

## Stimulating food production in Nigeria for sustainable development: lessons from China.

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### ABSTRACT

The paper focused on reviving agriculture in Nigeria through the adoption of reforms like the Chinese government. The authors are concerned with repositioning of agriculture and food production through the emulation of reform lessons of highly populated country as a sine qua non for sustainable development. The work exposed the excessive importation of food in Nigeria in spite of available fertile land, over dependent on oil sector and adverse effects it has on the economy. The authors believe, among others that land reform is needed and radical intensification of farm production in the 774 local government areas in the country will go a long way in revamping food production.

**Key words:** Development, Food, Lessons, Production, High-import-bills

### INTRODUCTION

Nigeria is a very large economy with population of about 150 million according to United Nation estimate. In 2011 the World Bank data estimated Nigeria population to be 162 million. Economic Watch (2013) estimates Nigeria population to be 169, 282 million. The country represents about 20 percent of total population of sub-Saharan Africa. The growth rate of the population is at variance with the food production. The food situation in the country given the less attention on agriculture has not helped matters in spite of the fertile land endowed the economy by nature. Food production in Nigeria is given insufficient attention vis-a-vis oil exploration. Although agriculture is the highest employer of labour in the country as pointed by (Torty, 2004), but it has to be revived so as to raise more resources use by the sector. Subsistence farming predominates and so the percent of Nigerians who are into one form of agriculture or the other do not produce enough for the teeming population. The food situation in Nigeria is critical.

Recent estimates showed that over 53 million Nigerians are hungry which is about 30 percent of the total population of over 150 million and 52 percent live below poverty line. Unbelievably, Nigeria was considerably self sufficient in food production and was also a major exporter of food to other nations of the world in the 1950s and 1960s. At present, the reverse is the case. The dramatic turnaround stemmed from the discovery of oil in commercial quantity that pushed leaders' attention out of this important sector, agriculture.

Besides, in the early 1970s, Nigeria depended so much on the agricultural sector as the major supplier of foods for consumption by the teeming population and a major source of required raw materials for agro-allied industries. Pathetically, in the recent past the sector has witnessed a remarkable fall in its contribution to national development as many Nigerians, over 50% switched over to other sectors of the economy in 1990, thereby leaving agricultural production to fewer percent of the population. The aged are mainly in agriculture and lack the energy to function. The youths found agriculture none lucrative because of the attitude and mentality of the leaders.

The sector nearly suffocated in the era of oil boom (1972-1975), brought about by actions of government that did not favour agricultural production. Hence, the few farmers into agriculture did not find the sector funny as they relied on agricultural labour market that was associated with high cost coupled with inability to save or lack of storage facilities and the cultural model adopted that are highly labour intensive. Consequently, the production system of farmers given their socio-economic situation; inconsistent government policies, poor infrastructural base and other factors combined to annihilate the sector. Thereby, bringing in low production; high prices of food items, inflation, underdevelopment and poverty (Okuneye, 2001:1-3).

Nigeria is bestowed with fertile soil and supposed to be able to produce sufficient food to cater for the uprising population, but the situation is not so. Due to insufficient production of food, the prices of available ones have skyrocketed. The situation of food problem in Nigeria seems to have taken an unexpected dimension, taking into account the challenges presented by high prices of food. The cost of acquiring agricultural goods rose sharply since early 2006. Ever since, there has been a continued rise in subsequent years. The Food and Agricultural Organisation (FAO) report indicated that food price index rose on average of 9 percent in 2006 compared with the previous year 2005. When compared to the period December, 2006 to December, 2007 the increase in the value of the index was 37 percent (Agwu *et al*, 2011).

Insufficient agricultural production over the last two decades has continuously escalates food import bills. CBN (2009) points that food import bills rose from

₦298.8 million in 1975 to ₦780.7 million in 1977, to ₦1, 027.6 million in 1978 and stood at ₦1, 437.5 million in 1980. The rise in food import has not come down notwithstanding different efforts made by various leaders. But the population of the country is continuously rising. Consequently, poverty situation has not been sufficiently addressed.

In view of the aforementioned, it is our intention in this paper to unravel how lessons from China can help Nigeria overcome excessive importation of food. The paper will be presented thus: section one is an overview of food import situation, section two is the role of government over the years to change the trend, section three is a highlight of efforts of Chinese Government on food security, while section four is lessons to Nigeria, way forward and conclusion.

**An overview of food import situation in Nigeria:** In order to meet with the food need, the country was compelled to import over the years. Food import in Nigeria has been on the increase. Food importation rose from ₦270.9 million in 1974 to ₦486.1million, ₦432.8 million and ₦486.1 million respectively in 1977, 1978 and 1979. In 2007, 2008 and 2009, food import figures in millions stood at ₦247, 063.08, ₦314,907.32, ₦351, 507.68 respectively. Inadequate domestic food supply had to be supplemented with large amount of import. While this was a short-term measure, the adverse effect is that of creating job opportunities for the exporting countries and raising unemployment for the importing country, with its problems on balance of payment and price shock that affected demand by the poor. The situation has been persistent. In the 1980s and 1990s the food shortage did not change.

**Table 1: Food shortfall and import in million 1994-2001.**

	1994	1995	1996	1997	1998	1999	2000	2001
Shortfall (deficit)	0.53	0.30	2.91	3.34	3.13	4.22	5.34	6.51
Food import	0.67	0.58	2.95	3.47	3.24	4.48	5.59	6.91

Source: NBS, Review of Nigeria Economy, Various issues.

**Table 2: Food Import in million 2004-2009**

	2004	2005	2006	2007	2008	2009
Food & Live Animal	178,747.4	193,259.1	217,603.02	247,063.08	314,907.32	351,507.68
Beverage & Tobacco	21,846.7	28,008.6	31,536.70	39,848.88	52,484.56	51,220.63
Animal & Vegetable Oil & Fat	39,307.6	70,021.4	78,841.73	87,667.56	131,211.38	117,299.63

Source: Central Bank of Nigeria (2009). Statistical Bulletin, vol 20.

The table 1 denotes a continuous deficit in food supply in Nigeria, because of population growth rate and less attention to agriculture brought about by massive movement of labour and other resources from agriculture to other sectors (Eyo, 1997:46). The situation could not have been allowed to reach to this level if the right actions were taken by the leaders. The resources to diversify the economy have been available, but the major problem has been the attitude of resources managers who seem to be myopic and prefer the application of fire brigade approach to issues.

Table 2 shows a continuous rise in import of varieties of food items, notwithstanding that Nigeria has conducive environment to produce them. Curtailing this excessive importation of food items presupposes adequate reforms, orientation of the citizens and sufficient attention to various agricultural productions.

The estimated food importation in Nigeria in 2009 by Federal Ministry of Agriculture was over \$3billion annually. This colossal expenditure could have been used in other developmental project if appropriate actions were taken at the right time and also if there is sincerity of purpose by the leaders. It is pathetic that notwithstanding that agriculture is the largest employer of labour (Torty, 2004), more than 60 percent of the population engage in food production, contributes 42 percent of gross domestic product, nevertheless, agriculture receives less than 10 percent of the annual budgetary allocation. Really, insufficient funding, inadequate attention is a focal issue that raised the food crisis in Nigeria. This has reflected in the food calories consumption in Nigeria. The insufficient available foods are sold at very high prices which the poor and low income earners cannot easily afford. Hence you often see cases of malnutrition in the so claimed 'giant of Africa'.

**Table 3 shows the import bills in billion of Naira and Dollar equivalent, 1990-2001**

Currency	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Naira	3.47	7.79	11.74	13.95	16.77	88.35	75.95	100.64	102.16	103.49	120.05	195.81
US \$	0.43	0.97	1.46	1.73	2.09	10.99	9.45	12.52	12.71	12.88	14.35	24.36

Source: Central Bank of Nigeria, Statistical Bulletin & Annual Report, various issues.

**Table 4 shows Import of Oil and Non oil in millions from 2004-2009**

	2004	2005	2006	2007	2008	2009
Oil	318,114.7	797,298.9	718,578.9	776,762.70	1,319,435.60	1,063,544.8
Non Oil	1,668,930.6	2,003,557.4	2,435,090.3	3,208,125.7	3,929,019.7	3,958,617.8
Total	1,987,045.3	2,800,856.3	3,153,669.2	3,984,888.4	5,248,435.3	5,022,162.6

Source: Central Bank of Nigeria (2009). Statistical Bulletin, vol 20.

Central Bank Nigeria (2000), Annual Report & Statement of Account. Dollar conversion is in constant 1990 factor.

From the table 3, it is obvious that there have been continuous increase in import bill. In table 4, food import dominates the total non-oil import which been rising rapidly. This shows that if any effort was put in place to remedy the situation, it was grossly insufficient. However, it is worthy to note that the inflationary trend experienced in the economy affected food supply in no small ways. High cost of farm input associated with increase in transportation costs due to poor state of road, adjustment in fuel prices that has adverse multiple effects and irregular power supply contributed to rise in food prices. The continuous rise in consumer price index for food in both rural and urban areas, couple with decline in agriculture (crops) contribution to gross domestic product, fluctuating inflationary trend and annual population growth are good testimonies to poverty impact in Nigeria. The poor peasants in the rural areas with very little or no income are the most disappointed by the blow of the situation, which reduced purchasing power and raised the poverty state (Uma, 2007).

This calls for a review of activity, emulation of what other countries have done to sustain food security. Nigeria actually is not the largest population in the world. Country like China with population of over 1.3 billion has considerable food security. Other countries adopted a strategy that repositioned agriculture and food security. A well repositioned agriculture is expected to produce enough that can sustain the population in area of food supply, industrial raw materials and still be exported so as to earn foreign income required to obtain the essential instruments for development. It really sustains the Nigerian economy before and after independence. Agricultural contribution to the gross domestic product in 1960/61 was 76 per cent (Adedipe, 1999). Today, the contribution is relatively very low.

The Civil War (1967-70) and the intensive focus of attention on petroleum in the early 1970s choked the production basis of agriculture due to deficiency of foresighted planning for sustainable development. In the 1999 – 2000, agriculture contributed between 40–42 percent to the gross domestic product of Nigeria, which supposed to be agrarian economy, but yet to reposition agriculture to take its central role in the economy. Be it as it may, the food availability in the country cannot be said to be enough as frequent importation of food items are embarked. The costs of

agricultural inputs persistently increased in the country. A typical example is fertilizer, which was sold for an average of ₦141 per bag in 1985 and ₦200 in 1996, increased to ₦1,400 in 1997. At present, it is over ₦2,500 per bag. The resultant effect is the increase in the production cost of food and consumable food leading to the problems of malnutrition, household food insecurity and restricted access to nutritious and sufficient food, culminating in greater effects of poverty on many Nigerians (Okuneye, 2001; Okuneye, *et al*, 2001).

**The role of the nigerian government to improve agriculture:** The leaders of the country over the years are aware of the inadequate food and poverty situation in Nigeria and have attempted to rescue the situation from making food available on the table of the masses. The government has often adopted programmes that in the short-run increase production of Agricultural goods. Among such programmes were: Farm settlement in the early-to-mid 1950s aimed at increasing commodity output and create employment for young school leavers. River basin development authorities were established for the purpose of harnessing water resources for farmers throughout the country. In 1972, Gen. Gowon instituted the National Accelerated food production programme and the Nigeria Agricultural and Co-operative Bank under the implementation of Agricultural Development Projects (ADPs). The ADPs were established in all States of the federation to help organize farmers into more productive agriculture through the provision of modern inputs.

In 1976, Obasanjo introduced Operation Feed the Nation (OFN), Agricultural Credit Guarantee Scheme Fund was adopted in addition to the ADPs. However, in 1979, during the civilian administration, Alhaji Shehu Shagairi introduced, “the Green Revolution Programme”, which was targeted or aimed at reducing food importation while at the same time, boosting crop and fibre production. It encouraged all Nigerians in both urban and rural areas to go into agriculture for both commerce and provision of food for home consumption. In the same vein, the Buhari government, in 1983 introduced, “Back – to- Land” programme and other policies. The desire was to make food available for the teeming population, create employment opportunities and reduce poverty. Ibrahim Babangida regime in 1986 came up with: mass mobilization approach to tackle poverty which included Integrated Rural Development (IRD) and Basic needs strategies. This was known as the “structural Adjustment Programme” (SAP). This

strategy used macro – approach which consisted the Directorate for Foods, Roads and Rural infrastructure (DFRRI) among others. It is disheartening to note that in spite of all the efforts of the various governments to revive the poor economy, yet much seem not have been done. Each of the programmes to an extent raises food production momentarily. It was actually not sustained as it should be. Moreover, there were no inbuilt components that meant to cater for the processing and commercializing of the food output. In actual fact, they failed as efforts in developing the agriculture sector (Manyong, *et al*, 2003).

The high level of poverty in Nigeria has stimulated action on the part of the leaders. Among which was attention on agricultural and rural development. The Federal government came up with national policy and strategy for reviving agriculture and rural development in 2001. This situation called for streamlined institutional framework to promote efficient technical and social services to agriculture and rural sector. The National policy was the precursor of new strategy for the Rural Development Strategy. This new development assisted in the preparation of National Economic Empowerment and Development Strategy (NEEDS). Actually, the 2001 Rural Development Sector Strategy pinpointed areas that attention need be focused if there is sincere intention for agriculture and rural development in Nigeria to have any effect on the lives of the populace. Among which are restructuring of institution and role reassignment in the agricultural extension; agricultural technology development and natural resources management and public intervention in specific areas of rural agriculture to measure effectiveness and human capacity building in the agriculture sector. The Agricultural policy of 2002 actually itemised the new direction agriculture should follow but was unable to give priorities as to when each is expected to be achieved. It was devoid of systematic procedure for attainment (Manyong, *et al*, 2003; African Development Bank Group, 2005)

The major thrusts of the national policy are: (i) Creating a conducive macro-economic environment to stimulate greater private sector investment in agriculture; (ii) Rationalising the roles of the different

tiers of government; (iii) Re-organising and rationalizing the institutional framework for government intervention in the sector; (iv) Actualising and implementing integrated rural development; (v) Increased budgetary allocation to enhance production and productivity; (vi) Increasing fiscal incentives to agriculture and reviewing trade regulations; and (viii) Promoting increased use of machinery and inputs through favourable tariff policy. The reformation of the institutions and the way government works was aimed at increasing the productivity of peasant farmers given that over 50% of the poor are engaged in agriculture. Other intention of reform was to attack corruption and encourage transparency among others (African Development Bank Group, 2005).

Suffice it to point that over the years there have been beautiful policies made to revive agriculture in Nigeria but the expected goal has not been realised. Food insecurity has not been tackled in all ramifications. This can be attributed to funding, problem of implementation or lack of focus on goal attainment. Besides, dwelling on one sector for economic development is not ideal given the uprising population. Agriculture which some Third world countries are known for should not be relegated for any reason.

#### **Effort of chinese government on food security:**

China's economy was underdeveloped in 1949 given the dominant features. The living standard was very low. The genesis of China change is the reformation of the 1950s which made it possible for about 80 percent of the rural household to have access to land resources that was at the beck and call of few 20 percent of the population. Prior to the then, subsistence agriculture was in practice. This situation was seen as highly disadvantaged especially when there was disaster; hence there was an emergence of cooperative service in agriculture and partnership among farmers. Besides, the movement for change included concentration of the medium and large sized production tolls. Collective services were given to individual household on certain farm production. A follow up was that the individual's land ownership was merged under collective land ownership.

**Table 5 showing major political events and agricultural Policies in China since 1949**

Period	Political Events	Major Agricultural Policies
1949-52	Socialist land reform(Agrarian reform)	Specialised production
1953-57	Cooperative movement	Free market <i>allowed</i>
1958-1962	Great leap forward	Compulsory commandism for demand and supply. No free market. Grain self-sufficiency for major agricultural products
1963-65	Readjustment period	Very low prices for agricultural products. Commune system
1966-168	Cultural revolution	
1979-	Economic reform	Relatively higher prices for agricultural produce Free market encouraged Specialized production encouraged Abolition of the Commune system Various kinds of production responsibility, especially household responsibility systems

Source: Adapted from Yao and Colman 1990

Economic reform brought remarkable changes and innovation in the rural areas. This eventually raises the output in agriculture and living standard. See the table below

**Table 6 showing the annual percent growth rate of China's Economy**

	Pre-reform 1970-78	Reform period 1979-84	Reform Period 1985-95	Reform Period 1996-2000
Gross Domestic Product	4.9	8.5	9.7	8.2
Agriculture	2.7	7.1	4.0	3.4
Industry	6.8	8.2	12.8	9.6
Services	na	11.6	9.7	8.2
Foreign trade	20.5	14.3	15.2	9.8
Import	21.7	12.7	13.4	9.5
Export	19.4	15.9	17.2	10.0
Grain production	2.8	4.7	1.7	0.03
Oil crops	2.1	14.9	4.4	5.6
Fruits	6.6	7.2	12.7	6.5
Red meats	4.4	9.1	8.8	6.5
Fishery	5.0	7.9	24.1	14.0
Rural Enterprise Output value	na	12.3	24.1	14.0
Population	1.80	1.40	1.37	0.90
Per capita GDP	3.1	7.1	8.3	7.1

Note: Figure for GDP in 1970-78 is the growth rate of national income in real term. Growth rates are computed using regression method. Growth rates of individual and groups of commodities are based on production data; sectoral growth rates refer to value added in real terms.

Source: Adapted from CCAP working paper (Huang and Rozelle, 2001) in Khan, S, Hanjra, M A & Mu, J ,2009)

Consequently, exports rose while import declined. Rural output was on increase showing efficiency in the use of available resources. Gross domestic product increased resulting from increased aggregate economic activity. Grains and other crops production rose beautifully. It is quite remarkable and worthy of emulation.

The reforms on agriculture adopted in China brought about positive impact. Rural per capita income increased visibly compared to what it was before reform. Development of agriculture has been seen to be the major engine for development, hence apart from technological innovation, the country established research centres where discoveries were made available to farmers so as to boost production in the region (Zang, 2005).

Actually, apart from providing food for about 1.3 billion population, China is also an exporter of food to other countries of the world, especially grains. This is the reason why there were worries that China's irrigation water shortage in recent past may throw dependant countries into food supply problem. Undoubtedly, proper understanding of the food need in China compelled the leaders to commence economic reform, especially in agriculture. Food security issue was made a priority in the political agenda of the government. The introduction of household responsibility system in agriculture was the bedrock for the remarkable improvement experienced by the country. Price distortions reduction and reallocated land rights from collective farms to rural households was a key issue. Most other reforms resulted to increased agricultural production, food security and poverty reduction. This bold step repositions the living standards of millions of poor rural residents. This revival of poverty is tagged the biggest antipoverty programme the world has ever seen and it was claimed to bring the greatest rise in economic wellbeing in terms of food security within the fifteen year period in all human history. The Chinese agricultural reform touched all and sundry, thereby giving rise to steady increase in per capita income and food security (Sachs, *et al*, 1994; Brown, L .R and Halwil, B,1998; Zhang and Kanbur, 2001; Fan *et al.*, 2004; Khan, *et al* 2009).

In actual fact, food security is given the highest priority in Chinese political agenda (Khan, S , *et al*, 2009). In spite of the challenges, the country is consistent with the aspiration because of its importance to the populace. This intention compelled China to embark on various reforms. For over two decades, China took a bold step to reform

agriculture. It started with policies and institutional reforms. This brought a remarkable motivation of the rural household which gave a positive result that raised food productivity by the rural dwellers and alleviated poverty greatly. Rapid economic turnaround was experienced due to agricultural reform and the impact was overwhelming as it was able to supply the food and raw materials needs of both the domestic and international market (Fan *et al*, 2004; Zhang and Kanbur, 2001; Sachs *et al* 1994).

Besides, having awareness of numerous challenges such as population growth rate, land problem, urbanization, industrialisation among others, the country opted for more advance technology and establishment of bilateral relationship in agriculture with other countries so as to resolve these problems expected to surmount the desire to sustain food security. The adopted technology accounted for about 40% of the increase in rice productivity during 1980 to 1995. In addition, increase total factor productivity is attributed to technology (Jin *et al*, 2002). This has repositioned China to adopt the goal of maintaining a high degree of cereals self-sufficiency.

In 1996, about 67% of China's land was devoted to agriculture and the cultivated area was 130 million hectares. However, the overwhelming land problem due to urbanization and industrialisation compelled China to do something, among which includes drainage from shallow water bodies, lake and swamp; drainage of waterlogged land; conversion of land from forestry, grass or horticulture through adjustment of agricultural structure; rehabilitation of areas discarded by mining, construction, disaster and so on (Heilig, 1997; Lin and Ho, 2003). Effort in the right direction is associated with positive change which is working for the Chinese economy. Nevertheless, there has been series of attention given to agriculture by china over the years worthy of emulation.

#### **Lessons to nigeria and way forward:**

Diversification of an economy is one of the ways to revamp an economy. Over dependent on oil as source of development has to change. Nigeria has come a long way in agriculture but could not sustain the tempo as it was in the 1960s and 70s. The exporter of food in the past is now a high importer of food. The serious reform adopted by Chinese government should be emulated by Nigeria if the high expenditure on food importation must be curtailed. Land policy should be reformed as done by Chinese to accommodate large scale production and all season farm products. It is really difficult to embark

on change but at last change is a necessary step for success. Restructuring of agriculture involves all round inward looking, considering the nature of our economy. If China could sustain food security for its large population, Nigeria can. There is need for more efforts, sincerity of purpose and consistence with programmes and policies. Different programmes have come and gone with various leaders. A steadfast on programmes, review of programmes and adoption of new strategies will go a long way.

Advance technology in agriculture should be introduced in all parts of the country. Nigeria has varieties of crops capable of mass production to sustain industries and also for export. Our leaders need to borrow a leaf from China and other countries. China improved agriculture, land reform and infrastructure in the hinterlands to minimise migration. It is imperative that Nigerian leaders have to develop the rural sector, make the environment conducive for economic activity. Actually, the establishment of agro-industries and integrated agricultural practice in all the 774 local government area of the country is essential at the moment. Government has the ability and capability to bring a change needed now; it is a matter of application of political will. What happened in banking industry is needed in agriculture if Nigeria wishes to revamp food production and regain the past glories as an exporter of agro-products. A stitch in time, they say saves nine. Nigeria is blessed with fertile soil and a large chunk of the country's land is unused. It is imperative for leaders to intensify action and attention on food production now and minimise food importation. This will go a long way to raise income and fight against poverty.

## CONCLUSION

In this paper, we have been able to show that Nigeria is lagging behind in food production considering the enormous food importation over the years. Besides, the country is bestowed with fertile land and so there is the need to emulate the actions of a highly populated economy that has achieved considerable food security. Nigeria has varieties of crops that need to be mass produced for consumption and export. Malaysia is doing well in palm production which was obtained from Nigeria. It is believed that if the country has to stand firmly, reduce food importation and sustain its industries there is an urgent need for radical option of revamping food production through sufficient and consistence attention to agriculture.

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