significantly to the economic development in providing food, alleviating poverty and job creation. Whereas, foreign exchange do not exact any significant influence on economic development. This study therefore supports with the findings of the previous studies by Omorogiuwa, Zivkovic and Ademoh (2014) ^[13] who found out that there is insignificant relationship between foreign exchange and economic development in Nigeria.

5. Conclusions

The study concludes that agricultural sector contributed played a major role to the economic development in terms of food supply, poverty alleviation and job creation. However, foreign exchange contributed insignificantly to the economic development in Kebbi state.

6. Recommendation

Based on the conclusions drawn, the study made the following recommendation:

In order to convince other countries to accept agricultural products from Nigeria, The current import and export regulations need to be revised. Since it permits currency conversions, it facilitates across border trade that may involve financial transactions, investments and the exchange of goods and services.

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