

RE-ENGINEERING THE AGRICULTURAL SECTOR: A PANACEA FOR ECONOMIC GROWTH AND INDUSTRIAL DEVELOPMENT IN NORTH-EASTERN NIGERIA



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Abstract

It may be recalled that in the 1960s, 1970s and early 1980s, agriculture was the mainstay of Nigeria's economy, as it contributed over 80% of the country's GDP, over 70% of the GNP, source of raw materials for industries & export; above all a major source of employment in the country. But agriculture today has witnessed a decline, to an extent that many today sees agriculture as pre-occupation for the poor or rural dwellers, especially in the North-east. It is in view of this that this study seeks to examine the impact of agriculture on economic growth and industrial development of North-Eastern Nigeria. This study employed survey design and content analysis. Primary data was generated through administration of structured questionnaire and interview; whereas secondary data on the other hand, was generated through content analysis. The population of the study was drawn from a sampled distribution of peasant farmers in nine Local Governments Areas of Adamawa, Gombe and Taraba states in North-eastern Nigeria. These local Governments were selected purposively for their engagement in farming activities in significant proportion. Findings were made that agriculture has a significant impact on the growth and industrial development of the Nigeria's economy. And that they have not only economic implications but social implications as it is a major source of employment; especially to the teeming youth populace who is idle and engage in all forms of vices/restiveness. And that there is a significant relationship between poor infrastructure/technology applications and increased agricultural output. In line with the findings; this study recommended that the government as a matter of urgency pro-active measures to reach out to farmers through a community agricultural network and provide succor to the plight of farmers within the threshold of reviewing the Land use Act; which will make the arable in the north-east more accessible to farmers. Provide agricultural inputs in form of fertilizers, insecticides, hybrid seedlings, etc and also enhance tax incentives available to agricultural productions and agro-allied businesses. And that a mechanized agricultural loan scheme be provided such that modern farm equipments like tractors, harvesters, harrows and other state of the art farm equipments be given to farmers in form of loan and the repayment period should cover half of the estimated useful lives of such machines.

Keywords: Agriculture, food security, Re-engineering, economic growth, industrial development, employment generation.

Background to the Study

Since the petro-dollar replaced the agro-dollar in Nigeria as the chief foreign exchange earner of the country in the early 1970s, public institutions, corporate entities and individuals in the country re-directed their attention to the oil and gas sector, such that the Federal Government, State Governments and Local Government councils in the country today rely solely on the statutory allocation from the Federation account, which over 80% of it is earned from the oil money. University graduates and the teeming youth population of the country today look up to oil companies in the upstream and downstream sectors for white-collar job. In fact, a survey conducted by Azizi (2007) and Nicholas (2009) among final year students in 12 Nigerian universities revealed that 6 out of every 10 prospective University graduates in Nigeria preferred to gain employment with oil companies, 3 out of every 10 preferred to work in the banking sector and only 1 out of every 10 selected other sectors of the economy. And 0 out of every 10 selected agriculture/or the agro-allied sector. This menace of relegating agriculture to the background has today cut across all age groups in the Nigerian society. Every average Nigerian citizen today wants to be rich overnight, by any means with the oil boom, regardless of the issue of food security.

In the 1960s and early 1970s, agriculture was the mainstay of Nigeria's economy, as it contributed over 80% of the country's GDP, over 70% of the GNP, major foreign exchange earner, source of raw materials for industries & export; above all a major source of employment in the country. With the discovery of crude oil in the Niger-Delta region in commercial quantity, agriculture witnessed a decline and became neglected, to an extent that many today see agriculture as pre-occupation for the poor or rural dwellers. In view of the persistent decline in agricultural production and the realization of the fact that crops and animal production holds the key to the survival of the manufacturing sector and the economy, the Federal Government of Nigeria has established several agricultural development policies aimed at reviving this sector, but it seems the lost glory of agriculture is yet to be restored.

In Nigeria, the predominant occupation of the people, especially rural dwellers still remains farming; most of this farming is done on subsistence basis and these farmers live from hand to mouth. Nigerian farmers are faced with the problems of inadequate finance, lack of modern farming equipment, lack of technical know-how, complete absence of research ideas and dissemination of research information. The government has initiated several Support programmes, aimed at overcoming all these problems, but one would begin to wonder if these programmes have solved the afore-mentioned problems. It is against this background that a study of this nature would not only be timely but inevitable.

In North-Eastern Nigeria, having advantage of the fertile landmass, especially in the savannah region and the green vegetation, agriculture has the potentials of stimulating economic growth and development of the region, developing local industries and generating employment for the teeming youth population. It is in view of this that; researchers need to re-direct their attention to focus on the development of agriculture which has a direct impact on food security, employment generation, income generation and a major source of raw material for other sectors of the economy. Re-engineering refers to the act of overhauling systems and processes from the design stage, development and introduction stages. Re-engineering in agriculture therefore, is construed by this study as an act of reviewing the land tenure system, reviewing the methods and processes of traditional/subsistence farming and the design, development and introduction of mechanized methods and processes of farming, in order to re-invent and rejuvenate the agricultural sector in Nigeria.

Agricultural re-engineering involves the use analytical models and techniques to solve the myriad problems affecting agricultural productions. These problems as mentioned earlier ranges from inadequate finance, lack of modern farming equipment, lack of technical know-how, complete absence of research ideas and dissemination of research information. However, in practice, agricultural re-engineering does not involve the utilization of any specific skills or models but it is interdisciplinary in approach, as it draws from the knowledge of crop production, animal production, soil science, agricultural engineering, agricultural financing, irrigation facility management, agricultural economics, agricultural extension services and applied agriculture to address identified problems, as well as to devise new and innovative means of enhancing agricultural production. It is also worthy to note that re-engineering agricultural production in all its ramifications would mean a giant step toward job creation, enhancing food production and global food security which will translate into an increased GDP and GNP of the country.

It is in view of the above that; researchers need to re-direct their attention to focus on agricultural production which has a direct impact on the level of poverty in most emerging economies, Nigeria inclusive. The need to pay more attention to research efforts geared towards reviewing the land use act; re-invention of agricultural systems and practices; design, development and introduction of mechanized farming cannot be over-emphasized, as it is known to be the engine room of growth.

Objectives of the Study

The main objective of this study therefore, is to examine the impact of agriculture on economic growth and industrial development of North-Eastern Nigeria and also examine some of the problems affecting agricultural production in Nigeria. In an attempt to achieve the stated objective, some research hypotheses were developed in null form, thus:

Hypothesis One: Agriculture has no impact on economic growth and industrial development in Nigeria.

Hypothesis Two: There is a significant relationship between lack of modern farming skills and increased agricultural output.

Hypothesis Three: There is a significant relationship between poor infrastructure/technology applications and increased agricultural output.

Scope and Significance of the Study

This study covered the impact of agriculture on economic and industrial development in Nigeria; it was however limited to three states in Northeastern Nigeria, namely: Adamawa, Gombe and Taraba States. A great deal of emphasis was placed on questionnaires and oral interview that were administered among farmers in some local government areas of these states.

This study would be a cursor for policy makers charged with the responsibility of formulating policies on agriculture in Nigeria. They would have a clear understanding of the agricultural potentials available in this country; especially in the Northeast sub-region. Investors (both domestic and foreign) will be familiarized with the agricultural potentials available in the Northeastern states. Farmers will also find this research report indispensable as it highlighted the major problems they face in farming activities; this would enable them pursue a common platform for government intervention programmes in these three states which constituted the study area.

Conceptual Considerations

In this section, relevant literatures related to the study were reviewed, relevant publications both local and international were reviewed including the work of Azubike (2009), Nzotta (2007), Odusola (2006), Appah, (2004), Appah and Oyandonghan (2011), Anyanfo (1996), Anyanwu (1997), Tosun and Abizadeh (2005), (Kaldor and Hume, 2004), Longe, (1997), Due (1980), Agyel, (1990), etc. This section further discuss some of the past agricultural policies of government, a look at the strategies used by the government in supporting small scale farmers and concluded on the economic growth and development theory.

An Overview of Agricultural Production

Agriculture is by far the most important sector of the Nigeria's economy, engaging over 70% of the labour force. Agriculture contributes immensely to the Nigerian Economy in various ways, namely; in the provision of food for the increasing population; supply of adequate raw materials and labor input to a growing industrial sector; a major source of employment, generation of foreign exchange earnings and provision of a market for the products of the industrial sector. Agriculture is widely driven by the public sector (i.e: the government), which has established

institutional supporting form of agricultural research, extension, commodity marketing, input supply and land use legislation to fast-track the development of agriculture.

The Declining Trend of Agricultural Production in Nigeria

Agricultural productivity started declining in Nigeria in the decade of independence, Eluhaiwe (1993) posits that before independence, the agricultural sector contributed about 64.39% this fell to about 18.00% in 1990. The Federal Office of Statistics, Economic and Social Statistics Bulletin, January, 1995 also concurred that the decade of independence witnessed a drastic reduction in the country's agricultural output.

Johnson (1992), positioned that Nigeria before the civil war has abundant food supply which were sold at cheaper rate and the country's export during those days were mainly agricultural during which Nigeria had major share in the exportation of Cocoa, Palm Product, Groundnut, Cotton etc. but with the emergence of oil sector as the major exporting sector in the early 70's the situation changed. The oil industry grew rapidly while agriculture started to decline and the relationship between the development of the oil and gas sector and the agricultural sector seems to be inverse (Olatunbode, 2000).

This decline can be explained by the greater diversification which have taken place in the economy, including growth in industrial sector, increase in urbanization, but the prominent reason is an increased dependence on petroleum resources, while the agricultural sector suffer a continual decline due to neglect. This is confirmed by the gradual decrease in most cash crop production which includes: Rubber, Cocoa, and Oil Palm in the southern part and the gradual disappearance of the famous groundnut pyramids in Kano, and cotton in the extreme northern parts of the country. Therefore, decline in agricultural production in Nigeria is largely due to negligence to provide adequate finances to the present practicing farmers, Agricultural sector invariably constitute a significant but declining proportion to Gross National Product (G.N.P).

Government Intervention Policies in Agricultural Development

Policy is said to be an intervention, a course of action taken by government, or management (in the case of an organization) or better still, an individual to influence or arrived at pre-determine outcome. The Federal Government of Nigeria (FGN) did recognize the importance of the agriculture early enough, so it decided to pursue policies that promote access to finance and financial infrastructure for agricultural production, with the ultimate aim of achieving the country's developmental goals. The reasons for government intervention in the agricultural financial markets are to:

- 1 Smoothen imperfections in the agricultural financial market: the agricultural financial market (also the rural financial market (also the rural financial market) exists to facilitate exchange, a platform or the reconciliation of demand and supply of capital for agricultural and rural development. Often times, the market is constrained by certain factors such as information asymmetry, moral hazard, adverse selection etc. from performing its roles effectively. Government then intervenes to iron out those imperfections and create a more pare to-optimal environment for market players.
- 2 Ensure food security: since finance is critical for investment in agricultural production either in form of equity or debt, government intervention in form of expenditure on credit to farmer's direct production etc is to guarantee that food is available and affordable. There is the realization that securing access to cheap food for Nigerians would ensure social stability and lessen reliance on food imports which supply can be cut at anytime depending on prevailing global political and economic conditions or similar conditions on the exporting countries.
- 3 Achieve favorable balance of payment: a high food import bill-exerts pressure on the foreign reserves of the country, leading to its depletion. This adversely affects the (BOP) and hence, the international position of the country. Whereas we have being endowed with abundant land resources and farming-friendly climate, just a little push in the direction of other resources, including financial capital is all that is needed to ensure that this happen, thereby saving foreign reserves for the productive use.
- 4 Promote foreign exchange earnings from agricultural exports: government policies on agricultural financing aim at, first, ensuring self-sufficiency in food production and then, exporting the surplus to earn foreign exchange.
- 5 Enhance other socio-economic issues: such as poverty reduction, employment generation, reduction in rural-to-urban migration and especially, food price stability since it is known that food price fluctuations are the precursor of inflation in developing countries. This follows from Engel's law, which states that a higher proportion of income in developing countries is spent on food. And since income elasticity of demand for food is highly elastic, it is easy to see why expenditure on food is large enough to cause inflationary trends in the country.

Government Agricultural Policies in Nigeria

The Federal Government of Nigeria (FGN) has over the years on embarked on certain number of agricultural programmes aimed at promoting access to finance and financial infrastructure for agricultural production, in order to boost food production, provide adequate supply of raw materials and labour input to a growing industrial sector; generate employment and foreign exchange earnings. The Federal Government of Nigeria has intervened in the following ways:

- 1 Agricultural Credit Guarantee Scheme Fund (A.C.G.S.F), 1978 till-date: Established by Act No. 20 of 1978, this offers a 75 percent guarantee backed by the Central Bank of Nigeria (CBN) on agricultural credit in default, net the amount realized from the disposal of security for such credit. Financing is at market determined interest rates. The CBN offers a rebate equivalent to 40 percent of loans interest when loans are duly repaid.
- 2 Small and Medium Enterprises Equity Investment Schemes (SMEEIS) 2001: This is a voluntary initiative of the banker's committee to support Micro, Small and Medium Enterprises (MSMEs) including agro and agro-allied businesses. Financing is in form of either debt or equity. In the case of debt, the borrowing rate is not to exceed single digit.
- 3 Supervised Agricultural Loans Board: Most state governments set up these boards to dispense finance in form of credit to farmers. It should be added that aside this boards, the state Agricultural Development Programmes (ADP) have recently been working in conjunction with the National Programmes for Food Security (NPFSS) in the provision of credit to farmers.
- 4 Agricultural Development Programme – 1975: It is jointly funded by World Bank, Federal and States in Nigeria aimed at provision of rural roads to farm service centers, etc. toward achieving food production. Extension activities implemented by ADPs included facilitating access to improved technology and helping lead farmers to teach others.
- 5 Operation Feed the Nation (OFN) - 1976. OFN was part of the third National Development Plan. It had objectives to mobilize the people to embrace agriculture, create job, income, and utilizes all available land resources in the country.

Major Agricultural Potentials Available in North-Eastern-Nigeria

The North-east sub-region comprises of six states, namely; Adamawa, Bauchi, Borno, Gombe, Taraba and Yobe. However, this study was conducted in three states (Adamawa, Gombe and Taraba). These three states are known for agricultural activities, favored by the green vegetation, the savanna region, undulating hills and mountains of the Mambilla plateau (in Taraba state) which is a hub for tea and cattle production, etc. In fact, in terms of agro-allied industries, the North-east sub-region is host to a handful number of manufacturing companies whose major raw materials input are obtained from agriculture; the Nigerian Beverages Production Company (NBPC) LTD in Kakara, Mambilla plateau-Taraba state, the Savanah Sugar Company in Numan, Adamawa state, the Maiduguri Flour Mills, the Potiskum Flour Mills, the AFCOTT Nigeria PLC in Ngurore, Adamawa state, the Baissa Timber Company in Taraba state, the Lau Tomato Company in Taraba state, etc. The region lies mainly in the savannah belt which supports the cultivation of cash crops, food crops and animal products like Maize, Rice, Beans, Cowpea, Sorghum, Millet, Guinea-Corn, Yams, Cassava, Onion, Tomatoes, Pepper, Cattle, Sheep, Goats, Pigs, Poultry, Fish, Oil-Palm, etc. In fact, these potentials can best be presented based on the Richardian theory of comparative cost advantage. The major agricultural products found in the study area are grouped according to local government areas, in Table 1.1 below.

Table 1.1: Showing Agricultural Potentials available in L.G.As within the Study Area

| S/NO: | State | L.G.A | Agricultural potentials |
|-------|---------|------------|--|
| 1 | Adamawa | Ganye | Yams, Groundnut, Sugar-Cane, Maize, Orange, Mango, Water -Melon, Beans, Guinea - Corn, Cassava, Cattle, Sheep, bee-keeping, Goats, Poultry and Fish farming. |
| 2 | Adamawa | Fufore | Maize, Cotton, Rice, Beans, Cowpea, Millet, Guinea -Corn, Onion, Tomatoes, Cattle, Sheep, Goats, Poultry and Fish farming. |
| 3 | Adamawa | Maiha | Rice, Beans, Cowpea, Sorghum, Millet, Guinea - Corn, Cassava, Onion, Tomatoes, Pepper, Cattle, Sheep and Goats. |
| 4 | Gombe | Akko | Groundnut, Rice, Beans, Cowpea, Sorghum, Millet, Guinea - Corn, Cassava, Onion, Tomatoes, Pepper, Cattle, Sheep, Goats, Poultry, and Fish. |
| 5 | Gombe | Kaltungo | Rice, Beans, Cowpea, Sorghum, Sugar-Cane, Millet, Banana, Groundnut, Mango, Orange, Guava, Guinea - Corn, Cassava, Onion, Tomatoes, Pepper, Cattle, Sheep, Goats and Pigs. |
| 6 | Gombe | Funa -Kaye | Rice, Beans, Cowpea, Sorghum, Millet, Guinea-Corn, Maize, Vegetables, Onion, Tomatoes, Pepper, Cattle, Sheep and Goats. |
| 7 | Taraba | Sardauna | Pear fruits, Banana, Guava, Mango, Maize, Beans, Groundnut, Vegetables, Soya -beans, Cocoayams, Cassava, Euclatus, Kola-nuts, Pepper, Cattle, Sheep, Goats and Oil -Palm. |
| 8 | Taraba | Takum | Yams, Cassava, Tomatoes, bee-keeping, Pepper, Poultry, Fish, Oil-Palm, etc |
| 9 | Taraba | Zing | Yams, Cassava, Rice, Tomatoes, Pepper, Poultry, Fish |

Source: Generated by the Researcher via Field Survey (2014)

The table above shows that the different local communities in the Northeast are differently endowed. With one, two or three of the local areas having one or two products in common, therefore; the principle of comparative cost advantage advanced by "David Richardo" can be applied such each local government area can concentrate on the production of product that it has a comparative cost advantage over it. It will encourage mass production, increased output as a result of benefit of specialization and efficiency.

The theory holds that nations should produce those goods for which they have the greatest relative advantage in his book "Principle of Economy" (1817), Richardo argued that it makes sense for a country to specialize in the production of those goods that it produces most efficiently and to buy the goods it produces less efficiently from other countries, even if this means buying goods from other countries that it could produce itself efficiently. Therefore, these communities may decide to produce goods that they have the greatest relative advantage and buy the goods it produces less efficiently from other communities.

Problems Affecting Agricultural Production in North-Eastern-Nigeria

The major problems facing small Scale Peasant farming and commercial farming in North-Eastern States were identified as follows:

1 Inadequate agricultural loan and subsidy: As summarized by Stevenson (2001), access to financing is one of the major impediments of both small scale and large scale farmers in Nigeria. Farmers were disadvantaged in capital markets because they lacked the collateral security or

knowledge to obtain commercial loans, especially at market interest rates. Therefore, farmers lacked access to the resources necessary to expand, modernize or grow their potentials and productivity. Their stunted growth prevented farmers from increasing employment and productivity and also contributing fully to overall economic growth in the economy. To acquire finance in starting small scale farming in Nigeria could be identified as one of the major, if not the biggest constraint facing them. Inegbenebor (2006) stresses that even though banks are a major source of funds for small and large scale farming in the developed world, in Nigeria, this is not the case.

2 Lack of Adequate Support and Incentives Programmes: Ekpenyong (2002) opined that Past government policies were centered on small scale farming development which has the capacity to exploit local endowments and propel the engine of growth if properly managed. This policy focus on small farmers started with the Third National Development Plan (1975-1980), but the implementations of these programmes were faulty as most of the loan schemes provided were not accorded to targeted farmers.

3 Lack of Modern Farming skills: Coughlin (2000), stated that the ability to run a successful farming venture, farmers needs a collection of competencies in order to manage these functions. For example research and development (R&D) in new production skills, financial control and market management all demand education and experience. Rapid developments also require current advanced knowledge in new farming skills and innovation. The management of successful farming venture also demands efficient training in production, financing, marketing, etc. Ude (1999) claimed that Most often, the owners of large scale farms pay more attention to producing one item or the other while they pay little or no attention on how to acquire knowledge in innovative skills concerning their farming activities.

4 Lack of Infrastructure and Technological Application As categorized by Aiyedun (2004:4) another area where farmers are facing a lot of problems in terms of Inadequate and inappropriate technology or non use of modern equipment in farming, lack of capacity to translate scientific research results into agricultural outputs are identified as some of the factors hindering growth of agriculture. Most farmers in Nigeria still use local implements and crude methods in their production.

Theoretical Framework

This section discussed the relevant theories related to this study. Some few theories are related to this study, among which includes: the contingency theory, the economic resources dependency theory, the institutional theory and the positive development theory (PDT).

The contingency theory may be argued to hold that agriculture and industrial development are necessary contingents in the economic growth and development of any nation. Difference may exist in the nature, natural endowment, vegetation, land topography, operations and farming

activities, but the environment in which these activities takes place can be evolved to develop agriculture and address the issue of food security and rural unemployment. In other words, contingent events may occur that alternatives considered being the 'best way' of undertaking agricultural activities, in order to enhance industrial development.

The institutional theory has been used by Chariri (2011b), Meyer & Rowan (1977) and DiMaggio & Powell (1983) to investigate impediments of national development in Indonesia. Carpenter & Feroz (2001) to explore the factors that influence the industrial development and the role of government in providing an enabling environment for economic and development in the US. The version of the theory adopted by this research is traced by Carpenter & Feroz (2001) to Meyer & Rowan (1977) and DiMaggio & Powell (1983).

The economic resources dependency theory to explore how people depend on one source of natural resources at the expense of other sources and linked the Nigerian case to this theory by stressing that the increased dependence on petroleum resources, while the agricultural sector is being neglected, captioned by the gradual decrease in most cash crop production which includes: Rubber, Cocoa, and Oil Palm in the southern part and the gradual disappearance of the famous groundnut pyramids in Kano, and cotton in the extreme northern parts of the country.

The positive development theory (PDT) is relevant to this study. This theory is concerned with management's motives for developing an economy (Healy & Palepu, 2001). According to Setyorini & Ishak (2012), the positive development theory is grounded on a notion of national development theory whereby national interest usually referred to as opportunistic behavior is held as the basis for all economic activities. They maintain that on the premise of the theory, national interest is the reason for national development, as well as policy making and implementations. Agriculture can therefore be seen as a nexus of industrial and national development.

Methodology

The population of the study was drawn from a number of peasant farmers in nine Local Governments Areas of the three selected states. The sample for the study is made up of 450 peasant farmers selected from Sardauna, Zing and Takum LGAs in Taraba State, Akko, Kaltungo and Funa-Kaye LGAs in Gombe State and Ganye, Fufore and Maiha LGAs in Adamawa State. A total of 450 questionnaires were distributed and only 298 were returned, representing a response rate of 66.22%. The research was conducted between 5th July, 2013 to 25th November, 2013. From the collected 298 responses, 42 were from Sardauna, 35 from Zing, 23 from Takum, 44 were from Akko, 31 from Kaltungo, 25 from Funa-Kaye, 38 from Ganye, 39 from Fufore and 21 from Maiha LGAs of the three selected states.

These local Governments were selected purposively for their engagement in farming activities in significant proportion. However, a stratified sampling method was used in selecting them as the LGAs in the states were first classified into three strata; i.e: according the three senatorial districts in each state. From each senatorial district, one (1) LGA was selected, to enhance even spread and coverage of the LGAs in the three states.

This study employed survey design and content analysis. Primary data was generated through administration of structured questionnaire and interview; whereas secondary data on the other hand, was generated through content analysis. Structured questionnaire was used to collect the primary data. The questionnaire was structured on a 5 point likert-scale arranged in four sections; A – D covering a total of 20 questions with each section having 5 questions that shall be used to test the four null hypotheses formulated. The Five-point likert scale was categorized follows: Strongly Disagreed -1, Disagreed-2, Undecided -3, Agreed-4, and Strongly Agreed – 5.

The following hypotheses were developed in null form, to enhance the collection of adequate and relevant data needed for the study.

Hypothesis One: Agriculture has no impact on economic growth and industrial development in Nigeria.

Hypothesis Two: There is a significant relationship between lack of modern farming skills and increased agricultural output.

Hypothesis Three: There is a significant relationship between poor infrastructure/technology applications and increased agricultural output.

Methods of Data Presentation and Analysis

This research used tabular method to present the data collected and with the aid of a computer based package known as the Statistical Package for Social Sciences (SPSS). Also, the research results was interpreted and discussed with respect to the research problem, research hypotheses, relevant literature and experience. Conclusions was drawn, recommendations made and relevant areas for further studies suggested. A simple analysis of variance (CHI-SQUARE) was employed to analyze the data that was collected using the questionnaire. The result of the analysis was interpreted and use for testing the hypotheses.

Data Presentation and Interpretation

The table (1.1) below shows the data collected from respondents in a coded form so as to enhance their input into the computer (SPSS) for analysis. Question code refers to a special number assigned to each question as structured in the questionnaire. For instance, question code A1 refers to question number 1 under section A of the questionnaire, and so on. The respondents' choice narrowed down answers actually given by the respondents to an already 5 leveled scale numbered

1 – 5; 5 indicating that the respondent strongly agree to a very high extent with the assertion (question), 4 for high extent, 3 for average extent, 2 for to a low extent and 1 where the respondent strongly disagree to a very low extent. Frequency refers to the number of time respondents made a particular choice for a particular assertion (question). Table 1.2 below is used as an example to presents the data in Section A of the questionnaire in a coded form.

Table 1.2: Descriptive Statistics of the Impact of Agriculture on Economic Growth and Industrial Development in North-Eastern Nigeria

| Variables | MEAN | Std Deviation | Skewness | Kurtosis | FREQUENCY (%) | |
|-----------|--------|---------------|----------|----------|---------------|---------|
| | | | | | CUM.HIGH) | CUM.LOW |
| A1 | 2.8875 | 1.55078 | .151 | -1.464 | 75 | 25 |
| A2 | 2.2750 | 1.2322 | .703 | -.655 | 95 | 5 |
| A3 | 3.1000 | 1.37427 | -.154 | -1.290 | 82.5 | 17.5 |
| A4 | 2.1000 | 1.14295 | 1.052 | .351 | 95 | 5 |
| A5 | 3.0500 | 1.33027 | .171 | -.868 | 75 | 25 |
| A6 | 2.0875 | .98333 | 1.214 | 1.533 | 96.3 | 3.7 |
| A7 | 3.7875 | 1.46429 | -1.060 | -.322 | 57.5 | 42.5 |
| A8 | 2.7750 | 1.42291 | -.023 | -1.390 | 88.8 | 11.2 |
| A9 | 2.5625 | 1.11200 | -.020 | -1.347 | 72.5 | 27.5 |
| A10 | 4.0750 | 1.20940 | .480 | -.478 | 90 | 10 |
| A11 | 2.9750 | 1.62243 | .041 | -1.618 | 71.3 | 28.7 |
| A12 | 2.2500 | 1.34541 | .584 | -1.131 | 95 | 5 |
| A13 | 4.0125 | 1.20646 | .109 | -.757 | 85 | 15 |
| A14 | 2.6375 | 1.42530 | -.454 | -1.218 | 85 | 15 |
| A15 | 3.1875 | 1.41505 | -.204 | -1.057 | 73.8 | 26.2 |

Source: Generated by the Researcher (Using SPSS 2014)

The Mean values in table 1.0 show that A10 and A13 with 4.0750, 4.0125 (Agriculture has impact on Economic Growth in North-Eastern Nigeria). While A4 (Agriculture has impact on Industrial Development in North-Eastern Nigeria) was the least in agriculture and economic growth with a mean of 2.1000.

The frequency column in table 1.0 shows the cumulative low and cumulative high values associated with agriculture and economic growth and industrial development. It should be noted that options 1,2,3 in the questionnaire (i.e., "Strongly Disagree", "Disagree", "undecided") make up the Cumulative Low column in table 1.2, while options 4, and 5 in the questionnaire (i.e., "Average usage," "Highly used," and "Very highly used) make up the Cumulative high column in table 1.0.

Under the Cumulative Low frequency column in table 1.1, it can be seen that none of the variables received relatively low usage emphases as all the variables are far below 50%. Table 1.0, also, shows that the whole fifteen (15) variables received relatively high usage emphases (as shown in the "cum high" column). These variables are A1 75%, A2 95%, A3 8.25%, A4 95%, A5 75% A6 96.3%, A7 57.5%, A8 88.8%, A9 72.5% A10

90% A11 71.3% A12 95% A13 85%, A14 85%, and A15 73.8%. These means that agricultural production is positively related to economic growth and industrial development as it enhance and facilitate economic development through direct food security, employment generation, income generation and a major source of raw material for other sectors of the economy.

| Table 1.3: Showing Analysis of Variance (ANOVA) with Friedman's Test | | | | | | |
|--|---------------|---------------------|-----|-------------|-------------------------|------|
| | | Sum of Squares | Df | Mean Square | Friedman's Chi - Square | Sig |
| Between People | | 169.552 | 46 | 3.686 | | |
| Within People | Between Items | 27.254 ^a | 14 | 1.947 | 63.592 | .000 |
| | Residual | 254.746 | 644 | .396 | | |
| | Total | 282.000 | 658 | .429 | | |
| Total | | 451.552 | 704 | .641 | | |
| Grand Mean = 4.3206 | | | | | | |
| a. Kendall's coefficient of concordance W = .060. | | | | | | |

Source: Field Study findings (2013)

Test of Hypothesis

HO1:- Agriculture has no impact on economic growth and industrial development in Nigeria.

HO2:- There is a significant relationship between lack of modern farming skills and increased agricultural output.

HO3:- There is a significant relationship between poor infrastructure/technology applications and increased agricultural output.

Interpretation of Result

As shown in the ANOVA summary table 1.3, there is much difference between the mean squares of between group and within group, resulting in significant differences ($F = 3.686$ and 0.396 ; $sig = 0.00$). Moreover, P value is lower than 0.05. This means that HO:1, HO:2 and HO:3 should be rejected.

Discussion of Results and findings

The result from Table A.3 above shows that $P < 0.05$ (the probability of significant of the F ratio is less than 0.05), which means that the result is significant, thus we reject the Null hypothesis:

Ho1: concluded that Agriculture has impact on economic growth and industrial development in Nigeria.

Ho2: conclude that there is a significant relationship between lack of modern farming skills and increased agricultural output.

Ho3: conclude that there is a significant relationship between poor infrastructure/technology applications and increased agricultural output.

The chi-square test statistic is 63.592 with an associated $p < 0.001$.

The null hypothesis should be rejected, since $p < 0.001$ and a conclusion is made that agriculture has a positive relationships with economic growth and industrial development. Examine the pattern of numbers it is noted that more respondents agreed that agriculture enhance food security, employment generation, income generation and a major source of raw material for other sectors of the economy.

Conclusion

From the findings above, the following conclusions are drawn:

- This research concluded that agriculture has a significant impact on the growth and industrial development of the Nigeria's economy. And that they have not only economic implications but social implications as it is a major source of employment; especially to the teeming youth populace who is idle and engage in all forms of vices/restiveness. Although this research does not cover all aspect of agricultural productions but it examined the agric potentials available in the north-east sub-region and discovered that it is inclusively re-engineered, it would boost the GDP of the country.

- The research findings also show that there is a significant relationship between lack of modern farming skills and increased agricultural output. The results of the descriptive statistics indicated that most of the farmers in the north-east sub-region are engaged in agriculture for subsistence reasons; and they make use of local/traditional methods of farming despite the availability of arable land which has the potentials of supporting crops and animal production in commercial quantity.

- Finding were also made that there is a significant relationship between poor infrastructure/technology applications and increased agricultural output. The results of the descriptive statistics indicated that most of the farmers in the north-east sub-region make use of local farm implements despite the availability of machines and state of the art farm equipments which would boost agricultural production in the region.

Recommendations

Based on the conclusions drawn above, the followings are recommended:

- The government as a matter of urgency pro-active measures to reach out to farmers through a community agricultural network and provide succor to the plight of farmers within the threshold of reviewing the Land use Act; which will make the arable in the north-east more accessible to farmers. Provide agricultural inputs in form of fertilizers, insecticides, hybrid seedlings, etc and also enhance tax incentives available to agricultural productions and agro-allied businesses.

- There should be an accessible agric extension services to be provided to farmers on communal basis, such each farming community should have a community agric extension office; where all agricultural inputs in form of fertilizers, insecticides, hybrid seedlings, etc to be provided

to farmers be channeled through these offices and the community be made to participate in the running of the extension offices.

Although the government over the years has embarked upon several forms of agricultural interventions but the results in terms of productivity is not commensurate with the amount of investment. Therefore; this research recommends that a mechanized agricultural loan scheme be provided such that modern farm equipments like tractors, harvesters, harrows and other state of the art farm equipments be given to farmers in form of loan and the repayment period should cover half of the estimated useful lives of such machines.

References:

- Aiyedun, P. (2004). Reforming Nigeria's Agricultural system: Quarterly Journal of Administration, 4: 421 – 426.
- Agyel, A.K. (1990). The Principle of Personal Income Taxation in Nigeria. Lagos: Adeyemi.
- Anyanfo, A.M.O., (1996). Public Finance in a Developing Economy: The Nigerian Case. Department of Banking and Finance, University of Nigeria, Enugu Campus. Enugu.
- Anyanwu, J.C., (1997). Nigerian Public Finance. Joanne Educational Publishers, Onitsha
- Appah, E., (2004). Principles and Practice of Nigerian Taxation, Ezevin Mint Printers and Publishers, Port Harcourt.
- Appah, E. and J.K. Oyandonghan, (2011). The challenges of tax mobilization and management in the Nigerian economy. J. Bus. Admin. Manage., 6(2): 128-136. Curr. Res. J. Soc. Sci., 4(1): 62-68, 2012
- Azizi (2007) LA. (2004). the Declining state of agriculture in Nigeria, edition, Feetal Consulting Publishers, Lagos.
- Azubike, J.U.B., (2009). Challenges of tax authorities, tax payers in the management of tax reform processes. Niger. Account., 42(2): 36-42.
- Churchill L.A. (1995), An exploratory study of selected problems encountered by small businesses in a South African context. Journal of African Business, 5(1), 45-72.
- Coughlin, P. (2000) F. Private sector development assistance, overlapping or complementarities – analysis of three projects in Mozambique. Study commissioned by the Ministry of Industry and Commerce (MIC). MIC: Maputo.
- Due, F. (1980). Tax Policy and Economic Development, in Taxation for African Development. London: Hutchinson.
- Ekpenyong, D. B. (2002). Performance of Small Scale Enterprises in Nigeria during the Structural Adjustment Programme Implantation: Survey Findings. Journal of Financial Management & Analysis, 15(1), 38.
- Eluhaiwe, P. N. (1993): Logistics for Effective Agricultural Credit Administration in Ondo State. A Paper Presented at Ondo State Council of Agriculture Meeting 1st, 2nd April, 1993, Pp. 9.

- Federal Ministry of Agriculture (2006). (Value Added tax the Agricultural sector) retrieved.
- Federal Office of Statistics (1995), Economic and Social Statistics Bulletin, January, 1995
- Johnson, D. T. (1992): The Business of Farming. A Guide to Farm Business Management in tropic
Pp 53-78
- Kaldor, N. and Hume S. (2004). Tax incentives applications and development. Journal of Modern
African Studies, 2 (2): 1-5.
- Longe, F. (1997). Modern Economics of West Africa. London: Macmillan.
- Nicholas, P.T. (2009), "the people Development Fund/Loan for the Poor" Journal of Agriculture
and Rural Development Vol. 111, No Pp 44,
- Nzotta, S.M., (2007). Tax evasion problems in Nigeria: A critique. Niger.Account., 40 (2) : 40 43.
- Odusola, A., (2006). Tax Policy Reforms in Nigeria. Research Paper No. 2006/03 United Nations
University-World Institute for Development Economics Research.
- Olatutunbode, A. A. (2000): Financing Nigerian Agriculture. Challenge of implementation in
Nigeria. The 2000 NACB digest. Journal of the NACB Ltd, Pp 424-425.
- Stevenson, K.U. (2001), The Merchant Banks and Agricultural Finance in Nigeria. The Bullion,
CBN Journal. Lagos, April – June Vol. V. No. 2
- Tosun, K.A. and Abizadeh, U.R. (2005), Feeding the masses, which way out? Journal of Nigerian
Farmers Authoritative Agricultural News July Pp 3-4.
- Ude, O. k. (1999). Small Business Planning and Finance. Owerri, Apex ltd. Wikipedia: The Free
Encyclopaedia. [Online] Available: May 2009. http://en.wikipedia.org/wiki/Small_and_medium_enterprises. Retrieved 2009/05/30.