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Strategies for Poverty Alleviation: The Imperative of Food Security in Nigeria

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Abstract

Poverty is general scarcity or dearth, or the state of one who lacks a certain amount of material possessions or money. *Poverty situation in Nigeria is precarious, not only in terms of income poverty, but also in terms of food poverty. In Nigeria, there is high level of food insecurity for the past four decades as a result of neglect in food production when oil has become the major export product and the because of the adoption of neo-liberal economic policies such as devaluation of naira, trade liberalization and withdrawal of government from economic activities, ethnic and religious conflicts; disasters, such as flooding and drought have also contributed to food insecurity in Nigeria. In addition, Nigerian food crisis is a product of colonial disorientation that has led to neglect of the peasant agriculture and food crops sub-sector as well as over reliance on cash crops production and the oil sector.* This paper presents a framework for understanding the relationship between systemic reforms, food security/production and poverty reduction. *The major panacea towards reducing poverty remains a focus effort in increasing food security. However, Nigeria still has the potentials to be food-secure if the following strategies are adopted and implemented: rural development, provision of easy access to basic farm inputs, adequate budgetary allocations to agriculture particularly to the food crop sub-sector, enunciation of appropriate policies for food crop sub-sector, political stability, reduction in rural poverty, and peasant farmers' education.*

1. Introduction

Poverty is a multifaceted concept, which includes social, economic, and political elements (Oriola, 2009; World Bank, 1995; World Bank, 2006; Yahaya, 2008). Poverty seems to be chronic or temporary, and most of the time it is closely related to inequality (Attah, 2012). As a dynamic concept, poverty is changing and adapting according to consumption patterns, social dynamics and technological change. Poverty is a cancerous disease which affects several millions of people worldwide but more severe in the developing countries which are characterized by low per capita expenditure, under-utilization growth, and high rate of unemployment. Zeller (2004) notes that poverty is inherently a relative concept. It is relative in the sense of its dependency on many other factors (Sabates, 2008; Oriola, 2004, 2006, 2007, 2008, 2009). Absolute poverty or destitution refers to the deprivation of basic human needs, which commonly includes food, water, sanitation, clothing, shelter and health care. Relative poverty is defined

contextually as economic inequality in the location or society in which people live (Otaha, 2013; 2013b).

Food and Agriculture Organization (2006) defines food security as a situation when all people, at all times, have access to sufficient, safe and nutritious food to meet dietary needs and food preferences for and active and healthy life. Food security for a household means access by all members at all times to enough food for an active, healthy life. Food security, according to USDA (2006), includes at a minimum; (i) the ready availability of nutritionally adequate and safe foods, (ii) assured ability to acquire acceptable foods in socially acceptable ways (that is without resorting to emergency food supplies, scavenging, stealing, or other coping strategies). Since, 1995, US\$770 million from donors and national government have been invested in FAO (designed food security programmes). The Special Programme for Food Security (SPFS) initiative helps to achieve food security in two ways.

(i) through assisting national government to run focused, well-planned National food security programmes and

(ii) through working closely with regional economic organizations to develop Regional programmes for food security which optimizes food security in areas like trade policy (FAO, 2006; Adewuyi and Hayatu, 2011).

This study aimed at finding the effect of poverty on the food security of households in Nigeria. The specific objectives include:

(i) Analyzing the global dimensions of poverty and poverty reduction mechanism.

(ii) Examining the effect of poverty on the food security in

Nigeria

2. Poverty and Poverty Reduction

Poverty reduction is a major goal and issue for many international organizations such as the United Nations and the World Bank. The World Bank estimated 1.29 billion people were living in absolute poverty in 2008. Of these, about 400 million people in absolute poverty lived in India and 173 million people in China. In terms of percentage of regional population sub-Saharan Africa at 47% had the highest incidence rate of absolute poverty in 2008. Between 1990 and 2010, about 663 million people moved above the absolute poverty level. Nevertheless, given the current economic model, built on GDP, it would take 100 years to bring the world's poorest up to the standard poverty line of \$1.25 a day. It has been argued by some academics that the neoliberal policies promoted by global financial institutions such as the IMF and the World Bank are actually exacerbating both inequality and poverty (Abbas, 1993; Adeoti, 1989; F.A.O, 2001, 2010, Mustapha, Fakokunde, and Awolusi, 2014).

Extreme poverty is a global challenge; it is observed in all parts of the world, including developed economies. UNICEF estimates half the world's children (or 1.1 billion) live in poverty (F.A.O, 2001, 2010).

World Bank data shows that the percentage of the population living in households with consumption or income per person below the poverty line has decreased in each region of the world since 1990:

Table 1. Percentage of the population living in households with consumption or income per person below the poverty line.

Region	\$1 per day			\$1.25 per day	
	1990	2002	2004	1981	2008
East Asia and Pacific	15.40%	12.33%	9.07%	77.2%	14.3%
Europe and Central Asia	3.60%	1.28%	0.95%	1.9%	0.5%
Latin America and the Caribbean	9.62%	9.08%	8.64%	11.9%	6.5%
Middle East and North Africa	2.08%	1.69%	1.47%	9.6%	2.7%
South Asia	35.04%	33.44%	30.84%	61.1%	36%
Sub-Saharan Africa	46.07%	42.63%	41.09%	51.5%	47.5%
World				52.2%	22.4%

Source: World Bank (2006), USAID (2011)

Life expectancy has been increasing and converging for most of the world. Sub-Saharan Africa has recently seen a decline, partly related to the AIDS epidemic. Graph shows the years 1950–2005.

In 1776 Adam Smith in the *Wealth of Nations* argued that poverty is the inability to afford, "not only the commodities which are indispensably necessary for the support of life, but whatever the custom of the country renders it indecent for creditable people, even of the lowest order, to be without. In 1958 J. K. Galbraith argued that, "People are poverty stricken when their income, even if adequate for survival, falls markedly behind that of their community. In 1964 in a joint committee economic President's report in the United States, Republicans endorsed the concept of relative poverty. "No

objective definition of poverty exists... The definition varies from place to place and time to time. In America as our standard of living rises, so does our idea of what is substandard (Idachaba, 2006; Idachaba, 2004; Kerr and Kolavalli, 1999; Nana- Sinkam, 1995; World Bank, 2003).

3. Poverty in Nigeria

At more than 160 million people, the population of Nigeria is the largest in Africa and accounts for 47 percent of West Africa's total population (World Bank 2012; Asika and Awolusi, 2013). Nigeria is also the biggest oil exporter in Africa, with the continent's largest natural gas reserves. Nigeria's oil wealth has helped it maintain relatively steady

economic growth despite recent global financial downturns. The country's GDP grew from 6 percent in 2008 to 8.4 percent in 2010 (World Bank 2012). Unemployment remains a significant problem, however, with an estimated 50 million youth unemployed. The government in 2011 launched a comprehensive public works program to stimulate employment and expand vital infrastructure and services (Attah, 2012; Idachaba, 2006; Idachaba, 2004; USAID, 2011).

Despite its significant natural resources and continued economic growth, poverty remains widespread in Nigeria and has even increased in some areas since the late 1990s. An estimated 70 percent of Nigerians live on less than US\$1.25 per day. Nigeria was ranked 40th out of 79 on the 2012 Global Hunger Index and 156th out of 187 on the 2011 UNDP Human Development Index. Poverty is especially widespread in rural areas, where 80 percent of the population lives below the poverty line (IFAD 2012).

Agriculture is the mainstay of Nigeria's economy, employing approximately two-thirds of the country's total labor force and contributing 40 percent to Nigeria's GDP (IFAD 2012). Nigeria is the world's largest producer of cassava, yam, and cowpea; yet it is a food-deficit nation and depends on imports of grains, livestock products, and fish (IFAD 2012). Of an estimated 71 million hectares of cultivable land, only half is currently used for farming; there is similar potential for an expansion of irrigation, which now only covers 7 percent of irrigable land. Most of the rural population farms on a subsistence scale, using small plots and depending on seasonal rainfall. A lack of infrastructure such as roads further exacerbates poverty in rural areas by isolating rural farmers from needed inputs and profitable markets (IFAD and World Bank 2012). Pressure from growing populations is also impacting already diminished resources, further threatening food production. Over-farmed land, deforestation, and overgrazing are severe in many parts of the country. Drought has become common in the north, while erosion and flooding is a major problem in the south (Adewuyi and Hayatu, 2011; Kerr and Kolavalli, 1999; Akinruwa, Awolusi, and Ibojo, 2013).

3.1. Population Below Poverty Line (%)

Table 2. Poverty Incidence in Nigeria (1992 – 2010).

Year	1992	2000	2004	2007	2010
Population (Million)	96.3	115.2	129.9	144.0	152.3
Population below poverty line (%)	34.1	54.4	60.4	70	70

Nigeria has one of the world's highest economic growth rates, averaging 7.4% according to the Nigeria economic report released in July 2014 by the World Bank. Poverty may have been overestimated because the country's economy is now being understood more and more. Poverty still remains significant at 33.1% in Africa's biggest economy. For a country with massive wealth and a huge population to support commerce, the level of poverty remains unacceptable. Over the last decade, a well-developed economy, and plenty of natural resources such as oil. Poverty in Nigeria can be also

caused by the political instability of the country. However, these programs have largely failed to overcome the three reasons for this persistent poverty: income inequality, ethnic conflict, and political instability (F.A.O, 2001, 2010, 1996; Gebremedhin, 2000; Idachaba, 2006; Idachaba, 2004).

3.2. Income Inequality

Income inequality worsened from 0.43 to 0.49 between 2004 and 2009. This is correlated with differential access to infrastructure and amenities. In particular, there are more rural poor than urban poor. This results from the composition of Nigeria's economy, especially the energy (oil) and agriculture sectors. Oil exports contribute significantly to government revenues and about 15% of GDP, despite employing only a fraction of the population. Agriculture, however, contributes to about 45% of GDP, and employs close to 90% of the rural population. This incongruence is compounded by the fact that oil revenue is poorly distributed among the population, with higher government spending in urban areas than rurally. High unemployment rates renders personal incomes even more divergent. Moreover, the process of oil extraction has resulted in significant pollution, which further harms the agricultural sector (Adewuyi and Hayatu, 2011; Attah, 2012; Nana- Sinkam, 1995; United Nations Food Conference, 1974).

3.3. Long-Term Ethnic Conflict and Civil Unrest

Nigeria has historically experienced much ethnic conflict. With the return to civilian rule in 1999, militants from religious and ethnic groups have become markedly more violent. While this unrest has its roots in poverty and economic competition, its economic and human damages further escalate the problems of poverty (such as increasing the mortality rate). For instance, ethnic unrest and the displeasure of local communities with oil companies has contributed to the conflict over oil trade in the Niger Delta, which threatens the productivity of oil trade. Civil unrest might also have contributed to the adoption of populist policy measures which work in the short-run, but impede poverty alleviation efforts (Diouf, 2005; F.A.O, 2001, 2010).

3.4. Political Instability and Corruption

Nigeria's large population and historic ethnic instability has led to the adoption of a federal government. The resultant fiscal decentralisation provides Nigeria's state and local government's considerable autonomy, including control over 50% of government revenues, as well as responsibility for providing public services. The lack of a stringent regulatory and monitoring system has allowed for rampant corruption. This has hindered past poverty alleviation efforts, and will continue to do so, since resources which could pay for public goods or directed towards investment (and so create employment and other opportunities for citizens) are being misappropriated (Idachaba, 2006; Idachaba, 2004; The World Bank, 1991).

3.5. Poverty Reduction

Various poverty reduction strategies are broadly categorized here based on whether they make more of the basic human needs available or whether they increase the disposable income needed to purchase those needs. Some strategies such as building roads can both bring access to various basic needs, such as fertilizer or healthcare from urban areas, as well as increase incomes, by bringing better access to urban markets. Agricultural technologies such as nitrogen fertilizers, pesticides, new seed varieties and new irrigation methods have dramatically reduced food shortages in modern times by boosting yields past previous constraints (Abbas, 1993; Claffey and Stucker, 1982; Davies, 2009; Diouf, 2005; United Nations, 2005).

3.6. Health Care and Education

Nations do not necessarily need wealth to gain health. For example, Sri Lanka had a maternal mortality rate of 2% in the 1930s, higher than any nation today. It reduced it to 0.5–0.6% in the 1950s and to .06% today while spending less each year on maternal health because it learned what worked and what did not. Cheap water filters and promoting hand washing are some of the most cost effective health interventions and can cut deaths from diarrhea and pneumonia. Knowledge on the cost effectiveness of healthcare interventions can be elusive and educational measures have been made to disseminate what works, such as the Copenhagen Consensus (F.A.O, 2001, 2010, 1996; Gebremedhin, 2000; Idachaba, 2004).

3.7. Removing Constraints on Government Services

Government revenue can be diverted away from basic services by corruption. Funds from aid and natural resources are often sent by government individuals for money laundering to overseas banks which insist on bank secrecy, instead of spending on the poor. A Global Witness report asked for more action from Western banks as they have proved capable of stanching the flow of funds linked to terrorism.

3.8. Reversing Brain Drain

The loss of basic needs providers emigrating from impoverished countries has a damaging effect. As of 2004, there were more Ethiopia-trained doctors living in Chicago than in Ethiopia. Proposals to mitigate the problem by the World Health Organization include compulsory government service for graduates of public medical and nursing schools and creating career-advancing programs to retain personnel.

3.9. Controlling Overpopulation

Some argue that overpopulation and lack of access to birth control leads to population increase to exceed food production and other resources. Better education for both men and women, and more control of their lives, reduces

population growth due to family planning. According to UNFPA-United Nations Population Fund, by giving better education to men and women, they can earn money for their lives and can help them to strengthen economic security.

3.10. Increasing Personal Income

The following are strategies used or proposed to increase personal incomes among the poor. Raising farm incomes is described as the core of the antipoverty effort as three quarters of the poor today are farmers. Estimates show that growth in the agricultural productivity of small farmers is, on average, at least twice as effective in benefiting the poorest half of a country's population as growth generated in nonagricultural sectors.

3.11. Income Grants

A guaranteed minimum income ensures that every citizen will be able to purchase a desired level of basic needs. A basic income (or negative income tax) is a system of social security that periodically provides each citizen, rich or poor, with a sum of money that is sufficient to live on. Studies of large cash-transfer programs in Ethiopia, Kenya, and Malawi show that the programs can be effective in increasing consumption, schooling, and nutrition, whether they are tied to such conditions or not. Proponents argue that a basic income is more economically efficient than a minimum wage and unemployment benefits, as the minimum wage effectively imposes a high marginal tax on employers, causing losses in efficiency (Worlf, 1995).

3.12. Cultural Factors to Productivity

Cultural factors, such as discrimination of various kinds, can negatively affect productivity such as age discrimination, stereotyping, discrimination against people with physical disability, gender discrimination, racial discrimination, and caste discrimination.

3.13. Wealth Concentration

Oxfam has called for an international movement to end extreme wealth concentration as a significant step towards ameliorating global poverty. The group stated that the \$240 billion added to the fortunes of the world's richest billionaires in 2012 was enough to end extreme poverty four times over. Oxfam argues that the "concentration of resources in the hands of the top 1% depresses economic activity and makes life harder for everyone else - particularly those at the bottom of the economic ladder."

3.14. Climate Change

A report published in 2013 by the World Bank, with support from the Climate & Development Knowledge Network, found that climate change was likely to hinder future attempts to reduce poverty. The report presented the likely impacts of present day, 2 °C and 4 °C warming on agricultural production, water resources, coastal ecosystems

and cities across Sub-Saharan Africa, South Asia and South East Asia. The impacts of a temperature rise of 2 °C included: regular food shortages in Sub-Saharan Africa; shifting rain patterns in South Asia leaving some parts under water and others without enough water for power generation, irrigation or drinking; degradation and loss of reefs in South East Asia, resulting in reduced fish stocks; and coastal communities and cities more vulnerable to increasingly violent storms (Diouf, 2005; F.A.O, 2001, 2010, 1996; Gebremedhin, 2000; Kerr and Kolavalli, 1999).

4. Reducing Poverty by Improving Food Security

4.1. Food Insecurity in Nigeria

The first essential component of social and economic justice is adequate food production. Even if a nation cannot send cosmonauts to the moon, it should be able to feed her population, only then can it occupy place of pride in the community of nations. Nigeria is a country richly blessed with abundant natural and human resources that if properly harnessed can feed its people and export the surpluses to other countries, yet it is experiencing persistent food crisis both in terms of quantity and quality. Cases of malnutrition and under nutrition are growing by the day (Asikhia and Awolusi, 2013). The food intake requirements of majority of Nigerians have fallen far below the international standard. Past effort at improving food supply through agricultural production has not yielded successful results. The programmes that were introduced only helped to alienate the peasant farmers who are the major producers of food in Nigeria (The World Bank, 1991; United Nations, 2005; Yahaya, 2008). Some of the companies that had something to do with food production include:

1. The national Grains Production Company.
2. National Root Crops Production Companies.
3. North-east, Western and National Livestock Production Companies.
4. The Nigerian National Shrimp Company.
5. The Nigerian National Fish Company.

These companies were set up by the federal Government in 1989 to participate in direct production of food. The major crops target includes maize, rice, millet, wheat, sorghum and cassava. One should mention in passing the establishment of 11 (eleven) River Basin Development Authorities, they were set up to develop river basins for meaningful agricultural production to make Nigeria self-sufficient in food production. Operation Feed the Nation (OFN) and Green Revolution were other short-lived national campaign launched to give agriculture a good image and to encourage land owners to take to farming not only as an occupation but also as a way of life. These programmes were more in favour of capital intensive and large scale commercial farmers who corruptly enriched themselves at the expense of poor peasant farmers (The World Bank, 1991; USAID, 2011; World Bank, 2003; Worlf, 1995; World Bank, 2006; Yahaya, 2008).

4.2. Causes of Food Insecurity in Nigeria

Food insecurity exists when people are undernourished as a result of the physical unavailability of food, their lack of social or economic access to adequate food. Food insecure people are those whose food intake falls below their minimum energy requirements as well as those who exhibit physical symptoms caused by energy and nutrient deficiencies resulting from an inadequate or unbalanced diet or from the body's inability to use food effectively because of infection or disease (The World Bank, 1991; United Nations Food Conference, 1974; United Nations, 2005; Yahaya, 2008).

According to FAO (2010) food insecurity refers to the consequences of inadequate consumption of nutritious food, considering the physiological use of food by the body as being within the domain of nutrition and health. Malnourishment also leads to poor health; hence individuals fail to provide for their families. If left unaddressed, hunger sets in motion an array of outcomes that perpetuate malnutrition, reduce ability of adults to work and to give birth to healthy children and erode children's ability to learn (F.A.O, 2001, 2010, 1996; Gebremedhin, 2000; Idachaba, 2006; Idachaba, 2004).

The World Food Summit plan of Action (1996) states that food insecurity occurs when;

- People experience a large reduction in their sources of food and are unable to make up the difference through new strategies.
- The prevalence of malnutrition is abnormally high for most time of the year, and this cannot be accounted for by either health or care factors.
- A large proportion of the population or group is using marginal or unsuitable strategies, and
- People are using —coping strategies that are damaging to their livelihoods in the longer term or incur some other unacceptable cost, such as acting illegally or immorally (USAID, 2011; World Bank, 2003; Worlf, 1995).

The 1970s brought Nigeria into the euphoria of the oil-boom and with it; a major shift from agriculture to crude oil was experienced. This has bewitched the agricultural sector which all component parts of the country had indicate high rate of interest. Today, Nigeria is importing the commonest commodity like toothpick. It is the same Nigeria used to produce for export palm-oil, palm- kernel, cotton, rubber, cocoa etc. Summarily, agriculture has been relegated to the background. Sad to note is the mis-management of those oil revenues. Given the existing economic conditions in the country, the reduced participation in farming as well as the increasing rate of people living below poverty line, high food insecurity becomes inevitable. A major obstacle of food security and indeed the root cause of food insecurity have been widely identified to be poverty—which is a situation of low capacity for access to basic means of livelihood arising from the separate, combined or cumulative responses to the complex degree of the interplay of economic, socio political,

and the physical environment. According to Kuponiyi and Awe (2000), poverty is described as a condition in which a person cannot maintain himself in a level with the standard of living of his group, and hence, is unable to achieve the mental and physical efficiency to function usefully in it. James and Felix (2001) expressed that poverty alleviation is synonymous with the reduction in the hardship and poor state of people's welfare (Worlf, 1995; World Bank, 2006; Yahaya, 2008).

The emergence of oil sector and the substantial revenue accruing from the sector shifted emphasis from agriculture to the extent that even domestic food production is not given the desired requirement. The government felt that it was better to import food than to embark on local production, especially when oil money has changed the tastes of most Nigeria in favour of foreign imported goods. The above reasons notwithstanding, the causes of food insecurity in Nigeria can be discussed under the following:

4.2.1. Gender Inequality

Gender inequality is a major cause of hunger and poverty. Food security can be a major concern for people who are incapable of or denied access to participation in labour - formal, informal or agricultural. In 2009, the UN estimated that 60 percent of the world's chronically hungry people are women and girls, 98% of which live in developing nations, when women have income, substantial evidence indicates that the income is more likely to be spent on food and children's needs. Women are generally responsible for food selection and preparation and for the care and feeding of children.

4.2.2. Policy Inconsistencies and Corruption

Frequent policy changes and poor performance of agencies assigned to implement food and agriculture policies have serious setback on food production and distribution. Each time a new government comes to power, the previous agricultural policies and programmes are abandoned and new ones are put in place, and not that the new ones are better than the old ones.

4.2.3. Poverty and Hunger

Poverty and hunger prevent people from working hard to increase productivity. Food and agricultural productivity is both capital and labour intensive. Unfortunately, it is the poor peasant farmers that produce the bulk of food needs in Nigeria, due to their level of poverty, they find it very difficult to learn, work and care for themselves and their family members, let alone getting the necessary inputs and energy to produce for others.

4.2.4. Conflicts

The ethnic or religious conflicts have devastating effects on the economic activities especially food production in the areas that they take place. Conflicts here do not necessarily mean physical fighting of wars. It means a disarticulated country or society that is experiencing structural violence without official declaration of war such as pervasive poverty,

oppression of the poor by the rich, police brutality, intimidation of ordinary people by those in power, oppression of women and children and monopolization of resources and power by some sections of the society (Okelbeanu, 2009).

4.2.5. Natural Disasters

Frequent climate changes leading to shortage of rainfall and persist drought in Northern part of the country and excessive rainfall and flood in southern and middle belt regions of the country contributed immensely to low food production in Nigeria.

6. Low level of technology, low agricultural financing and rural-urban migration pose serious threat to food production in Nigeria (World Bank, 2003; Worlf, 1995; World Bank, 2006; Yahaya, 2008).

4.3. Concept of Food Security

Food security refers to the availability of food and one's access to it. A household is considered food secure when its occupants do not live in hunger or fear of starvation (FAO 2001). Food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life (Idachaba, 2006). Food security for a household means access by all members at all times to enough food for an active, healthy life. Food security includes a minimum of

1. The ready availability of nutritional adequate and safe foods and

2. An assured ability to acquire acceptable foods in socially acceptable ways, that is without resorting to emergency food supplies, scavenging, stealing or other cropping strategies (USDA 2008; The World Bank, 1991; United Nations Food Conference, 1974).

In the World Bank Policy Study (2006) food security is defined as access by all people at all times to enough food for an active healthy life. To the Economic commission for Africa (2009) food security involves not only food availability through storage, and trade but also more importantly food access through domestic or home production. It is the contentions of the (FAO, 2010) that for a country to have sustainable food security, food supplies must keep pace with increase population and urbanization. As such, according to FAO, addressing agriculture and population growth is vital to achieving food security. Other organizations and people (Peter Singer 2008) have come to this same conclusion in agriculture and population control. USAID, (2011) proposes several key steps to increasing agricultural productivity which is in turn key to increasing rural income and reducing food insecurity. They include:

1. Boost agricultural science and technology. Current agricultural yields are insufficient to feed the growing populations. Eventually productivity derives economic growth.

2. Securing property rights and access to finance.

3. Enhancing human capital through education and improved health.

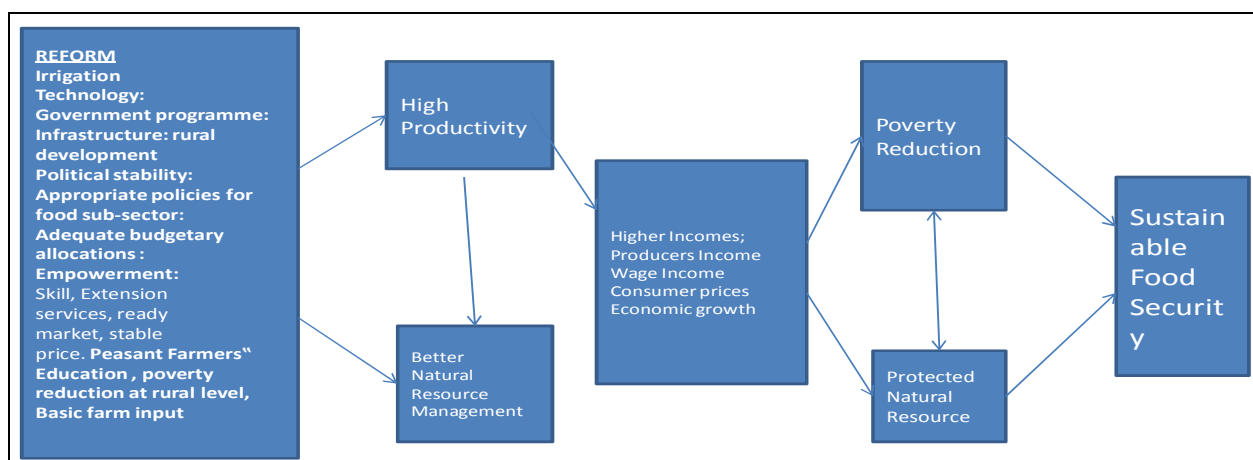
4. Conflict prevention and resolution mechanisms and democracy and good governance based on principles of accountability and transparency in public institutions and the rule of law are basic to reducing vulnerable members of society (The World Bank, 1991; United Nations Food Conference, 1974; USAID, 2011; World Bank, 2003).

4.4. Food Security and Poverty Allevation Framework

If the nation is to escape famine and reduce poverty, crop production must not only be boosted but the political will by government should be there. The right attention and not lip service should be given to agriculture most especially irrigation at the three tiers of government. Some 30 years ago our leaders gave priority to agriculture as presented earlier

during the farm settlement schemes; the operation feed the nation and green revolution. Also there should be a change in our value system such that emphasis should no longer be on wealth accumulation but on dignity and integrity. The political will should be targeted at pragmatic reform of irrigation system as presented in the figure below. The framework is presented with a view that reform and empowerment (Oriola, 2007) in irrigation farming will lead to poverty reduction if not total eradication and sustainable food security through its positive effects.

Figure 1 is a framework for understanding how reform in irrigation will influence higher productivity and better natural resource management for higher income and help in reducing poverty, protect the environment and attain food security.



Source: - Adapted from Kerr and Kolavalli (1999). Oriola (2009).

Figure 1. Food Security and Poverty Reduction Framework.

It is widely accepted that Nigeria is not a poor country except that it has been poorly managed by those entrusted with its development. It is also widely accepted that Nigeria is rich enough to feed herself and the rest of Africa, the major hindrance to this are:

1. The ethnic and religious conflicts which claimed many lives and the destruction of food crops with able men and women staying in refugee camps for two or three years.

2. Those who rule Nigeria do not believe in Nigeria because of that they lack political will and patriotic zeal to deal with the problem of food insecurity in Nigeria; hence they adopt all forms of neo-liberal economic policies recommended by the World Bank and IMF for personal profits (Attah, 2012).

These are the man made problems, so that if properly addressed sanity will return and people's confidence in food production will be restored. The other solution to food insecurity lies with paying attention to the natural disasters such as flood, drought and pest control. Fortunately, we are going to have new generation of leaders who will have faith in Nigeria and strongly believe that Nigeria must take responsibility for its own destiny, that Nigeria will uplift herself only by her own efforts in partnership with those who wish her well (Otaha, 2013).

4.4.1. Government Programmes

There have been attempts at poverty alleviation, most notably with the following programmes:^[9]

- 1972: National Accelerated Food Production Programme and the Nigerian Agricultural and Co-operative Bank.
- 1976: Operation Feed the Nation: to teach the rural farmers how to use modern farming tools.
- 1979: Green Revolution Programme: to reduce food importation and increase local food production.
- 1986: Directorate of Food, Roads and Rural Infrastructure (DFRRI)
- 1993: Family Support Programme and the Family Economic Advancement Programme
- 2001: National Poverty Eradication Programme (NAPEP): to replace the previously failed Poverty Alleviation Program.

Nigeria possesses the capacity to be food secured if the enabling environment is created for the peasant farmers to operate in their farming activities through the following strategies (Adewuyi and Hayatu, 2011; Attah, 2012; F.A.O, 2001, 2010).

4.4.2. Rural Development

Rural development is the quantitative change or upliftment in the standard of living of people in the rural areas, brought about through integrated approach, by both governmental and non-governmental agencies and the people themselves. However, the integrated approach to Rural Development suggests some multi-sectoral efforts by the state which involves the provision of infrastructural facilities like roads, dams, schools, electricity etc., introduction of new techniques, establishment of banks and other service agencies as well as organizing and mobilizing people for productive activities.

Three basic strategies of Rural Development have been suggested and tried in many countries and in between them, there exists different mixtures. These strategies, according to Griffin (1974), are (a) technocratic (b) reformist and (3) radical (Abbas, 1993). Essentially, the major beneficiaries are the small peasants and landless labourers. Since this strategy emphasizes equality of opportunities and collective ownership of the means of production, it aims at rapid economic progress and a more equitable distribution of income and elimination of absolute poverty. It is this very strategy that can guarantee food security in Nigeria of the three. Of these three strategies, the third is the appropriate for Nigeria to guarantee food security but the agricultural policies of Nigeria are currently largely tilted to the first and the second strategies (F.A.O, 2001, 2010, Idachaba, 2006; Idachaba, 2004).

4.4.3. Easy access to Basic Farm Inputs

- As noted by IFAD in its country evaluation 2007, agriculture and rural development are crucial to the Nigerian economy. Around 45 per cent of GDP is generated from agriculture and almost 70 per cent of the poor live in rural areas and derive their livelihoods primarily from small-scale agriculture

4.4.4. Adequate Budgetary Allocations

Governments at all levels should ensure that budgetary allocations reflect the central importance that food and nutrition security have for the welfare of all people, as well as the immense economic benefits they provide for relatively little cost.

4.4.5. Appropriate Policies for Food Sub-Sector

While an expansive agricultural program is being pursued, there is also the need for a national food policy which seeks to assure all citizens access to food supply that is reasonably priced, relatively safe, adequate in quantity, and nutrition (Claffey and Stucker, 1982:50; Nyangito, 1999:112; Adeoti, 1989:126; Federal Government of Nigeria, 2001). Food policy properly formulated will encompass diet policy that shows, for example, the relationship of good diet with good living, as well as the causal link between inappropriate or insufficient diet with major and common debilitating diseases. Furthermore, a food policy, unlike agricultural policy, should stipulate safety guidelines for food production in the growing food industry; it will crystallize in food safety regulations,

such as the minimum requirements of basic nutrients that must be present in the food, the conditions under which the food is produced, its packaging, and even the advertisement to promote the consumption of the food (Davies, 2009).

4.4.6. Political Stability

For any economic activity to take place, political stability is a necessity. That is why The 1996 World Food Summit reaffirmed that a peaceful, stable and enabling political, social and economic environment is the essential foundation which will enable states to give adequate priority to food security and poverty eradication. Democracy, promotion and protection of all human rights and fundamental freedoms, including the right to development and the full and equal participation of men and women are essential for achieving sustainable food security for all (FAO, 1996).

4.4.7. Reduction in Poverty at the Rural Level

It has been well established in the copious literature on economic development that the problem of hunger and malnutrition is closely linked with poverty and lack of jobs because access to food is contingent on having the means to acquire it (The World Bank, 1991; Olayemi, 1998). This means, in essence, that any government that is desirous of making the country to be food-secure must also strive to create employment opportunities in both the rural and urban areas. This is by no means an easy task because employment creation has always been government's Achilles heel (Sinha, 1976:35; NEEDS, 2004: 76). There is a more compelling need for the government to initiate and implement macro-economic, fiscal, and monetary policies that will expand employment opportunities and promote overall economic growth with equitable distribution of the benefits of growth (Adeoti, 1989:132).

4.4.8. Peasant Farmers' Education

Peasants as the farmers are and rural as their environment may be, there is the need to educate them on how to use the farm inputs that are available to them. They need to be properly informed of the introduction of new improved crops and seedlings, different kinds of fertilizers and their uses as well as timeliness of use, the storage systems under which different post-harvest farm produce can survive over a relatively long period of time, the basic technology that can enhance their farming activities, and the marketing system that they can adopt to dispose their produce at reasonable prices when they want to do so (Abbas, 1993; Adewuyi and Hayatu, 2011; Ake, 1981).

4.5. Implications for Food Security and Poverty Reduction

The workability of the framework presented above implies that there should be a serious and pragmatic reform in this sector. The reform addresses the three fundamental components of irrigation system; the technology, infrastructure and farmers empowerment strategies. The framework therefore, serves as an antidote for attaining sustainable food security and poverty reduction. 1. Irrigation

technology is to be fine-tuned to take into consideration the dwindling water resource as a result of climate change. The technology has to conserve water and its distribution to farmland efficiently in such a way that it would militate against waterlogging and salinization (Oni, 2008; Otaha, 2013).

2. The Irrigation infrastructure on ground in various project sites are to be repaired or rehabilitated

in some cases and work out a better mechanism for a better operation and maintenance. Perhaps, the Public Private Partnership initiatives should be entrenched in this circumstance to facilitate better operation and maintenance. The farmers should be recognized as stakeholders in irrigation system (Oriola, 2004 and 2008) and be given responsibility in the operation and maintenance of such infrastructures.

3. Empowerment is the third critical issue in agriculture and irrigation farming in particular. It has been observed that participating farmers on various irrigation schemes lack access to farm input in general, fund and fertilizer in particular. Whereas, farmers need better access to seeds, fertilizer and water if they are to substantially ramp up production (Joachim von Braun, 2008). Also, they have very little skill on modern irrigation especially when extension services have been a thing of the past on irrigation projects. This was not the case when modern irrigation farming was introduced in 1976. As observed by Fagbamiye (2009), the extension services system which has become moribund cannot be left, it has to be adequately financed and motivated. Similarly, access to credit facility through Micro Finance Banks, legal recognition of the farmers' water users Association and Cooperative Societies formed by the participating farmers, Governments' efforts at stabilizing food prices through creation of steady market for all produce from irrigation farms in particular (e.g. the grain reserve initiatives) are forms of empowerment that are necessary in the system. Appropriate and adequate measures to enhance the above three fundamental issues will spin high productivity for higher income and facilitate better natural resource management because once the farmers imbibe irrigation skills the irrigation environment will be managed better, waterlogging will not be a problem and fertilizer will be applied appropriately with the assistance of the extension service provider (Olayemi, 1998; Oke, 2009).

Higher productivity leads to higher income, farmers can easily pay the wages of engaged labourer, and prices will become affordable for consumers. As farmers income increase farm households like good consumers anywhere, spend much of their income on a range of consumer goods and nonfarm services (Stephen et al 2002). Cumulatively, there will be economic growth and which will definitely reduce poverty. As poverty is being reduced the natural resources will start to enjoy some protection and finally the food security will become sustainable (Otaha, 2013; 2013b).

5. Conclusion and Policy Implications

Eradicating hunger and poverty requires an understanding of the ways in which these two injustices interconnected. Hunger and the malnourishment that accompanies it, prevent poor people from escaping poverty because it diminishes their ability to learn, work, and care for themselves and their family members. Food is not like other commodities, it is an indispensable and an important factor in nation's quest for economic growth and development. Being an inevitable commodity all efforts must be geared toward ensuring its adequate supply for sustainable economic development and human survival. In Nigeria, most of the food need is produced by peasant farmers who are scattered all over the rural areas and not multinational companies who produce on large scale for export and profit. For the dream of food security to realized agricultural policies must target these peasants' farmers and their rural environments. The Nigerian economy has what it takes to be food-secure given the enormous natural endowed. What is required is a re-orientation of the agricultural sector by properly repositioning the peasant farmers who are the providers of food in Nigeria. Nigeria could be food-secure if it adopts and faithfully implement the strategies suggested above. This is because these strategies do not only encourage these farmers but also promote their activities.

Poverty reduction is equivalent to eradication of hunger and improvement in household food security. Alleviation of poverty is to be pursued with the aim of improving the food needs of the poor households. Addressing the poverty issue of household can only yield significant result if it focuses well on the problem of hunger in the households. The study had shown that there is a close link between the poverty status and the food security of the households. The welfare of people can be positively influenced by placing priority on increased food production and regulated prices of foodstuffs. The preceding analysis has brought out some findings that have important implication on policy formulation. Based on these findings, the following recommendations are made:

- i. The design of poverty reduction programme should focus more on improving food production for the growing population through increased funding of agriculture and controlled food prices. Government should promote growth in agriculture especially the production of food crops, and ensure their availability at cheaper market prices.
- ii. The national food security programmes of the government should be well planned and focused so as to lessen the burden of food security of the rural poor.
- iii. Rural empowerment scheme can be intensified through integrated farming entrepreneurship; thus reducing food insecurity.
- iv. Poverty alleviation programmes should be well designed to incorporate the peculiarity of the vulnerable members of the community.

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