

Sustainable Agriculture, Poverty Reduction and Enhanced Livelihood: A Three-Step Approach to Sustainable Development in Nigeria

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Abstract

The majority of the population in most third world countries resides in the rural areas where farming is the predominant occupation. This study interrogated the extent to which sustainable agricultural practices can transform a rural farm population from one that is essentially poor to a vibrant semi-urban population whose standard of living is greatly enhanced in terms of income generation, access to basic necessities of life, education, sanitation, etc. Data was sourced from secondary materials which include books, magazines, journals, periodicals, newspapers, the internet, etc. the neoclassical theory of a linear closes system (Pearce, 1972) was adopted as the theoretical framework while the mode of content analysis employed as the tool of analysis revealed that a sustained agricultural practice can facilitate the process of poverty alleviation, improve the general welfare/living standard of the citizens and enhance the attainment of sustainable development in Nigeria. Government is therefore, advised to make greater effort at boosting sustainable agricultural practices as an avenue of facilitating sustainable development in the country.

Keywords: *Poverty reduction, Sustainable agriculture, Living standard, Sustainable development, Semi-urban population*

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Background to the Study

Public sector investment is key to poverty eradication as it provides public goods like agricultural research and extension, education, infrastructure and services usually not supplied by the private sector. The public sector also provides crucial incentives for the regulation of sustainable management of natural resources. Thus, investing in the agricultural sector is key to poverty eradication, hunger and malnutrition particularly in rural areas where most of the world's poorest live. Investments in agriculture have the propensity to simultaneously increase small scale farmers' productivity and income; diversify farmers' income through value chain development; and create more and better jobs for the rural poor. Unfortunately,

In the past 30 years, private and public investments in agriculture and rural areas have remained stagnant or have declined in most developing countries particularly in sub-Saharan Africa and South Asia, where poverty and hunger are most prevalent (FAO, 2012). Interestingly, with the adoption of the new 2030 Agenda for sustainable development, countries have renewed their commitment to fight poverty, hunger and malnutrition, recognizing that equitable and sustainable growth and inclusive structural transformation are key to achieving sustainable development and lifting people out of poverty.

Achieving the sustainable development goals such as poverty alleviation and improved living standards, will require a significant increase in the quantity and quality of investment in agriculture and rural areas. Almost a decade ago in 2009 precisely, the G8 countries pledged US \$20 billion to agricultural development at their summit in L'Aquila, Italy. These pledges increased at the Pittsburgh G20 summit of the same year.

The discovery of crude oil in commercial quantities in Nigeria by 1968 and the subsequent oil boom of the seventies, “culminated in the displacement of agriculture as the driver of the nation's economy” (NISER, 2015). Within a decade up to 1981, however, agricultural output in Nigeria declined and the nation began to import major food staple crops such as rice, wheat, sugar, fish, etc to augment local supplies. Since then, Nigeria has been spending substantial amount of its foreign reserves on importation of staple foods. “It spent over 1.3 trillion naira in 2010 alone on imports of wheat, rice, sugar and fish” (Adesina, 2012). The realization of the adverse implications of this situation led several previous administrations to initiate measures to bring about a turnaround. Thus, over the years, government has initiated various policies to unleash the potentials of Nigerian agriculture to feed its nation and become a leading exporter of food such as Operation Feed the Nation (OFN), Green Revolution, National Food Acceleration Production Programme (NAFPP), Directorate of Food, Road and Rural Infrastructure (DFRRI) among others. These programmes failed due to policy inconsistencies and corruption (Ifeanacho, Nte, and Nwagwu, 2009).

The above measures by various administrations in Nigeria underscore the realization of the importance of agriculture for purposes of poverty reduction. This importance is best summed up in the words of Shultz (1979). Most of the people in the world are poor, so if we knew the economics of being poor we would know much of the economics that really matters. Most of

the world's poor people earn their living from agriculture, so if we knew the economics of agriculture we would know much of the economics of being poor. Against the background of the above introduction, it stands to reason that the best approach to poverty reduction is through massive investment in agriculture since it employs the majority of the population.

Statement of the Research Problem

In what appears to be rule of the thumb, the vast majority of the citizenry in the developing countries reside in the rural areas where agriculture is the predominant occupation. Massive and increased investments in the agricultural sector certainly will guarantee employment and poverty alleviation thus facilitating the attainment of the poverty alleviation goal of the 2030 sustainable development agenda. Thus, there is much economic rationality in pursuit of sustainable agricultural practices for purposes of poverty reduction and enhanced standard of living in Nigeria. This study seeks to assess the extent to which sustainable agriculture can guarantee poverty reduction and enhanced livelihood in Nigeria.

Objectives of the Study

The broad objective of this study is to interrogate the adoption of a three step approach to poverty reduction consisting of sustainable agriculture, poverty reduction and enhanced livelihood as a viable solution to the attainment of sustainable development. Specifically, the study seeks to:

- a. Ascertain the extent to which sustainable agricultural practices can guarantee meaningful employment for the teeming rural populace in Nigeria.
- b. Assess how much jobs from the agricultural sector can ensure poverty reduction in Nigeria
- c. Find out the extent to which the reduction of poverty can guarantee improved standard of living for Nigerians.

Research Questions

This study intends to address three research questions which include:

- a. To what extent would sustainable agricultural practices guarantee the meaningful employment of the teeming rural populace in Nigeria?
- b. How can the agricultural sector ensure the reduction of poverty among the rural majority population in Nigeria?
- c. To what extent would the reduction of poverty ensure enhanced well-being/living standard of the majority of Nigerians?

Literature review

Conceptual clarification

Poverty reduction: Poverty reduction or poverty alleviation is a set of measures both economic and humanitarian that are intended to permanently lift people out of poverty. "It occurs largely as a result of overall economic growth" (Krugman, 2009, Vaquez, 2001). "Food shortages were common before modern agricultural technology and in places that lack them today, such as nitrogen, fertilizers, pesticides and irrigation methods. The dawn of industrial revolution led to high economic growth, eliminating mass poverty in what is now considered

the developed world. Poverty alleviation also involves improving the living conditions of people who are already poor.

Sustainable agriculture: The adjective biological, ecological, alternative, regenerative and low-input are commonly used to refer to seemingly similar concepts of agricultural systems. The term sustainable agriculture is hereby broadly defined to include all these concepts to some degree, and also address a specific set of criteria. This three broad areas of concern seem to underlie the concept of sustainable agriculture: (a) economic concerns over economic justice, the survival of owner-operated farms, and the long-term profitability of agriculture (b) environmental concerns over adverse impacts and the (c) public welfare concerns over food quality and human exposure to toxic chemicals. A sustainable agriculture integrates all components of a system in the horizontal, vertical and time dimensions. Thus, an agricultural program, policy or practice contributes to agricultural sustainability if it:

1. Enhances, or maintains the number, quality and long-term economic viability of farming and other agricultural business opportunities in a community or region.
2. Enhances, rather than diminishes the integrity, diversity and long-term productivity of both the managed agricultural ecosystem and the surrounding natural ecosystems.
3. Enhances, rather than threatens, the health, safety and aesthetic satisfaction of agricultural producers and consumers alike.

Against the above background, Anon (1989), states thus:

a sustainable agriculture is one that, over the long-term, enhances environmental quality and the resource base on which agriculture depends; provides for basic human food and fiber needs; is economically viable; and enhances the quality of life for farmers and society as a whole. The US National Research Council (1989), defined sustainable agriculture as, “those alternative farming systems and technologies incorporating natural processes, reducing the use of inputs of off-farm sources, ensuring the long-term sustainability of current production levels and conserving soil, water, energy and farm biodiversity”. It is a system of food production which avoids or largely excludes the use of systematically compounded chemical fertilizers and pesticides and use of environmentally friendly organic inputs.

Sustainable development: According to the World Commission on Environment and Development; sustainable development may be defined as, “development that meets the needs of the present without compromising the chances of the future generations to meet their own needs” (Bruntland Commission, 1987). Gills (1992) defined the sustainable development path, as “the one that maximizes the present value of the inter-temporal social function”. The concept underscores the aim of maintaining economic advancement and progress while protecting the long-term value of the environment (i.e environmental sustainability).

Living standard: standard of living refers to the level of wealth, comfort, material goods, and necessities available to a certain socioeconomic class in a certain geographical area, usually a country. It includes factors such as income, quality and availability of employment, class disparity, poverty rate, quality and affordability of housing, hours of work required to purchase necessities, gross domestic product, inflation rate, amount of leisure time every year,

affordable (free) access to quality healthcare, quality and availability of education, life expectancy, incidence of disease, cost of goods and services, infrastructure, national economic growth, economic and political stability, political and religious freedom, environmental quality, climate and safety. According to Investopedia (n.d), the standard of living is closely related to quality of life.” Thus, standard of living refers to the material basis of well-being which is reflected in a person's consumption level. Standard of living, in turn is one of the important determinants of well-being or happiness.

In his updated, Easterlin (1995), explained that “happiness or subjective well-being varies directly with one's own income and inversely with income of others.” In his most recent study, Easterlin (2001) also argued that, “Impacts of income on happiness or subjective well-being depend upon standards which change over time according to the individuals' expectations and social comparisons”.

Empirical Literature

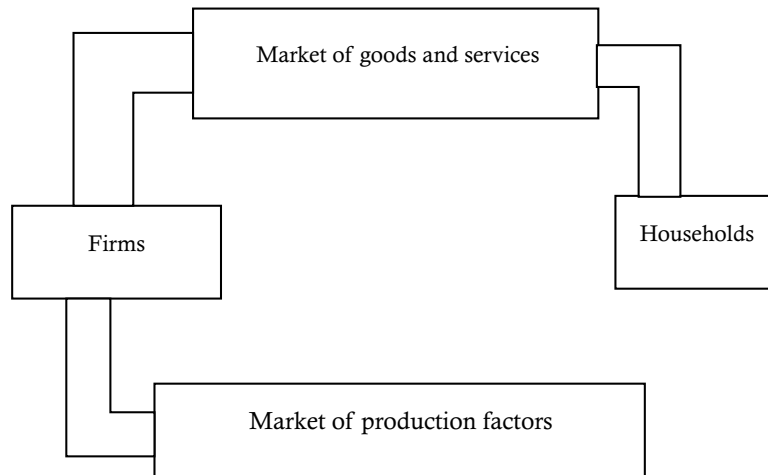
This section presents past and current works on the subject matter in a tabular form as follows:

Table 1.

| Surname of Researcher (s) Title of study/year, Time frame of Research | Geographical and content scope covered | Data source and Analytical tools | Results/ findings/conclusions |
|---|---|--|---|
| Nwankpa (2017). Sustainable agricultural development. A way out of hunger and poverty | Nigeria: the paper examined the agricultural transformation vis-à-vis hunger and poverty eradication as a means of sustaining economic growth and development in Nigeria. Specifically the study limited itself to the important role of agricultural transformation in engendering sustainable development and significant levels of hunger and poverty reduction in south west Nigeria. | The study used secondary data. | The study found that of over 70% of the total Nigerian labour force is employed by the agricultural and rural sector. Thus, it recommended among others that focusing development efforts on agriculture and the rural sector will unleash positive development dividends for the nation. |
| Ogundipe, Oduntan, Ogunniyi and Olagunju (2017). Agricultural Productivity, poverty reduction and inclusive growth in Africa: Linkages and pathways | Africa: The study examined the effect of agricultural productivity on poverty reduction in Africa. | Using secondary data, it adopted the system GMM estimation technique. | The empirical result suggests that agricultural value added per worker contributes significantly to the reduction of rural poverty in Africa. |
| Oyakhilomen and Zibah (2014). Agricultural production and Economic Growth in Nigeria: Implication for rural poverty alleviation | Nigeria: The study is an empirical examination of the relationship between agricultural production and the growth of Nigerian economy with a focus on poverty reduction | It employed time series data which analyses were done using limit root tests and the bounds (ARDL) testing approach to co-integration. | The result of the data analysis showed that agricultural production was significant in influencing the favourable trend of economic growth in Nigeria. |

Theoretical Framework

This study adopts the neo-classical theory of a closed linear system (Turner, Pearce, 1972) as its theoretical framework.



Source: Romanian Statistical Review 12/2013

Since the endogenous growth models are in alignment with the basic philosophy of the Solow approach (i.e removing both the assumptions of decreasing productivity of capital and exogeneity of technical progress), which leads the denial that in the future, there is the process of convergence between the growth rates of the various countries and to predict the tendency of continuous expansion, there is no implicit mechanisms to stop (it was in fact, the diminishing marginal productivity of capital which has led to the rest growth unless it was offset by exogenous technical progress). From the perception of classical economists like Malthus, Ricardo, Mill, etc. it is clear that the economic activity was conditioned by the environment. Thus, they believe in the role of the market as an indispensable basis for economic growth. The market will have, as a matter of fact, distributed merits and efficiency, generating wealth for all. The theoretical conclusion and confidence by the classics held in the short-term context. In the long-run however, the economy would still be found in stationary state which coincides with the mere subsistence level by all. This is due to the full awareness of natural resources as a scarce and limited entity, or as a finite set of natural resources, causing a break on growth. The point of view, “pessimistic” of all the classics in the long-term as well expressed in the studies of Thomas Malthus and Ricardo who watched the constraints imposed by the environment in terms of scarcity of fertile land for cultivation.

Unlike the classical, the traditional neo-classical economists, in considering the economic system as a closed and linear system (Turner, Pearce and Bateman) did not take into account, the binding connection between the economic system and the environment. The environment only has an instrumental value. There are resources to be shaped and used in the production function to meet the market equilibrium. The unlimited exploitation of natural resources is commonly accepted as the price to pay for fueling economic growth and providing employment.

Research Methodology

Data in this study were sourced from secondary materials comprising books, journals, periodicals, newspapers, and the internet. Analysis employed the mode of content which ran in the following sequence:

Research Question One (1): To what extent would sustainable agricultural practices guarantee the gainful employment of the teeming rural population in Nigeria?

A study on sustainable agricultural development in Nigeria as a way out of hunger and poverty (Nwankpa, 2017) posits that, “hunger and poverty rates will continue to rise as long as the abundant human and material resources located in Nigeria's rural settings are not optimally harnessed”. This assertion points to the potentials in sustainable agricultural practices in enhancing the chances of employment of the rural Nigerian dwellers.

According to Adebayo and Olagunju (2015), agriculture is the predominant activity in most zones in the country including the south western Nigeria”. The nation has huge agricultural potentials given its arable land potential of 98.3million consisting of 72.2 million ha (72.2 percent) cultivable (about 23 percent of arable land across all the West Africa) and only 27.1 million ha (27.6 percent) non cultivable land.

At the moment the agricultural sector offers employment opportunities to the teeming population of Nigeria. The point to note is that with the decline in the sector's productivity and contribution to GDP, the rate of employment in the sector has not been as expected. The table below shows the rate of employment in Agricultural sector vis-à-vis other sectors in Nigeria.

Table 2: Total Employment by Economic Activity, 2003-2007

| Description | 2003 | 2004 | 2005 | 2006 | 2007 |
|---|------------|------------|------------|------------|------------|
| Total Employment | 46,000,800 | 48,124,440 | 49,496,362 | 50,886,826 | 52,327,514 |
| Agricultural Hunting, Hunting and Fishing | 27,840,000 | 28,516,48 | 29,016,653 | 29,837,824 | 30,682,234 |
| Mining Quarrying | 66,150 | 67,325 | 69,001 | 70,954 | 73,962 |
| Manufacturing Industries | 820,000 | 838,517 | 907,877 | 933,570 | 959,990 |
| Hotels & Restaurants | 86,940 | 89,488 | 96,370 | 99,097 | 101,901 |
| Building & Construction | 260,000 | 267,879 | 273,049 | 280,777 | 288,723 |
| Transport, Storage & communication | 400,000 | 412,202 | 415,988 | 427,761 | 439,866 |
| Real Estate, Renting Business Activities | 58,590 | 59,983 | 60,182 | 61,885 | 63,636 |
| Health and Social work | 280,000 | 291,431 | 296,375 | 304,762 | 313,387 |

Source: National Bureau of Statistics, Quick National Employment General Survey (2007). Provisional figures

The table above shows agricultural potentials in employment generation in Nigeria. It is interesting to observe that the sector provides the greatest number of employment for Nigerians. This paper is of the opinion that such potentials can be enhanced through sustainable agricultural practices that would encourage an improved land tenure system, the use of fertilizer, etc. For instance, when compared with some other countries like Brazil and Malaysia, Nigeria uses less fertilizer which has not helped her agricultural productivity. Such enhanced productivity encourages more people to embrace agriculture for the sake of its high level productivity. It also affords farmers to employ more hands to boost the level of productivity.

The table below shows Nigeria's level of engagement in sustainable agricultural practice (eg. Fertilizer application)

Table 3: Fertilizer application by countries

| | Fertilizer consumption tonnes | Share of arable land irrigated | Production of oil crops (1000 tonnes) | Value of Agricultural exports (USD million) |
|----------|-------------------------------|--------------------------------|---------------------------------------|---|
| Nigeria | 88,334 | 0.7 | 3503 | 564 |
| Malaysia | 1,460,658 | 4.8 | 17829 | 17,673 |
| Brazil | 11,313,123 | 4.4 | 11,677 | 42816 |

Source: UN FAO Statistical Year Book (2009).

The table (3) above indicate that when compared with its contemporaries like Brazil and Malaysia, Nigeria's agricultural development falls short of the situation in other countries. For instance, it consumes less fertilizer than other countries, again only 0.7% of its arable land is irrigated as against 4.8% for Indonesia and 4.4% for Brazil. The country (Nigeria) is best suited the production of oil crops, yet it records 564 million USD as against Malaysia which records 17.673 USD and Brazil 42.816 billion USD.

The argument is that the application of sustainable agricultural practices will stimulate and enhance further productivity, profitability, contribution to the nation's economic growth and development. This enhances employment in Agricultural sector and even beyond. The sector becomes so viable as to arouse the interest of more youths to take to farming occupation while enhancing the capability of practicing farmers to seek more labor. It is in this vein that, Ogbalubi and Wokocha (2013), observed that, “the potential of the agricultural sector in employment generation is yet to be maximized.

Research Question Two (2): How can the agricultural sector ensure poverty reduction among the rural populace in Nigeria?

A study on rural development as a panacea for achieving sustainable development goal in Nigeria by Afeez, Olupona and Olarere (2018) revealed that, “there is a positive relationship between sustainable development and rural development”. It was also found that there is a bi-causal relationship between the variables. Obviously, poverty contributes to poor agricultural

productivity as many farmers in Nigeria cannot afford to purchase necessary farm inputs such as fertilizers, pesticides and improved seeds, which would bring about increased productivity. Boosting agricultural growth through sustainable practices by applying new technologies is one important way which is a vital component of integrated strategies for poverty reduction, has a crucial role to play in evolving an escape route out of food insecurity and poverty by improving farm income, generating employment for farm workers, reducing food prices and fueling economic growth. Low investment and the use of inappropriate technology are listed as the reasons for low agricultural yield in Nigeria.

Available data shows that the majority of the poor in Nigeria reside in the rural areas. This has the implication that poverty (in Nigeria especially) is a rural phenomenon. Using consumption and income analysis, as shown in the table below, the share of the poor in the rural areas showed 49.9%, 46.1% and 67.8% respect. Hence, Khan (2000) asserts that, “the situation in the SAA is that rural poverty accounts for 65-90% of overall poverty.” More worrisome is the revelation that the statistics of about 77% of farmers are poor while more than this number, 48% are extremely poor.

Table 3: Poverty trends in Nigeria by sector (%) in 1980-1996

| | | |
|------|------|------|
| 1980 | 17.2 | 28.3 |
| 1985 | 37.8 | 51.4 |
| 1992 | 37.5 | 46.0 |
| 1996 | 58.2 | 69.8 |

Source: Federal office of statistics: poverty profile for Nigeria, 1980-1996.

For agricultural to pull the majority of the rural population of the poverty bracket and trap, knowledge of the causes of such poverty is necessary to ensure appropriate use and maximum yield from land and other agro-related activities. Hence, Barbier (1998), reasons, that, “comparatively low level of the use of external inputs such as fertilizer and irrigation water is also a concern of from both food production and the environmental standpoints”. This is because of the overuse or misuse of farm inputs like fertilizer can produce effects which support the thesis that fertilizers degrade soil fertility. Evidence of on land degradation and use suggests that Africa, Nigeria inclusive, is undergoing rapid land conversion, human-induced soil erosion being major contributor. Again, Barbier (1998) reveals that, “approximately 25% of the world's degraded land is found in Africa where over-grazing, agricultural activities and deforestation and wood harvest (for firewood) account for most of the human-induced erosion.

Land degradation and depletion of soil resources have economic implications for low-income and poor rural areas. The environmental damage resulting from soil erosion leads to losses in income of farmers and increases risks, particularly for poor households. It is in this vein that Barbier (1998) estimates that, “the loss in agricultural production from land degradation can be substantial”. This makes the reversing of the vicious cycle of land degradation and conversion, a matter of urgent concern. It is also worrisome to imagine that the economic

livelihoods of a vast majority of poor rural households in Nigeria appear to be directly dependent on the exploitation of lands that are highly vulnerable to degradation. Thus, “the location of many of the rural poor on “low potential' and 'fragile” lands has its implications” (Barbier, 1998). It stands to reason therefore, that the problems of rural poverty and human-induced soil degradation in Nigeria are related. Very common examples are found in rural communities located along the Enugu-Port Harcourt expressway in the southeast of Nigeria.

It is obvious that rural poverty alleviation cannot be accomplished without ensuring rural dwellers' access to resources and opportunities. This is why any government policy/programme towards poverty alleviation must incorporate measures to enhance such access and opportunities with special emphasis on agricultural activities.

In taking a periscope view of the potentials of Nigerian agriculture to poverty reduction, it must be recalled that Nigeria's agriculture contributed significantly to the nation's GDP and played major roles in the global economy. It employed over 70% of the labor force, was a major driver of growth before the discovery of oil, accounted for 42% of the world's export of shelled groundnut in 1961, 27% of the global export of palm oil in 1960 and 18% of global export of cocoa in 1961. Ekpo and Umoh (2012) observe that, “the decline in agriculture contribution to GDP from 63% in 1960 to 34% in 1988 was due to the neglect of the sector and not because of increased share of the industrial sector”. The potential of the sector as is obvious from the above account, has not been fully tapped. Agriculture has unique power in reducing poverty. World Bank (2008) note that, “GDP originating in agriculture is at least twice as effective in reducing when compared to GDP originating from non-agricultural sectors. The potentials of sustainable and effective poverty reduction in Nigeria is best explained and illustrated using the 'diamond policy' in the figure below:

The diamond at the centre of the figure guarantees labor mobility and migration leading to:

- a. Self employment and entrepreneurship in agricultural endeavors;
- b. Small holder subsistence farming for food security;
- c. Offer of formal/paid employment in medium to large farm enterprise; and
- d. Engagement in non-farm activities within the rural area.

Umoh (2012) observes that the critical success factors (CSF) for the diamond-based policies include: good governance, sound macro-economic fundamentals and conducive socio-political environment. It needs not be overemphasized that such CSFs are needed in Nigeria owing to the different challenges/constraints which stare the nation's agriculture sector in the face. What the nation needs is a policy reform in the agriculture sector that would encapsulate all the needs outline in this paper.

“Diamond-Based”. Policy illustration

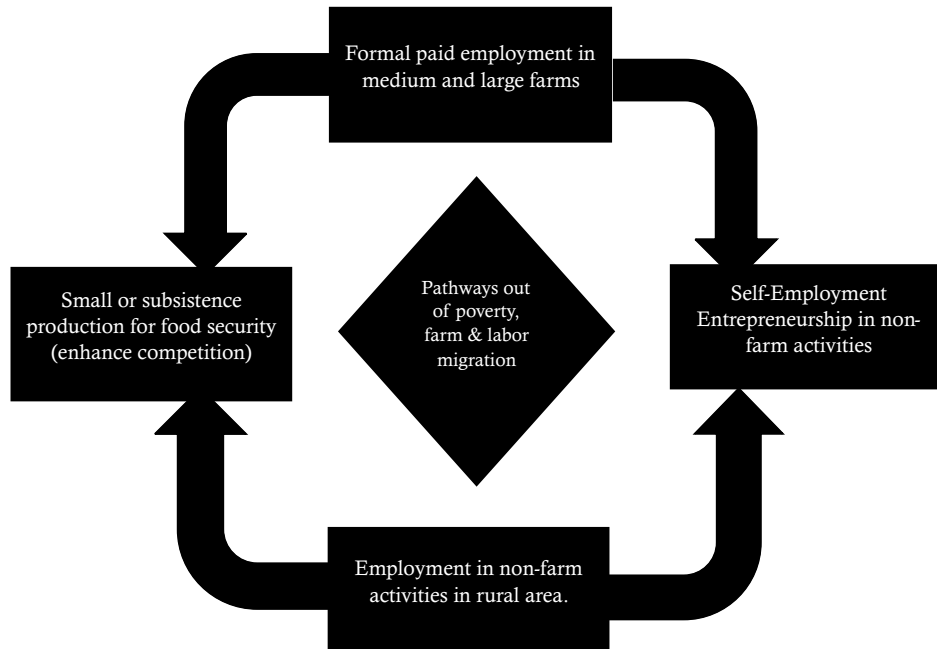


Fig. 1: Pathways to exit from poverty in Nigeria offered by agriculture

Source: Umo (2012) adapted from World Bank report, 2018, p.19

An empirical support on the position of this paper is located in the findings from an OECD paper No. 23 by Cerrentes Godoy, and Dewbre (2010) on the economic importance of agriculture for poverty reduction. The time-series, cross-section regression analysis reveal that, “While economic growth generally was an important contributor to poverty reduction, the sector mix of growth mattered substantially, with growth in agricultural incomes being especially important”

Research Question Three (3): How would poverty reduction enhance the living standards of the rural population in Nigeria?

Obadan (1996) says that, “the poor are those who are unable to obtain an adequate income, find a stable job, own property or maintain healthy living conditions” while Olayemi (1995) describes the poor as, “those who had no access to the basic necessities of life such as food, clothing and decent shelter, are unable to meet social, economic, political obligations. Living standards therefore, is all about well-being which involves enabling the hitherto adjudged poor to afford the basic needs of life which is the basis of all development plans.

Literature is replete with instances where economic growth and increased income has not translated to better living for the people. It may also be argued that even at a point when Nigeria recommended high revenue and improvement in her GDP, the trickling down effect

on her citizens where not felt or seen by the people however, this paper argues that when the rural citizens is employed and earns some money he/she does not remain the same as when out of job. This is an improvement on his standard of living.

Findings

The findings of this study include:

1. Agriculture is the predominant activity in most parts of Nigeria
2. The huge potentials in agriculture are manifested in its arable land of 98.3 million consisting of 72.2 million ha. (72.2percent) cultivable (about 23 percent where only 27.6 percent) is non cultivable land.
3. The current situation in Nigeria where the sector provides the greatest number and percentage of employment opportunities can be enhanced if the citizens (farmers) can gain knowledge of appropriate and efficient use of land and the application of resources like fertilizers. This will lead to improved productivity; profit and contribution to GDP thereby enhance the capacity of the sector to generate more employment.
4. When compared to its contemporaries like Malaysia and Brazil, Nigeria treads behind in knowledge and use of farm resources such as fertilizers.
5. A good percentage of the farm population sojourn on lands that are degraded following human activities.
6. The potential of the agricultural sector for employment generation is yet to be maximized.
7. Nigeria is best suited in the production of oil crops, yet it records 564 million USD as against Malaysia which records 17.673 USD and Brazil 42.816 billion USD.
8. There is bi-causal relationship between agricultural productivity and poverty. Thus, while poverty leads to low productivity, low agricultural productivity equally leads to and worsens the poverty situation.
9. Boosting agricultural growth through sustainable practices such as the application of new technologies is one sure way of reducing poverty level.
10. Agricultural research, a vital component of integrated strategies for poverty reduction, has a crucial role to play in evolving an escape route out of poverty.
11. Majority of the poor in Africa (Nigeria) reside in the rural areas. This tends to suggest that poverty is a rural phenomenon.
12. Africa (Nigeria) is undergoing rapid land conversion with human-induced erosion as the primary contributor.

Conclusion

At independence in 1960, the agricultural sector constituted the mainstay of the Nigerian economy contributing the greatest percentage to GDP and generating the highest number of employment opportunities. However, this has not been the situation in recent times as the advent of oil led to the total neglect of this sector. Hopes are not lost as the evolution and introduction of sustainable agricultural practices leaves any nation with the choice to que into such practices or not. The point to underscore is that this nation can adopt modern practices in the agricultural sector revamp it and ensure its restoration its lost glory. In doing so, the sectors

potentials for employment generation, poverty reduction, economic growth and development will be enhanced. Certainly, so much evidence abound in attestation of the fact that sustainable agricultural practice holds out great potentials for poverty reduction. The relationship between the variables is strong and positive and causation is two-way. This is so because while sustainable agriculture has what it takes to reduce poverty, on the one hand, poverty reduction can also enhance sustainable development. The study therefore, goes ahead to volunteer some suggestions.

Suggestions

Following the data analysis in the course of this investigation, the following may be suggested:

1. There is the urgent need for the Government in Nigeria (FGN) to articulate on policy reforms in favor of the agricultural sector with a view to repositioning the sector as a major contributor to its GDP.
2. Whatever the policy initiative, efforts should be made by government to enhance the knowledge ability of the average rural dweller/farmer on the issue of misuse/appropriate use of land and other natural resources.
3. An external resource such as the use of fertilizers is an area that needs priority attention and government must accord it that position.
4. Government policies should focus more on poverty reduction of the rural populace since the greater majority of the population resides in such areas.
5. The economic implications of land degradation and depletion should be the subject of a public orientation/campaign to be mounted by government agencies.
6. The reversal of the vicious cycle of land degradation and conversion should be a matter of great concern to all as government cannot do it alone.

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