A Review on Communication as a Means of Bringing Back Nigeria's Lost Economic Glory Through Agriculture[†]

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Abstract

Communication has always been a powerful tool for initiating and implementing ideas that came to human mind. The importance of agriculture to the Nigerian economy is evident in the nation's natural endowments in production factors – extensive arable land, water, human resources, and capital. Exploring the nation's productive advantage in this sector is the fastest way to stimulate growth in the economy. This review would help inform policy decisions regarding resource allocation in agricultural growth and development to achieve desired economic growth. This review adopted the desk research methodology, several literatures pertinent to this study were reviewed. The findings showed that before the 'Oil boom' Agriculture was the major source of foreign exchange also contributing immensely to the annual GDP. Originally an agriculture dependent country, Nigeria shifted focus to oil exports in the 1970s and decades of slow economic growth follows; It was therefore recommended that, there is a need to refocus on agriculture now that global Agricultural activities have become sophisticated, with the aid of effective communication, appropriate knowledge and information can be timely disseminated to both crop and animal farmers (large or small scale) which will minimize the risk and uncertainty they usually encounter right from production to marketing of their produce and consequently improve productivity and profitability of agricultural business in Nigeria. In conclusion, this review takes a look at some of the challenges and unsuccessful attempt by past administrations towards reviving agriculture in other to remove food crisis, encourage massive agricultural development and bring back the lost economic glory of Nigeria. However, with modern channel and effective medium of communication, tremendous achievements and development are possible, taking India as a good example.

Keywords: Communication, Agriculture, oil export, knowledge, profitability

Introduction

Agriculture and communication can be said to be the oldest and most consistent survival activity since the creation of man. These two acts have been responsible for the sustainability of human existence on earth. Before the advent of modern technologies both in agriculture and communication, Nigeria was able to grow and sustain its economy even without the "oil money", but attention was shifted away from agriculture following the discovery of crude oil in 1956. Agricultural enterprise such as cocoa, groundnut, oil palm and cotton production accounted for a large chunk of foreign exchange earnings for Nigeria, thereby showing the important role

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agriculture has played and continues to play in the history and development of Nigeria (Okafor and Malizu, 2013). Looking back, Nigerian currency, the naira was twice the value of pound sterling (British currency), today a naira is 455 times lower in value than a pound sterling. It then becomes disturbing when the country can no longer sustain its economy that keeps getting worse, to the point of entering a situation referred to as "Economic recession" in the year 2016/2017, despite all the advanced technologies and revenue generated from crude oil over the years.

The importance of this review originates from the role of agriculture in Nigerian economy based on its size, potential and prospects. The resilient nature of the sector is evident in its ability to recover more quickly than other sectors from shocks resulting from disruptive events e.g. civil war (1967-70) and economic recession (1981-85), (2016-2017) periods. In Nigeria, because 70% of the population is employed in the agriculture sector, economic growth will be almost impossible to achieve without developing the sector. There is no doubt that agriculture is back on the development agenda. But despite the promises and the rhetoric from governments worldwide, investment in agriculture and rural development is still lagging. Communication for agriculture is also not seen as a major priority at either national or international level and the role of the media as an effective player in agricultural and rural development is undervalued. (Chukwu, 2015). Past administrations have tried implementing various policies and programs to revive agriculture and its lost glory but somehow these programs do not seem to achieve the much desired developmental goals. The failure of most of these developmental programs can be attached with some political and leadership issues in Nigeria.

Farming is the most important economic activity in many developing countries. In Africa alone, about 65% of the labour force is employed in the agricultural sector, which generates about 32% of gross domestic product (GDP) it is therefore interesting to note that millions of farmers are still trapped in poverty. The reasons are multiple but notably include the unavailability of credit, lack of market information, limited availability of agricultural extension and advisory services for farmers, as well as the lack of information and communication technologies (ICTs) for agricultural development (Aker and Mbiti, 2010).

However, it should be noted that sustainable agriculture is an important element in the overall effort to make human activities compatible with the demands of the earth's ecosystem. Thus, an understanding of the different approaches to ecological agriculture is necessary if we must utilize the planet's resources wisely. Returning to the economy, Olajide et al. (2012) used Ordinary Least Squares (OLS) regression method to analyse the relationship between agricultural resource and economic growth in Nigeria between 1970 and 2010. They found a positive causal relationship between GDP and agricultural output in Nigeria, however their study was limited to showing only that agriculture and GDP growth rate are related.

The objective of this work is to bring forth means by which agriculture can be effectively utilized to remove food crises and encourage massive agricultural development like it use to in the past before the oil boom.

The 1970 - 1986 periods, which coincided with intensive petroleum exploitation, was marked by policies that lacked interest in supporting agriculture. The strong decline in domestic agricultural

production reduced the country to a growing dependency on imported foodstuffs. In the wake of the major food crisis in the country in 1976, such programmes like "Operation Feed the Nation" (1976 - 1979) and "Green Revolution" (1979 - 1983) were set up. These programmes focused on strengthening agricultural production, providing subsidized inputs, community development, and access to credit. However, they were implemented without a transparent framework to structure action, and the successive governments did little at ensuring continuity (Chukwu, 2015).

How communication can be of help

It is a widely established fact there have been tremendous breakthrough in terms modern innovation and advancement in the field of agriculture especially in developed countries. However, after the creation, sourcing or accumulation of knowledge, the knowledge has to be disseminated to users to support the innovation process. Information and Communication Technology (ICT) can play a critical role in facilitating rapid, efficient, and cost effective knowledge management (Okafor and Malizu, 2013). The information and communication support during last 50 years has mainly been conventional. The extension personnel of the Department of Agriculture disseminated the technological messages to the farmers manually. This approach has not been able to reach majority of the farmers who are spread across the whole country. The diversity of agro-ecological situations adds to this challenge further. Farmers' needs are much more diversified and the knowledge required to address them is beyond the capacity of the grass root level extension functionaries. Consequently, a new paradigm of agricultural development is fast emerging; in both developing and developed countries, the overall development of rural areas is expanding in new directions - old ways of delivering important services to citizens are being challenged; and traditional societies are being transformed into knowledge societies worldwide. (Jayade and Khot, 2013).

Accurate and precise agriculture data and information is required for policy development, strategy formulation, monitoring growth and evaluating impact of policies and programmes for growth and sustainable development of the sector, Information and Communication Technology (ICT) is generally seen as an important means of achieving such a transformation (Meera et. al., 2004). When used as a broad tool for providing local farming communities with scientific knowledge, ICT heralds the formation of knowledge societies in the rural areas of the developing world (UNDP, 2012). However, this can only be realized when knowledge and information are effectively harvested for overall agricultural and rural developmental needs. This can only be achieved through the media of communication, which has also been transformed from traditional to mass media and now ICT/new media. The development of precision farming in Nigeria emphasizes knowledge-intensity; hence the agricultural paradigm in the developing world will have to be recast to take advantage of knowledge availability to achieve multiple goals of income, food and jobs. In that case, agricultural extension in the current scenario of a rapidly changing world, has been recognized as an essential mechanism for delivering knowledge (information) and advice as an input for modern farming (Jones, 1997). Agricultural information interacts with and influences agricultural productivity in a variety of ways. It can help inform decisions regarding land, labour, livestock, capital and management skills. Hence, the creation of agricultural information (by extension services, research, education programmes and others) is now often managed by agricultural organizations that create information systems to disseminate information to farmers so that farmers can make informed decisions in order to take advantage of market opportunities and manage continuous changes in their production systems. When the

information required by rural farmers is packaged in the language they understand and made available at the appropriate time, it will enhance agricultural productivity and ultimately food security.

In Nigeria, there are noticeable changes and transformations brought about by the emergence of Information and Communication Technology (ICT) in almost all aspect of living as well as the agricultural sector. Generally, there are three areas in which ICT can contribute to the agricultural sector: • Improved management of data and information • Improved services including marketing • Improved learning and capacity development. What is really needed is greater awareness and sensitization among policy makers about the potential of ICTs and improved information systems in contributing to the development of the agricultural sector, appropriate policies and investment in programmes that are aimed to improve data and information systems and the ability to use information in policy and strategy development and implementation (Okafor and Malizu, 2013).

Methodology

This study adopted the desk research method with diverse reference materials. These entails the use of secondary data in the process of data collection which give room for various literature reviews and making abstractions from existing documents. The desk research method covers academic papers, books journals and reports, publications as well as grey literature such as conference papers, thesis etc. This method of data collection was used because, it helps the researchers to examine current and past topical issues on the review study and it is also used to gather data that are quantified in an obstructive way.

Findings

Support for agricultural inputs has been a central element of Nigerian agricultural policy since the 1950s. This support consists primarily of distributing public subsidies so that farmers can easily acquire inputs (fertilizer, improved seeds and phytosanitary products). These levels of federal subsidies have followed a spiky path, with highs and lows, and methods of implementation have been highly variable. In addition to federal subsidies, each state allocates its own subsidies for fertilizer. These vary greatly from one state to another in both amounts (50 to 150kg per farmer) and subsidization rates (from 10% to 50%). Even so, many farmers still find it difficult to obtain good-quality inputs at an affordable price and at the time they are needed. The governments are yet to set up an effective regulation and monitoring system to address quality issues and the diversion of subsidized inputs to outside the country.

Communication for agriculture is also not seen as a major priority at either national or international level and the role of the media as an effective player in agricultural and rural development is undervalued. Reporting on agriculture is largely restricted to natural disasters, food shortages and rising food prices. Some argue, however, that the media has a potentially broader role in raising the profile of agriculture amongst decision-makers as well as the wider public, and in communicating farmers' needs management in the country. This situation was reversed in 1987 with the Structural Adjustment Programmes (SAPs) that sought to reduce the national economy's dependency on oil and promote the private sector as the engine driver of the

economy. Thus, in 1998, the Nigerian government once again turned its attention to the agricultural sector by adopting an agricultural policy that had the objective, among others, of ensuring food security for the population through the development of local production.
It has been observed that "prior to independence, traditional agriculture accounted for the bulk of Nigeria's export". But in contemporary times, traditional agricultural practice according to Garba (2006) has led to the deforestation of the aspects and theoretical propositions. This gap, he further observes, reflects a socio-technological schizophrenia in developing countries, where societies are caught between their own values and traditions and the slogans of modernity and development.

Moreover, rural development receives poor media coverage. Most reporters consider the issue to be of little interest and relegate items on them to the furthermost corners of the news. Furthermore, evidence of this fact is the rarity of specialist broadcasts on agriculture (Wood, 1995). The problem is partly explained by inadequate training facilities for agricultural journalism since collecting and diffusing this kind of information requires experience and a variety of skills. Knowledge of agronomy, economics, nutrition and the environment are prerequisites for journalists who want to understand agricultural issues. Unlike other sectors, such as human health, there is virtually no complete agricultural journalism programme available in Nigeria that takes all these different aspects into account.

Another major problem that has become the bane of agricultural development policy is the lack of continuity associated with government programmes. The effect of this on agricultural development has been far reaching. Successive governments came in to introduce new programmes, schemes and institutions, which in most cases do not represent a continuity of the existing ones. Policies are therefore abandoned midway, in most cases, before their effects become manifested.

Upshot to the above is the uncoordinated manner in which agricultural programmes and schemes have been handled. According to Nsi (1993), policies are pronounced and institutions set up that are in most cases either the negation of existing facility, or a duplication of it. A cursory look at these institutions shows duplication and overlapping of functions and activities in the operations of most of them. It is therefore clear that there are issues of inconsistent policies and lack of will in policy implementation that would need to be addressed. These two issues are negatively reinforced by intermittent change in government, resulting in lack of continuity. Overall, even with the proliferation of institutions, programmes and schemes, the impact on the ordinary farmer is minimal and thus no serious effect on agricultural output and outlook in recent times.
Part of problems militating against some programmes geared at improving agricultural production also include poverty, illiteracy, inconsistent agricultural policies, bureaucratic bottleneck, inadequate rural infrastructures, corruption, high post-harvest food loses and lack of interest among the youths in agriculture which in turn had led to the inability of the rural farmers to produce enough food for commercial purposes (Muhammad-Lawal and Atte, 2006).

There are also problems at the micro (individual) level that borders on the management of farm, sources of finance, supervision, etc. In Nigeria, majority of farmers are the most impoverished and backward of all professionals or businessmen. This is not the case in the developed countries where farmers are among the richest and most successful entrepreneurs. In addition, the level of

extension services is yet to succeed in meaningfully changing the orientation of an average farmer, especially where there is a conflict of culture and tradition. Furthermore, the medium scale farmers are compelled to contend with serious issues of management, financing, preservation and weather.

Furthermore, according to Abbah (2000), several socio-economic obstacles appear to bedevil agricultural development in Nigeria, they include: i. Lack of the basic statistical data and knowledge of the socio-economic background, the environment, the resources and the management capacities within the traditional production systems. ii. Rapid population growth, which in addition to associated socio-economic pressures, has outmoded the traditional farming systems that made the economic viability no longer to be appreciated. iii. The complexity of traditional agricultural production systems, the competition between the subsystems and non-farm components, and the farmers' interests in diversification. Iv. Irregular electricity power supply and other basic infrastructures to facilitate and encourage automatic system of commercial livestock production.

The following establishments were targeted at improved agriculture: 1. Structural Adjustment Programmes (SAPs) 2. Operation Feed the Nation (OFN). 3. River Basin Authority. 4. Integrated Rural Development Programme. 5. National Accelerated for Food Production Scheme. 6. The establishment of Agricultural and Co-operative Banks. 7. Green Revolution Programme (GR) among others.

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he objectives of these programmes included the following: 1. Attainment of self-reliance and self-sufficiency in the production of food requirements. 2. Promotion of a linkage between agriculture and other sectors of the economy. 3. Equitable and reasonable level of distribution of income among food producers and the maintenance of good nutritional standards. 4. Revamping of Agricultural sector so as to generate employment opportunities. These programmes have served as a strategic framework for the attainment of a sustainable agricultural development environment.

These programmes focused on strengthening agricultural production, providing subsidized inputs, community development, and access to credit. However, they were implemented without a transparent framework to structure action, and the successive governments did little at ensuring continuity. The enactment of the Land Use Act in 1978 marked a historic turning point for land use thus, the Federal government of Nigeria has embarked on agricultural development strategies and policies aimed at producing enough food for its teaming population. If the people in a Country are not properly fed, the act of governance becomes quite a big problem. The government in addition made provision for self-sufficiency in which, the government as a matter of necessity, consciously embarked on programmes and policies to raise productivity.

Government also assigned agricultural sector an ambitious role in its strategic planning frameworks. The strategic document for reducing poverty in Nigeria, "National Economic Empowerment and Development Strategy" (NEEDS II 2008 - 2011) emphasizes an economy driven by the private sector, while the "7-point Agenda", is a framework economic reform in the country. Adopted in May 2007, they are the medium-term policy documents intended to help the

country in achieving the Millennium Development Goals (MDGs) as well as the "2020 Vision" plan.

The strategic frameworks in NEEDS II and the 7-point Agenda have been translated into short-to-medium-term programmes. The Olusegun Obasanjo government also launched the Presidential Initiatives in 1999 for seven agricultural products (cassava, rice, vegetable oil, sugar, livestock, cultivated trees and dry grains). The aim of these initiatives is not only to boost Nigeria's agricultural exports by taking advantage of preferential agreements in the framework of the World Trade Organization (WTO) and the Economic Partnership Agreements between the European Union and the Africa-Caribbean-Pacific countries but also to make the most of the potential regional market made up of neighbouring countries. Although these measures have shown that investment in the agricultural sector can have concrete results in terms of increasing domestic production, their overall outcomes have been mixed and the only intensification of production segment has been taken into account, ignoring the downstream segments of the value chain (such as product processing).

In May, 2012, the Federal Government initiated the Growth Enhancement Support Scheme (GESS) to actualize the Agricultural Transformation Agenda (ATA) of the present Nigerian administration. GESS was aimed at subsidizing the cost of major agricultural inputs like fertilizer and seedlings. Over 14 million farmers throughout Nigeria qualified for direct redemption of farm inputs through the e-wallet system (communicating with rural farmers via mobile phones, precisely SMS). This shows that ICT/new media has a significant role to play in evolving such a paradigm.

The Federal government of Nigeria under President Muhammad Buhari also initiated several programs and policies towards agricultural development such as the National Agricultural Investment Plan (NAIP), Agricultural Promotion Policy (APP), Economic Recovery and Growth Plan (ERGP) among others.

Discussion

Agriculture continues to remain a major sector of the Indian economy. It provides 60 per cent of employment and continues to be the primary source of living for 70 per cent of the population. Technological progress in agriculture is, therefore, crucial for the overall economic development of the country and worthy of emulation by a nation like Nigeria. Indian population is 1.354 billion, that’s about six times larger than Nigeria; 199million and World’s population is 7.804 billion. When it comes to challenges, India faces more crucial challenges than Nigeria will ever encounter in a life time. In the current millennium, there are challenges of scarcity of land, water & resources and very high population to be faced simultaneously. There are many challenges to the Indian agricultural scientific community to provide the food security to the increasing population. The total geographical area of India is estimated at 328.8 million hectors. The gross cropped area is about 180 m.ha, of which 35 m.ha are under double cropping. Rice is the most important crop followed by wheat, pulses, oilseeds, sorghum, and maize. Cotton and sugarcane are the principal commercial crops.

If a nation as big as India can make use of communication to transform and develop their economy through agriculture then Nigeria should take a lesson from them and even do better, since we are not even up to one quarter of their population.

Realizing that there are numerous challenges to be addressed on priority for making India a developed nation through progress in agriculture, ICT was warmly embraced. In the current millennium, there are challenges of scarcity of land & resources and very high population to be faced simultaneously. Therefore, there are challenges to the Indian agricultural research to provide the food to the increasing population. The event of Information Communication Technology (ICT) as a highly powerful enabling tool for delivery of services in the public and the private sector has by now been universally recognized. ICT has the potential to change the information and knowledge in agricultural research as well as to disseminate it to the farmers**.**
It should be noted that India has one of the largest agricultural research systems in the world with the largest number of scientific personnel of any developing country except China. The research system includes approximately 30,000 scientists and more than 100,000 supporting staff actively engaged in research related to agriculture. What this means is that Nigeria will have to have similar research systems that are very active and rejuvenate the existing ones like IITA, IAR&T, and Federal Universities of Agriculture.

In India, ARIS 'Agricultural Research Information System' programme, was funded by World Bank under National Agricultural Research Project (NARP) and then National Agricultural Technology Project (NATP), resulted in creating awareness, access to basic computer facilities, Internet connectivity, email, development of databases, application software and HRD in computer application. Now it is time to go for more intricate real-time, system wide applications to conduct and manage agricultural research through a computerized system, which has become necessary in order to address the present day challenges of achieving increased growth rate coupled with efficient and prompt delivery systems. Thus ICAR through its project ARIS is developed infrastructure at majority of sites of National Agricultural Research System (NARS) institutions for development of database and access of information effectively. Now, ARIS have improved research; planning, dissemination of research findings, information sharing mechanism, feedback mechanism and provides help in bringing an element of transparency in flow of information, which are great gain for the system (Jayade and Khot, 2013).
Some forms of ICT used in India;

- **Digital content – databases, data warehouses, commodity/crop portals, inter crop portals, expert systems, simulation models, web services** Digitization of the traditionally existing content has gained importance for creating organizational knowledgebase and easy access of relevant information by the stakeholders. Contents in the form of WebPages, Databases, Data warehouses, Expert Systems, Application Software, Intranet and Work Flow Applications, Training Modules, Extension Modules, Web based Services etc. are necessity of the day in order to exploit full potential of the IT in agriculture. The people who own the content may be encouraged to create these contents and share based on policy.

- **Remote Sensing, Geographic Information System and Geographical Positioning System Remote Sensing (RS)** refers to the process of gathering information about an object, at a distance, without touching the object itself. The most common remote sensing method that comes to most people's minds is the photographic image of an object taken with a camera.

Remote Sensing techniques have a unique capability of recording data in visible as well as invisible (i.e. ultraviolet, reflected infrared, thermal infrared and microwave etc.) part of electromagnetic spectrum. Therefore, certain phenomenon, which cannot be seen by human eye, can be observed through remote sensing techniques i.e. the trees, which are affected by disease, or insect attack can be detected by remote sensing techniques much before human eyes see them. Geographical Information System (GIS) is a computer-based information system that can acquire spatial data from a variety of sources, change the data into useful formats, store the data, and retrieve and manipulate the data for analysis. Today, GIS is a multibillion dollar industry and has become part of a basic information infrastructure for private enterprises, government agencies, and academic institutions. The majority of the operational GIS are used for thematic mapping, handling spatial queries, and decision-making support.

- **Precision Agriculture;** Precision Agriculture is conceptualized by a system approach to re-organize the total system of agriculture towards a low-input, high-efficiency, sustainable agriculture. This new approach mainly benefits from the emergence and convergence of several technologies, including the Global Positioning System (GPS), geographic information system (GIS), miniaturized computer components, automatic control, in-field and remote sensing, mobile computing, advanced information processing, and telecommunications.

- **Agriculture Expert System;** An expert system is a specific kind of information system in which computer software serves the same function expected of an expert. The computer, programmed to mimic the thought processes of experts, provides the decision-maker with suggestions as to the best choice of action for a particular problem situation. The hope is that we can design computers (information systems) that extend our ability to think, learn, and act as an expert. Expert systems allow users to influence the knowledge of experts without requiring their presence. Expert systems are useful in any field especially in agriculture where experts are rare, expensive or inaccessible.

Information Communication Technology (ICT) has facilitated the much needed community empowerment and development by meeting their information needs. ICT is also an important enabler in research activities to accomplish tasks faster, more efficiently and effectively. It holds as much potential for development of agriculture sector as for any other sector in India and Nigeria. In India, Food grain Productions have increased to 255.36 million tonnes in 2012-13 from 50.83 million tonnes in 1950-51 (FAO Statistics, 2012).

Conclusion and Recommendations

This review has succeeded in bringing forth some of the potentials and benefits of agriculture to economic growth, as well as problems militating against Agricultural development in Nigeria. It also elicits how studies have shown that essentially, communication (especially the modern and advanced systems), is capable of developing agriculture which in turn leads to growing the economy of Nigeria. It was also observed that crop production subsector contributes the most to agriculture sector growth and that growth in the agriculture sector is overly dependent on growth of the crop production subsector. This indicates the importance of this subsector and probably, lack of attention or investment to the other subsectors. Therefore, increased efforts in developing

the livestock, fisheries and forestry subsectors will foster the contributions of agriculture sector to the Nigerian economy. This work, will to some extent, assist policy makers and government of African countries that are sincerely considering the growth of their economy with the aid of agricultural development.

As a form of recommendation ,quotes such as: -If you don't rear or grow it, you don't eat it; -Great farmers, Great nation; -No Farmers No nation; -Agriculture is amazing, embrace it; -Agriculture means food for all; - A hungry man is an angry man and a well fed man is a pleasant man (food for all equals to no violence) etc, should be constantly communicated to the citizens (especially the youths) on televisions, radios, social media and bill boards across the nation for proper orientation and motivation towards agriculture.

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