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**SMOOTHENING TRENDS OF FOOD PRICES IN NIGERIA:
POLITICAL ECONOMY AND POLICY VISTAS**

By

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**Paper Presented at the 29th Conference of the International Association of
Agricultural Economists, University of Milan, Italy**

August 8-14, 2015

Abstract

The food crisis of 2008 in Nigeria was influenced by price changes in the world market and the escalation of the price of imported fuel into Nigeria which led to sharp increases in the prices of agricultural inputs and transportation cost. The soaring prices of food staples benefited the producers whereas there was a worsening of malnutrition among the poor. To cushion the effects within the short-term, the government released grains from the reserve, ordered the import of half a million tonnes of rice to be sold at a subsidized rate and suspended the tariff on rice imports. The policy measures adopted caused a reversal of the trend of food price increase within six months, generated awareness about the nutritional importance of major food staples, and led to changes in preferences in the demand for food commodities and stimulated increased financing for commercial agriculture. This study sought to (i) examine the political economy issues surrounding the 2008 food price crisis, (ii) analyse the performance of the medium-term policies and strategies to prevent a recurrence of the 2008 episode and (iii) draw policy implications for price stability in the country. The study found that the country has not been under any threat of food crisis since the 2008 episode. Right from 2011, the medium-term policies and strategies were re-designed and entrenched as major components of the agricultural transformation agenda (ATA). The implementation of the ATA has led to an increase in domestic food production, reduction in food import and stabilization of food prices.

1. Introduction

Nigeria is a net importer of food. Therefore, any crisis that occurs in the international food market will be felt in Nigeria. It is in the context of the international dimensions of the 2008 food crisis that the nature, impact, and policy responses in Nigeria can be understood. Although the prices of many commodities slumped during the first couple of years of the new millennium, some commodities (coffee, cotton, sugar, rubber, cocoa, rice, etc.) started to witness a rebound thereafter. The main causes include the shifting fundamental trends in supply and demand, poor harvests, policy changes, episodic shocks arising from climatic fluctuations and a variety of other natural and political factors. As in 2006, the increases in commodity prices in Africa were regarded as a commodity boom being driven by growth in other developing countries, especially China and India, influence of taste and preferences, climatic fluctuations, conflicts in crop producing countries, high energy costs, and price speculation (Olomola, 2007). By 2008, however, the price rises have assumed crisis dimension in food markets across the developing world, including Nigeria. The crisis actually came to a climax during the first three months of 2008 and the implementation of policies to mitigate the effects started during the first week of May. This paper presents a political economy analysis of the food crisis and undertakes an assessment of the policy responses and implementation performance from 2011 to date. It begins with an overview of the nature and impact of the food crisis in section two. In section three the policy responses and the political economy analysis is undertaken. Section four examines the implementation performance of the policy responses during the post-crisis period to have an insight into their relevance and capacity to stabilize prices as well as the commitment of the government to do all that is required to prevent future occurrence of the crisis. And in this vein further measures are proffered to strengthen the implementation process as the paper is rounded off in section five.

2. Overview of the nature and impact of the 2008 food crisis in Nigeria

In general, the prices of many commodities have followed an increasing trend but skyrocketed between 2007 and 2008, especially in the case of rice, sorghum, cassava, soybean, maize, millet, and wheat. Even after 2008, prices of many crops continued to rise with the exception of rice. This is due to three main factors: (1) demand pressures from neighbouring countries some of which have experienced food riots, (2) substitution effect of the 2008 food crisis. Consumers in Nigeria and indeed in many West African countries turned from the consumption of rice and bread to the consumption of other food staples such as cassava products, yam, and maize; a trend that has been observed in Guinea, Liberia, Sierra Leone, Ghana, Benin, and Nigeria together with an increase in the production and trade of cassava farina in West Africa since 2008 (NISER 2009; SWAC 2011). (3) the high cost of transportation in Nigeria during the period, particularly occasioned by the increase in the international price of petrol occurring simultaneously with the soaring of international prices of rice and wheat. As Nigeria was also importing fuel during the same period, such increase in the price of petrol was transmitted to the domestic economy leading to an escalation of transportation cost.

An indication of international price transmission is revealed by co-movements between the import prices and domestic retail prices of major tradeables for annual data from 2002 to 2010. A correlation analysis reveals that the co-movement is strongest in the case of wheat ($r = 0.84$), followed by rice ($r = 0.70$), while in the case of maize, the movement is also in the same upward direction, but the correlation is weak ($r = 0.37$). The shock in world food prices in 2007–8 should be expected to generate extraordinary effects because the rise in prices coincided with sharp increases in the prices of petroleum products (including petrol) imported into Nigeria which followed the same trend as the price of crude oil in the international market. Prices of refined petroleum products, fertilizer, and other agricultural inputs imported into the country increased, resulting in a substantial rise in prices of both imported and domestically produced food. The weak exchange rate which continued to depreciate up till 2010 also fuelled the hike in food prices especially in view of the fact that the country is highly import-dependent for the supply of its agricultural inputs. The Nigerian naira (NGN) exchange rate to the US\$ continued to depreciate from 2005 to 2010. It was NGN 132.9 in 2005, NGN 127.4 in 2007, and NGN 139.27 in 2008. It depreciated further to NGN 148.9 in 2009 and NGN 150.3 in 2010. Moreover, the inflation rate which stood at a single digit before the crisis, rose considerably from 6.6 percent in 2007 to 15.1 percent in 2008 and 12 percent in 2009. The domestic inflationary pressure, inadequacies of the foreign currency market and imported inflation through massive imports of petroleum products (which jerked up transportation and production costs) were partly responsible for the food price crisis in Nigeria. This situation also partly accounts for the observed trend in which domestic food price increases actually exceeded world food price increases. Critical supply shortages arising from inclement weather conditions, investment-unfriendly macroeconomic environment and poor implementation of projects exacerbated the price transmission effects.

The food crisis had considerable impact on producers and consumers in both rural and urban areas of the country (Olomola, 2013a). In the aftermath of the price escalation farmers demonstrated a clear and remarkable supply response. Younger farmers were attracted to the agricultural sector. However, consumers were worse off. Those on low incomes witnessed a substantial increase in the proportion of their income that was spent on food. There was also deterioration in their intake of calorie and protein as they engaged in unhealthy food consumption patterns.

3. Policy Responses and Political Economy Context

The 2007–8 food crisis was widely reported by the Nigerian mass media and this generated responses from all strata of the society—the executive, parliament (National Assembly), non-governmental organizations, producer associations, development partners, scholars, and activists. This section examines the actual policy process that took place, the actors involved, their roles, and the type of links and interactions among them as well as the timing of responses and the factors influencing the adopted policy actions.

3.1 *The Policy-making Process*

A diverse group of stakeholders (government, donors, research community, farmers' associations, media organizations, and the private sector) was involved in the debate surrounding the food crisis and policy responses in Nigeria. The policy-making process did not follow the conventional linear model with a unidirectional flow from an agenda setting phase to the decision phase and implementation phase which actually had been flawed in the literature (Sutton 1999). A major characteristic of the food crisis policy (response) process is that it involved the participation of a variety of stakeholders dominated by the government (policy makers), politicians, the mass media, and producers' associations. The policy process can best be described as one of disjointed incrementalism or muddling through (Lindblom 1980). Indeed, muddling through a 'time bomb' which never exploded offers an intriguing experience. Discussions about the nature of the crisis and possible solutions were going on simultaneously but a considerable length of time was taken to build consensus. It was difficult for the stakeholders to promptly prescribe the policy agenda because of the political colouration and connotation implied by the controversy surrounding whether or not Nigeria was actually facing a food crisis. As the price hike was becoming increasingly burdensome for consumers and food supply shortages were being reported and intensively analysed in the media, the National Food Reserve Agency (NFRA)—a more or less technical arm of the Federal Ministry of Agriculture and Water Resources (as the ministry was then known) claimed that the country was not facing any risk of food crisis. This position was unpopular in the country and took some time before it was reluctantly vacated. It effectively created a lull in policy response and put the executive arm of the government on defence rather than staying at the forefront to study the situation properly and provide the rallying point to set the policy agenda to tackle the crisis. The government was later to be stampeded by criticisms by opposition parties (politicians), civil society organizations, and media reports of the dire consequences of soaring food prices in other countries including deadly riots and threats to the stability of governments. Consequently, the process witnessed the pronouncement of decisions by the government even when consensus has not been reached and hurriedly identified solutions which turned out to be unimplementable within the stipulated time. Such a panicky process was exemplified by the initial announcement of the direct import of rice to the tune of NGN 80 billion. The basis for this move was the fear that the soaring food prices in the world market could introduce significant shocks into the Nigerian food market, given the status of Nigeria as a net food importer wherein rice and wheat predominate among others in the food import bill of US\$2.8 million per annum. Following sharp criticism by the Rice Farmers' Association of Nigeria (RIFAN) and opposition parties the policy had to be moderated by another commitment of NGN 10 billion for the provision of credit to farmers to boost food production. This way, the government was able to assuage the apprehensions of both consumers and producers. This is a demonstration of the influence of producers' association as the government muddled through by ways of working out a beneficial process for the producers in tandem with what the consumers will benefit from cheap imports of rice. Another example was the attempt the government made to import small-scale rice processing machines to be installed within one month in all parts of the

country. The idea failed when it was later realized that the process of importing and putting up the factory buildings would require up to three months. Further details of what worked and what else failed to work can better be understood as we characterize the process by examining the role of the decision-making actors as well as the stakeholders who influenced the process, timing of responses, policy choices and effects, as well as the factors that circumscribed the selection of policies implemented.

3.2 Decision-making Actors

Of the three tiers of government in Nigeria (federal, state, and local) the federal government maintained the leadership role in organizing and implementing policy responses to the 2008 food crisis. And in the same vein, the executive and legislative arms of government played prominent roles. The response of the executive arm of government (led by the president) came mainly through the FMAWR while in the National Assembly (parliament), the House of Representatives and Senate organized public hearing, debates, and investigations through their respective committees on agriculture. The FMAWR was the fulcrum around which the policy process revolved. It has the responsibility to liaise with other stakeholders including the parliament, the Federal Executive Council (FEC), the private sector, farmers' associations, and development partners, package the policy measures for necessary approval by the government and implement such policy response measures. During the period, approval of executive actions followed the normal procedure in which the FEC comprising all cabinet ministers and chaired by the president, examines the policies brought before it by the relevant minister and arrive at a consensus after thorough consideration of the merits and demerits.

As part of the consensus building process, the minister of agriculture convened a stakeholders' meeting which took place at Abuja on 3 May 2008. The stakeholders in attendance included directors of various departments in the Federal Ministry of Agriculture, representatives of the National Food Reserve Agency, Agricultural Research Council of Nigeria, development partners, representatives of agribusiness firms, and the Rice Farmers' Association of Nigeria. The agenda of the meeting was to examine the food situation in the country and to obtain the commitment of stakeholders towards implementing the proposed policy decisions. The sole objective of the policy response in the short term was to bring the domestic price of rice down quickly having jumped by about 100 percent in a couple of months prior to that time. It was established that the rice output in 2007 was 3.4 million MT out of which only 1.4 million MT was milled leaving 2.0 million MT of rice paddy unprocessed because of inadequate processing capacity. It was also established that the requirement of the country for paddy rice for its 140 million people at 30 kg per caput consumption was 6.5 million MT or 4.2 million MT milled rice equivalent at 65 percent recovery rate; and that the harvest of paddy in 2008 was estimated at 3.94 million tonnes.

The timing of the legislative and executive actions taken between October 2007 and November 2008 in response to the crisis attests to the role of both houses of parliament (Senate and House of Representatives) as policy champions (Table 3.1). The legislature demonstrated a better understanding of the problem and wielded considerable influence in setting the policy agenda and in ensuring effective delivery of services at the

Table 3.1 Policy process of the Nigerian 2007–8 food crisis response

Time line	Issues addressed and measures taken
25 October 2007	Through resolution No. 37 of 25 October 2007 the Senate alerted the nation of the drought in some parts of the country. This alert was mainly due to the devastating effects of droughts especially in view of the need to ensure national food security. The Senate further resolved that the Federal Ministry of Agriculture should immediately brief the house on the status of the nation's strategic grains reserve. The strategic grains reserve is the mandatory storage by the Federal Government of about 5 percent of grains harvested nationwide. This reserve is to ensure continuous availability of food even in the time of famine.
25 April 2008	The Committee on Agriculture of the House of Representatives alerted the federal government on the growing food shortages and the attendant soaring of prices of grains. The legislative chamber thereafter invited the Federal Ministry of Agriculture to a meeting to discuss in detail the status of food security in Nigeria.
29 April 2008	Based on the above articulated concerns the president convened an emergency meeting with all the 36 state governors to review the situation and take necessary actions. The meeting extensively discussed the food security situation in the face of the global food crisis arising from the shortage in the aggregate world food output and resolved that very urgent measures be put in place to protect the populace and develop the agricultural sector.
3 May 2008	A stakeholders' meeting was convened in Abuja at the instance of the minister of agriculture. The agenda of the meeting was to examine the food situation in the country and to obtain the commitment of stakeholders towards implementing the proposed policy decisions.
14 May 2008	Some of the measures proposed during the meeting with the state governors were considered and approved by the FEC. The FEC approved inter alia that: (i) the sum of NGN 10 billion be provided from the rice levy account for a credit scheme to support local rice processing capacity. Credit granted under the scheme was to attract 4 percent interest rate, a repayment period of 15 years and a five-year moratorium; (ii) all outstanding food storage projects should be completed before the end of 2008 to significantly increase the national food reserve capacity from 300,000 to 600,000 MT; (iii) the funds accruing to the Natural Resources Development Fund (May 2008 to 2011) be utilized as Special Intervention Fund Agriculture to boost domestic production of food crops and development of agro-allied industries as well as R&D for the production of improved varieties of seeds.
8–14 November 2008	In its annual retreat held in Kano (north west Nigeria) the Senate held sessions on 'Desertification, Climate Change and Challenge of Poverty' and 'Ensuring Food Security in Nigeria' as part of the key issues of concern during the retreat. The food crisis was widely discussed. The speakers and discussants at these sessions were distinguished academics drawn from various parts of the country. The whole nation was sensitized regarding the need to address the main causes of the crisis and the need for the government to take effective measures to address the crisis.

Source: Olomola, 2013a

implementation stage. This was done through organizing public hearings and conducting debates to ensure appropriate policy implementation was neither delayed nor derailed. A major political dimension in the policy process in Nigeria was the involvement of the thirty six state governors as part of the key decision actors especially in view of the federal nature of the country with a multi-party democracy and multi-layered governance structure. All the governors met with the president on 29 April 2008 to examine the policy response measures. The following week, 5 May, the measures were tabled before the stakeholders for validation prior to presentation before the FEC.

3.3 Policy measures to address the crisis

In Nigeria, the policies adopted can be categorized into short-term, medium-term, and long-term policies. In what follows we present details of the various policies.

3.3.1 Short-term Measures

Release of grains

The federal government released 65,000 MT of various grains and garri to the public, which led to a reduction of prices of some tradable and non-tradable food items such as maize, sorghum, millet, and gari. The states were enjoined to do the same but this took place at an insignificant level given the low stock levels. The intervention buying operation of the federal government was aimed at increasing the supply of rice within the next three months (May–July 2008) and sustain it for the following three months in the first instance (August–October 2008). This was expected to cause a significant reduction in the market price for rice, based on evidence that it had much faster than the current price at the border with Benin Republic. The incremental import would be sold to the general public at a subsidized price, with a view to bringing the price down.

Mopping up operations

This involved purchasing the current stock of imported rice in the country from local stores in different parts of the country. It was established that about 110,000 MT were available to be mopped up at the prevailing market price to be sold to the consuming public at subsidized prices. Although this was achieved within the short term, the quantity available was too small to generate any perceptible impact.

Distribution of small-scale machines

The government considered the option of processing the paddy in storage based on the quantity confirmed to be available. Rice Farmers Association of Nigeria (RIFAN) had claimed that about 4 million MT of paddy would be available in the short term, comprising present stock level in July 2008 (2.5 million MT) as verified by the Federal Ministry of Agriculture and Water Resources (FMAWR) plus new harvest (1.5 million MT) in the following season in October 2008. However, the problem of processing was underscored, in terms of low capacity of small-scale processors and poor quality of domestically milled rice in Nigeria. Thus, small-scale machines could be distributed to processors in the short run for the purpose of milling the paddy to be made available in

October 2008. Therefore the government made an attempt to place an order for small-scale rice processing machines from abroad. About 1,000 small-scale milling machines were to be purchased which would need one month to install in all parts of the country. This was expected to reduce the rice price by at least 30 percent. It was also to have favourable socioeconomic implications including creation of jobs for processors, engineers, and others. The fact that farmers would be encouraged to produce rice made this option particularly attractive. The option did not go beyond the level of conceptualization. It failed as a short-term measure because about two or three months would be required for the import of machines and putting up the factory buildings.

Tariff waivers

The federal government approved the suspension of all levies and duties on rice imports with effect from 7 May to 31 October 2008, which stimulated the private sector to place an order for rice import to the tune of almost 10 MT. The actual rice import was only 172,518 tons, which led to a 45 percent fall in prices. In addition, the cross-border trade in rice probably increased. The socioeconomic implication was in terms of increased business among rice traders and consumers in the short run, which of course was at the expense of low morale of farmers in the long run.

3.3.2 Medium-term Measures

Subsequently the ordeal of soaring food prices was converted to an opportunity for Nigeria to institute medium- to longer-term measures for improved agricultural development. Thus, the federal government set up an implementation committee comprising ministers of agriculture and water resources, finance, commerce and industry. A number of medium-term measures emerged to address the looming food crisis.

Food production

An allocation of 1.68 percent of the federal budget was made to the Natural Resources Development Fund during 2008–11 for boosting the domestic production of food crops, the development of the agro-allied industry, and research and development (R&D) on seed varieties. As discussed below, not all the amount was actually spent due to bureaucratic delays and untimely disbursement of funds.

Agricultural credit

The government provided NGN 10 billion from the rice levy account as a credit scheme at a concessionary interest rate, in support of the local rice processing capacity in the country. However, many small-scale producers and processors could not access the funds. A major complaint was that the selection of beneficiaries was politically motivated. Furthermore the Central Bank of Nigeria resolved to raise NGN 200 billion funds from the commercial banks in two weeks. The fund would be used for commercial agriculture to be disbursed by accredited banks. The credit under the scheme was to be disbursed for crop and livestock production, the processing and marketing including storage and input supplies. The commercial agricultural credit scheme was not targeted at financing the establishment of rice mills. Thus, despite the introduction of this scheme the issue of

inadequate rice processing mills remained unresolved. The implementation of the scheme was inequitable as small-scale farmers who produced over 80 percent of the agricultural output in the country received little or nothing from the credit scheme while large-scale producers benefitted immensely. Smallholders also face far more restrictions in terms of access to formal credit than the large-scale farmers.

Food reserve and storage facility

The federal government decided to complete the outstanding storage projects before the end of 2008 in order to increase the national strategic food reserve capacity from 300,000 to 600,000 MT. The state governments were encouraged through moral suasion to step up their buffer stock operations, which involve at least 10 percent of food output in their respective domains. It was envisaged that up to two million MT silos capacity would be required for the country. Efforts were made to complete seventeen silos which were already at various stages of completion across the country. The federal government also decided to start up the building of eleven others in various states of the country. A sum of NGN 15 billion was earmarked for this purpose. To date, however, many of the silos remain uncompleted and the target capacity has not been met due to poor budget implementation especially non-release of appropriated funds.

Crop processing

A decision was taken by the government to increase the rice milling capacity by an additional 88,000 MT per annum and create about 8,000 direct and indirect job opportunities. The mills were to be located in the major rice producing states to take advantage of proximity to raw materials. The local capacity for the operation and maintenance of rice mills and the fabrication of spares was to be gradually built thereby creating employment for youth. Commitment to this decision seems to remain on course. The federal government is making arrangements to secure international financing for the establishment of a hundred rice mills across the country. The target date for the completion of the project has been put at 2015. As it turned out, the issue of importing rice processing equipment which failed as a short-term measure has been shifted to the medium-term horizon and even then it has been difficult to achieve mainly due to scarcity of investment funds and the lack of confidence on the part of private investors that the policy environment will protect their investment if they provide the necessary funds. There was also emphasis on the physical development of markets for livestock and birds, physical development of grain markets and the introduction of a guaranteed minimum price (GMP) scheme. This is to serve as a safety net measure for the farmers in terms of providing remunerative prices and stabilizing their income. The GMP was actually introduced but its implementation has not been effective.

3.4 Long-term Measures

Later in 2009, the federal government produced a food security strategy document which prioritized a number of measures in the long term. The policy thrust behind this includes a number of desirable attributes, namely the value chain approach to agricultural development, commodity focus in providing support to producers, the visibility of the

private sector, successor farmer generation, and provision of safety net. In this regard, the aspects of the policy response in the long term include (i) the promotion of large-scale commercial agriculture of between 500 and 3,000 hectares (ha) that is intended to have a direct linkage to the small-scale farmers with a target of 10,000 ha for a period of four years; (ii) the construction of 60 specialized warehouses that will increase storage capacity; and (iii) the setting aside of 1.68 percent of the Natural Resources Fund for agricultural research.

4. Performance of post-crisis policy measures and implications for price stability

Since 2011 when another general election was held and the administration of President Jonathan was sworn in, Nigeria has not witnessed the type of 2008 food price crisis. The policy responses to the 2008 food crisis that fell under the medium and long-term horizons were organized into four key components of the agricultural transformation agenda (ATA) for the period 2011 to 2015 which was coterminous with the tenure of that administration. The relevant components of the agenda and complementary policies which have helped to expand production and stabilize prices are the growth enhancement support scheme (GESS), value chain development, staple crop processing zone (SCPZ), cassava flour inclusion for bread production and tax policies. In what follows we undertake a brief review of the performance of these strategies and policies.

4.1 Performance of the growth enhancement support scheme

The GESS is actually the most popular component of the ATA; and so far it has received far more policy attention than any of the other components as expected. It was designed in 2011 and commenced operation in 2012. The specific policy objectives of the GESS are to: (1) Target 5 million farmers annually for four years for the delivery of subsidized agricultural inputs on their mobile phones. (2) Provide direct support to farmers to enable them to procure agricultural inputs at affordable prices, at the right time, and at the right place. (3) Increase productivity of farmers across country through increased use of fertilizer—from 13kg/ha to 50kg/ha and (4) Transform the role of government from direct procurement and distribution of fertilizer to a facilitator of procurement, regulator of fertilizer quality, and catalyst of active private sector participation in the fertilizer value chain. The process of targeting farmers to benefit from the input subsidy program under the GESS started with the registration of 3.91 million farmers in 2012. The number increased to 9.5 million in 2013 and 10.47 million in 2014. The number of farmers targeted for the subsidy benefit also continued to increase from 1.09 million in 2012 to 7.24 million in 2013 and 8.30 million in 2014. Under the scheme, the quantity of fertilizer distributed to farmers increased from 120,903 metric tonnes in 2012 to 466,638 metric tonnes in 2013 and rose phenomenally to 748,834 metric tonnes in 2014. On fertilizer subsidy alone, the amount spent by the federal government rose from 6.65 billion naira in 2012 to 22.92 billion naira in 2013 and 41.19 billion naira in 2014. This implies that the total public spending on fertilizer subsidy (by federal and state governments) over the period increased from 13.30 billion naira in 2012 to 45.84 billion naira in 2013 and 82.38 billion naira in 2014. The number of farmers that benefited from the subsidy increased from 728,936 in 2012 to 4.12 million in 2013 and 7.22 million in 2014. On this count alone, the implementation of the GESS in particular and ATA in general

has been very successful. As expected, the proportion of beneficiaries was much lower in the southern zones than the northern zones. Persistently, the northwest zone recorded the highest share of 53, 32 and 32 percent in 2012, 2013 and 2014 respectively compared with the southwest which recorded the lowest share of 3, 5 and 8 percent respectively. With better targeting of farmers, improved management of supply chain and monitoring of input distribution right from 2013, it has been possible to achieve significant improvement in the compliance with input allocation criteria and better access to inputs by farmers. The level of success achieved notwithstanding, challenges remain as expected; but which are by no means insurmountable. There are administrative, technical, financial, social and political constraints as well as weak collaborative process which often result in delays in service delivery.

4.2 Value chain development initiative

By and large, activities for agricultural commodities' value chains development have been extensive under the ATA and they have been able to elicit considerable participation of the private sector in the various agricultural sub-sectors. The comprehensive coverage of the sub-sectors and several commodities (beyond rice and cassava) commenced in 2013 with focus on soybean, ginger, groundnut, sorghum, sesame, oil palm, cotton, cashew, cocoa, poultry, sheep and goat, piggery, dairy, leather, beef, aquaculture and artisanal fishery. Table 4.1 presents the key inputs distributed under the value chain development program and the associated redemption rates. In 2013, the redemption rates in the crop sub-sector ranged from 6 percent (for cocoa) to 77 percent in the case of sesame. In 2014, the redemption rates increased considerably ranging from 57 percent (for cocoa) to 88 percent for cotton. With the exception of leather which recorded full redemption in 2013, the redemption rates are generally lower in the livestock sub-sector than it is the case in the crop sub-sector. The redemption rate for poultry which stood at 95 percent in 2013 declined to 84 percent in 2014. In the case of beef, the redemption rate which was only 18 percent in 2013 fell to 15 percent in 2014. The fishery sub-sector witnessed remarkable activities in aquaculture compared with artisanal fishery. Fish farmers responded to the incentives in 2013 with the redemption rate being as high as 88 percent. The activities continued in 2014; although there was a slight drop in the redemption rate to 86 percent.

4.3 Performance of the staple crop processing zone (SCPZ)

The SCPZ is one of the key pillars of the ATA in which the government seeks to identify major clusters of agricultural which will be delineated as specific zones for agricultural processing and industrialization. The SCPZs are designed to boost import substitution, improve the competitiveness of Nigeria's agricultural sector and establish the appropriate linkage between the sector and the industrial sectors as a basis for Nigeria's industrial development. The FMARD is to implement the SCPZ program in partnership with State Governments, MDAs, development partners and the private sector focusing on key commodities such as rice, sorghum, cassava, fisheries, horticulture, livestock and oil palm. The production clusters for these commodities have been evaluated by the federal government based on factors such as existing clusters of agroindustrial activities, competitiveness, business environment and implementation support by the state

Table 4.1 Major inputs distributed and redemption rates for agricultural value chain development

Commodity/ Enterprise	2013			2014		
	Redemption Rate (%)	Seeds distributed (mt)	Fertilizer distributed (mt)	Redemption Rate (%)	Seeds distributed (mt)	Fertilizer distributed (mt)
Crop						
Soybeans	73	834	1,744	60	769	2,758
Cassava	73	232,292	2,821			
Ginger				74	58	124
Groundnut ¹	52		172			
Sorghum	54	356	12,718	87	905	20,548
Sesame	77	470	87	83	248	497
Oil Palm	57	139,550	228	63	787,000	966
Cotton	50	2,779	6,177	88	2,096	10,824
Cashew				72	14	398
Cocoa ²	6		624,799	57		
Livestock						
Poultry ³	95	28,500	36	84	220,900	169
Sheep & Goat ⁴	28		3,860	64		
Piggery ⁵	24	679	121			
Dairy ⁶	8	467	143			
Leather ⁷	100		882			
Beef ⁸	18	10,472	1,104	15	27	1
Aquaculture ⁹	88	3,681,500	553	86	2,359,000	361

Source: Olomola, 2015

¹ SSP fertilizer was entered in column for fertilizer.

² Total pesticides used in liters comprising of Teractive, Actara, Champ DP, Funguran, Ridomil Gold, Ultimax was entered in column for fertilizer.

³ Day old chicks and chicken feeds were entered in column for seeds and fertilizer. Chicken feeds are in metric tonnes.

⁴ Feeds was entered in column for fertilizer

⁵ Disinfectants in liters was entered in column for seeds

⁶ Dairy Feeds was entered in column for fertilizer

⁷ Industrial Salt was entered in column for fertilizer

⁸ Beef fattening concentrate feed and salt lick are entered in column for seeds and fertilizer respectively.

⁹ Juveniles and fish feeds are entered in columns for seeds and fertilizer respectively.

governments. This led to the selection of 14 sites in 2013 located in Anambra, Enugu, Kogi, Kebbi, Sokoto, Niger, Bayelsa, Taraba, Kano, Kwara, Lagos, Benue, Ogun and Rivers states. An additional site was included in November, 2014 stretching over 200 km and targeting various crops including maize, rice, cassava, oil palm and cocoa in Cross River state. In addition to driving rural industrialization, the 15 SCPZs have the potential to strengthen downstream activities and increase revenues by reducing post-harvest losses and food imports. Some of the incentives put in place to achieve this include tax breaks on the importation of agricultural processing equipment, tax holidays for food processors located within an SCPZ, and increased government investments in roads, logistics, storage facilities and utilities.

4.4 Performance of the rice and cassava processing initiative

The establishment of 100 integrated large scale rice processing plants in major rice producing areas in Nigeria was proposed in 2012 early in the life of the ATA. The plants were necessary to address the problem of inadequate processing capacity to process the large quantity of paddy rice being expected as output of the rice value chain development under the ATA. Establishing the plants will enable Nigeria to produce milled rice of acceptable quality to meet consumer preferences and international standard and thereby reduce the huge rice import into Nigeria. The plants were to be built Chinese companies on turn-key basis with a loan from China Exim Bank. The plants were to be contracted out to the China Geological Corporation Overseas Construction (CGCOC) Group at a total cost of US\$957.85 to be financed under the export finance facilities of the China Exim Bank. The project was to be implemented in three phases during which 40 plants will be delivered in the first phase and 30 plants in each of the remaining phases. The first phase will last for 12 months while the two other phases will last for six months each; making the total duration for the delivery of the 100 plants to be 24 months.

According to Olomola (2014), the investment was stalemated due to a number of factors: (1) There was a rethink of the size of the mill. A large-scale mill of a total capacity of 100 tonnes per day or a minimum paddy processing capacity of 30,000 tonnes per year was considered to be too grandiose to be sustainable. There were fears about the possibility of producing sufficient quantity of paddy within the time stipulated for the commencement of operation and maintaining regular paddy supply for the plant to operate profitably. Of course without profitable operation on a regular basis, loan repayment cannot be assured. (2) The procedure for cost recovery was circuitous and cumbersome. Following the completion of the projects, ownership and management would be transferred to Nigerian private sectors under the management of the Bank of Industry (BoI). The investor would run the mill and pay back to BoI who in turn would undertake the repayment of the sovereign loan to China Exim Bank. Before the transfer, BoI and the Bank of Agriculture (BoA) would maintain credit administration relationships with the plants until all development costs are recouped. (3) There was no guarantee that the plants would run fully as private sector business concerns after completion. According to the design, the government of the state in which a plant is located would be involved as a shareholder (with nothing less than 20 percent ownership). Given that many states would have up to three plants (one has five and another has seven) cooperation of

the states is particularly critical to the success of the project. In a federal system like Nigeria with its multi-party democracy, it is difficult to guarantee such cooperation; and having uncooperative states as owners of such plants being funded with external loan would amount to a great risk. (4) The difficulty in securing land within the time stipulated for project commencement. Each plant would require 5 hectares for its premises and an additional minimum of 2000 ha of farm land for the development of outgrowers scheme for the supply of paddy feed stocks. Altogether, a total of 200,500 hectares would have been required to deliver the 100 plants. The problem is actually not the scarcity of land. The state also has control over land. However, the procedure of securing a minimum of 2000 ha of land for outgrowers in the rural areas of many of the states (especially the southern states) may require a considerable length of time which time may be a luxury for a rice industry that is in need of urgent transformation. Many states which have to accommodate three plants or more will need time to work out the compensations and make all necessary payments in accordance with laid down procedures. Apart from government facilitative roles, efforts are also being made by the private sector directly to boost rice production and processing capacity. For instance, Olam International has invested \$70m in a fully mechanized rice farm and new rice mills which provide total capacity of 210,000 tonnes per year. The domestic conglomerate, Dangote Plc also announced in August 2014 plans to invest \$1bn in rice production in Nigeria.

With regard to the cassava industry, 18 plants were to be developed under a turnkey contract with the China Heavy Machinery Corporation (CHMC) at a total cost of US\$153 million (at US\$8.5 million per plant). The project was also to be financed under the export finance facilities of the China Exim Bank. According to the project design each plant would produce 240 metric tonnes of high quality cassava four per day; and this would require 1,000 metric tonnes of cassava feedstock per day. The Federal Ministry of Agriculture and Rural Development (FMARD) was to assist in developing necessary outgrowers schemes to ensure the supply of adequate feedstock. The cassava processing plants suffered the same fate as the rice plants.

In view of the foregoing, Nigeria has to abandon the proposed investments and undertake a rethink of the whole process. Two years later (in 2014) a solution was found. The rethink led to changes in four areas: a reduction in the number of rice plants from 100 to 10, full involvement of the private sector in operating the plants, promote the establish of medium-scale instead of large-scale plants and relying on domestic source of funds to finance the establishment of the rice and cassava milling plants. In this regard, FMARD signed a memorandum of understanding with the Bank of Industry (BoI) to establish 10 integrated rice mills and 6 integrated cassava mills across the country. The agreement provides for a loan facility to the tune of ₦13.6 billion to be facilitated by the Federal government for investors to access the facility at 5 percent interest rate per annum. Loan under the agreement is payable within 10 years inclusive of three years moratorium. The government has no equity capital in the mills. The role of government is to facilitate access to finance to encourage the private sector to invest in the mills and run them as a totally private-sector driven operation. The rice mills are medium sized with a capacity of 36,000 metric tonnes making all ten to be a total of 360,000 metric tonnes.

They will be located in Kebbi, Zamfara, Kaduna, Kano, Benue, Kogi, Bayelsa, Bauchi, Ogun and Anambra states. The six high quality cassava flour mills are to be located in Ondo, Ogun, Abia, Delta, Cross River and Nassarawa states (Ajayi, 2014).

4.5 Performance of agricultural financing initiatives

Since the 2008 food crisis, two initiatives have been introduced in support of agricultural financing. They are the commercial agricultural credit scheme (CACS) (earlier described) introduced in 2009 and the Nigeria Incentive-based Risk Sharing System for Agricultural Lending (NIRSAL) which was introduced in 2010 and commenced operations in 2011. With regard to the CACS, available data from the CBN show that by the end of 2012 a sum of ₦199.12 billion has been disbursed for 269 projects consisting of 239 private projects and 30 state governments including the Federal Capital Territory (FCT). Despite the inadequacies, this initiative has made remarkable contribution to agricultural financing in the country judging by the rising trend in the share of agriculture in total commercial banks' credit to some key sectors of the economy. The share rose from 1.4 percent in 2009 to 3.9 percent in 2012. This positive trend cannot however, be due to the CACS alone. According to Olomola and Gyimah-Brempong (2014) it is a reflection of the total effect of all the agricultural credit intervention schemes and government incentives. The schemes include the agricultural credit guarantee scheme (ACGF), the self-help group linkage banking, the trust fund model to enhance agricultural credit supply, the interest rate drawback programme (IDP) and the agricultural credit support scheme (ACSS) all introduced at different periods by the CBN. With regard to CACS specifically, there are positive trends in terms of demand and supply of credit as well as understanding of implementation procedures all leading to a rising trend in funds release by the CBN and loan disbursement by the commercial banks. The number of participating banks rose from only 2 in 2009 to 11 in 2010, 19 in 2012 and 20 in 2014. The cumulative loans disbursed stood at ₦96,811 billion in 2010. It increased to ₦198.17 in 2012 and ₦237.0 billion in 2014 (Olomola and Yaro, 2015).

In the case of NIRSAL, the operations cover all crops and livestock activities with emphasis on three key functions and incentives such as (1) Credit risk guarantees (CRGs) on loans made to agribusiness investors, farmers, companies and other related participants, (2) interest draw back and (3) Investment advice to farmer groups and value chains actors as well as strategic advice to state and local governments on how to create an enabling business environment for agriculture (Sanusi, 2013).

As regards credit guarantee, NIRSAL has issued a total of fifty three CRG covers valued ₦19.304 billion from 2012 to 2014 (August). In addition eighteen GES CRGs valued ₦3.883 billion were approved through five banks under the 2014 NIRSAL-GES framework; thus bringing the cumulative disbursement under NIRSAL GES Scheme to ₦32.947 billion for 158 projects. Progress is also being made in respect of the interest draw back (IDB). The IDB claims are being paid quarterly in respect of each of the projects. Cumulatively, 25 projects have benefited under the IDB till date (August, 2014) and the total IDB claims paid stood at ₦206.216 million. With regard to the GES, the total IDB paid by 2014 stood at ₦198.904 million for 73 projects. Even though NIRSAL provides incentives to attract the banking sector to lend to agriculture it took considerable time and efforts on the part

of the organization and FMARD to convince and persuade the commercial banks to take advantage of the lending opportunities and incentives. As at 2012 when they were expected to finance the agrodealers and input suppliers many of the banks remained unconvinced about the prospects of NIRSAL and so the level of financing was quite low. By 2013, there was a change of attitude as it became evident that government was determined to implement its agricultural transformation agenda to the letter and that the banking sector has a lot to gain from financing the supply of input—a critical component which would require investments running into billions of naira. Only a few of the banks took tangible steps in 2012 and early in 2013 to articulate procedures and actualize lending based on the value chain approach enshrined in NIRSAL operations ((Olomola and Yaro, 2015).

Due to the sluggish response by the commercial banks, the arrangement that they would finance the agrodealers in 2012 to enable them to purchase fertilizer from the suppliers failed; and this led to the disruption of fertilizer distribution schedule in many states. With the lack of finance from the bank, agrodealers could not purchase fertilizer from suppliers, and many registered farmers could not be supplied (Olomola, 2014). The situation, however, changed in 2013 as many input supply companies embraced the GES scheme. This is because companies had confirmed the government's commitment to pay according to the laid down schedule, and in part due to the clearly laid-down lending framework and incentives agreed upon by the participating banks and NIRSAL. Thus, for the 2013 GES, thirteen commercial banks granted loans to the agrodealers to finance their input distribution across the country. Nonetheless, a substantial part of the ₦19.612 billion loan came from only six banks; implying that despite the available incentives (improved guarantee cover and interest rate rebate ranging between 20 and 40 percent), only a few banks have the capacity to cope with the requirements of agricultural lending in accordance with NIRSAL guidelines.

The latest in the series of financial innovations is a new fund known as the Fund for Agricultural Financing in Nigeria (FAFIN), which has a capitalization target of \$100m. It was established early in 2013 and commenced operation in July 2014 as an agriculture-focused investment fund sponsored by FMARD, Nigeria Sovereign Investment Authority and Germany's Development Bank, KfW. Currently valued at \$34m, FAFIN is a pioneer public-private-partnership (PPP) financing arrangement managed by Sahel Capital. It seeks to leverage private capital to scale up financing of small and medium-sized enterprises (SMEs) along the entire agricultural value chain. In addition to providing long-term financing at affordable rates, FAFIN includes a technical assistance component which seeks to assist SMEs to maximize available investment opportunities. In December 2014, FAFIN made its first successful investment, securing a 25 percent stake in dairy producer, L&Z Integrated Farms (FMARD/OBG, 2015). The fund is not to seek majority shareholding in investee companies but will hold equity ranging from 25-49 percent either directly through common shares or indirectly via convertible debentures or preferred equity. FAFIN is to focus on agricultural SMEs that have been in operation for a minimum of three years, preferably companies generating \$3m-10m in annual revenues with a minimum annual revenue threshold set at \$1m. The initial lifespan of the fund has

been set at 10 years with the possibility of extending by three additional years (FMARD/OBG, 2015).

4.5 Performance of complementary policy measures

The two categories of policies that are supportive of the main components of the ATA analysed above are (i) the policy to substitute wheat flour with 40 percent high quality cassava flour (HQCF) in the production of bread and (ii) tax incentives. Regarding the former, government adopted the policy as part of its ongoing efforts to reduce the burden of wheat import. As part of the strategies, a legislation mandating that bread is produced with 10% cassava flour was first passed in 2005. The efforts continued in 2013 when the proportion was increased to 20%. Following complaints by bakers regarding the difficulty of reaching the specified blend, FMARD established a cassava bread development fund of \$66m to train them. This policy was also aimed at boosting cassava production to meet domestic and export demand. Indeed, as at August 2013, FMARD announced a contract with Chinese buyers to supply 3.2m tonnes of dry cassava chips which can be used as livestock feed, sweeteners, or for making ethanol (FMARD/OBG, 2015).

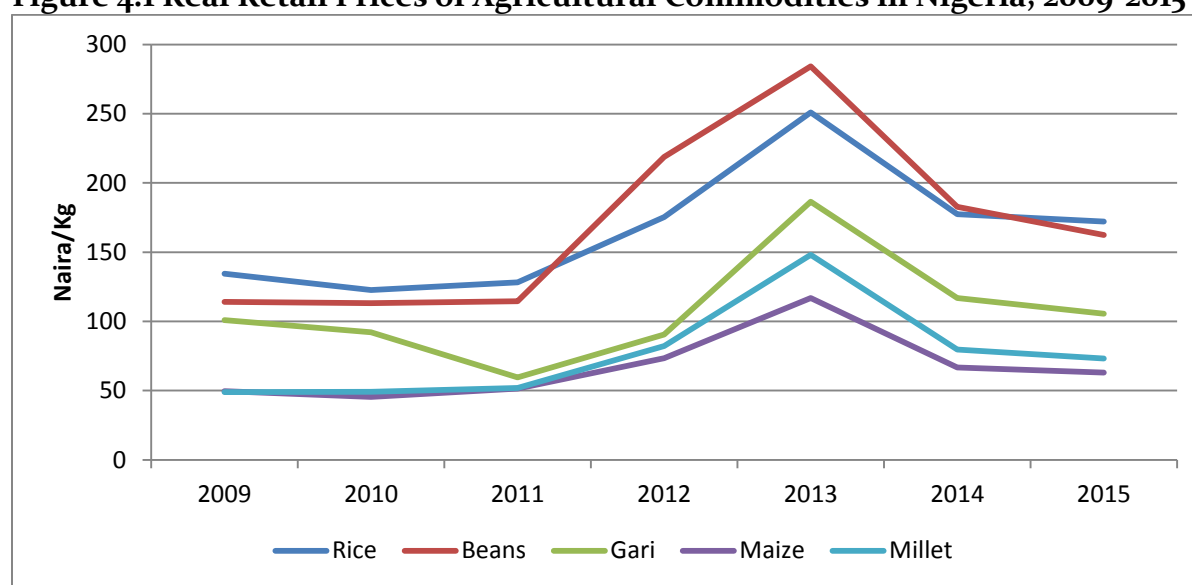
In an attempt to concretize legislative support for this policy, a Cassava Bill was sent to the National Assembly in 2014 stipulating that bread produced in the country must include at least 20 percent cassava flour. Three corporate bakers have already implemented the 20% cassava bread standard ahead of parliamentary approval. A target of 40% cassava flour inclusion has been set for 2015 in the implementation of this policy. By 2014, the federal government proposed a sum of \$22.3m to be deposited with the BoI for upgrading the equipment of small and medium-sized enterprises to enable them increase the production of cassava flour and to serve as incentives for sustaining supply response to government's efforts to expand cassava production.

Tax policies have also been adopted to incentivize various actors in the agribusiness sector. The tax policies are particularly critical in addressing food import challenges especially as far as wheat import is concerned. For instance, wheat imports alone averaging about 4m tonnes a year come at a cost of about \$1bn (FMARD/OBG, 2015). In 2012 a new policy was introduced to provide tax holidays for investors who build processing plants in staple crop processing zones. This will be an incentive for small-scale farmers who are involved in supplying raw materials to the processing plants. Moreover, there is a policy that revenue derived from an increased levy on agricultural commodity imports should be used to support domestic production. Some of the tariff policies that were introduced in 2012 were to serve as incentives for assisting small-scale farmers to boost production included zero tariffs (custom, excise and value added) on imports of agricultural equipment and agro-processing equipment; and increase in the levy on imports of any commodities that Nigeria can produce (starch, sugar and wheat). Specifically, the import levy of 5 percent for brown rice and 30 percent for polished milled rice, 5 percent on raw sugar and 10 percent on starches were increased. Thus, from 1 July 2012, wheat flour attracted a levy of 65 percent to bring the effective duty to 100 percent, while wheat grain attracted a 15 percent levy to bring the effective duty to 20 percent. The levy of 25 percent on brown rice was increased to 30 percent. In addition, to encourage domestic rice production, a levy of 40 percent was

placed on imported polished rice, leading to an effective duty rate of 50 percent. From 31 December 2012, all rice millers were to move towards domestic production and milling of rice, as the levy of 50 percent was raised to 100 percent. Besides, all tax waivers and concessions for rice and wheat importation were abolished (Olomola, 2013).

The implementation of the aforementioned schemes, initiatives and policies has led to an increase in domestic food production, reduction in food import and stabilization of food prices. As shown in Figure 4.1, prices of major food staples have been generally stable between 2009 and 2011. They followed an upward trend to reach a peak in 2013 after which the prices trended downwards till 2015. The rising trend between 2011 and 2013 was a reflection of the inclement weather and flood disaster of 2012. Other factor that built up inflationary pressure during the period was the price of fuel (petrol) which increased from

Figure 4.1 Real Retail Prices of Agricultural Commodities in Nigeria, 2009-2015

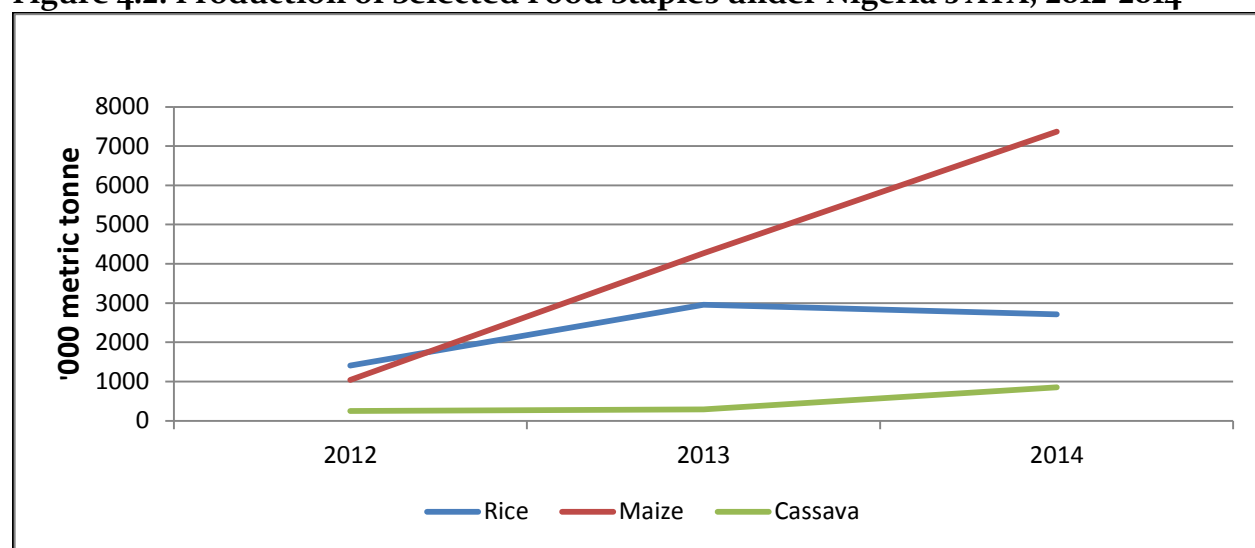


Source: Authors' graph using data from FEWSNET, Abuja.

N65 per litre in 2011 to N97 per litre in 2012. The flood affected no less than 34 of the 36 states in the country (FMWR, 2012). It resulted in 363 deaths, affected seven million people, displaced 2.3 million others and damaged 597,476 houses (Soriwei, 2013) with adverse consequences on food production, processing, storage and marketing. In a quick response, FMARD put some remedial measures in place including distribution of improved seeds, and other inputs for dry season farming under the agricultural transformation agenda (ATA) to address the consequences and prevent widespread food shortages. From 2012 to date, no crop has recorded production shortfall for two consecutive seasons in many parts of the country.

Available data show that rice production increased from 1.41 million MT in 2012 to 2.96 million MT in 2013 and 2.71 million MT in 2014. Sorghum production increased from 60,000 MT in 2012 to 73,423 MT in 2014. In the case of cassava, production increased from 250,000 MT in 2012 to 850,000 MT in 2014. Output expansion is most pronounced in the case of maize which witnessed an increased production from 1.02 million MT in 2012 to 4.27 million MT in 2013 and 7.37 million MT in 2014 (Fig. 4.2).

Figure 4.2: Production of Selected Food Staples under Nigeria's ATA, 2012-2014



Source: Author's graph using data from FMARD, Abuja. 2015

Overall, the ATA added 11.07 million MT of food to the national supply in 2014 which combined with food production in 2012 and 2013 is 21.5 million MT or 107 percent of the 20 Million MT food target by 2015. This achievement has led to a reduction in Nigeria's total food import bill from N3.19 trillion in 2011 (US \$21.1 billion) to N635 billion (US\$3.5billion) by 2014 (Adesina, 2015).

5. Policy recommendations and conclusions

The aforementioned policies and priorities are still relevant to the development of the agricultural sector. Nonetheless, the new administration will no doubt have to re-order the priorities and change implementation strategies to ensure food security and achieve sustained growth and development of the sector. The following areas of priority are recommended in addition to the ongoing policy measures as the government embarks on the arduous task of revamping the agricultural sector to ensure food security in the country.

5.1 Priority Areas of Policy Interventions

5.1.1 Strengthen regulatory and monitoring activities

Intensify regulatory role of government. There should be more effective regulatory activity by national agricultural seed council (NASC) and federal fertilizer department (FFD) to improve the quality of inputs being supplied to farmers. Government through the NASC should monitor the seed suppliers to ensure that seeds supplied to agrodealers and distributed to farmers meet the specified standards. Appropriate sanctions should be meted out to erring suppliers and agrodealers that adulterate seeds and producers that produce sub-standard seed varieties.

5.1.2 Articulate intergovernmental collaboration platforms

The new administration should de-monopolize agricultural development agenda setting and refrain from making programme implementation regime-limited. The stakeholders (federal, state and local governments, organized private sector and non-state actors) must participate in agenda setting, policy formulation and implementation. This is important in order to liberalize the development paradigm, deepen its relevance and sustain its application. It is recommended that there should be more effective and meaningful use of existing institutional arrangements for collective decision making where cross-tier partnerships are required. Such institutions include the National Economic and Development Council and the National Council on Agriculture (NCA). And this is where the issue of sequence must be strictly adhered to. Presentation of an already designed agenda to secure buy-in is consistent with cooperation but violates the principle of collaboration if indeed the other tiers of government are to be regarded as partners and are expected to show true commitment to the implementation of the agenda. The appropriate authority to convene the meeting of the NCA has the liberty to convene it whenever it is absolutely necessary. Thus, it should be possible to create the opportunity for the other partners to participate in taking the required decision for the design of collaborative programs. Moreover, the federal and State governments should involve the LGAs in meaningful partnership to develop agriculture.

5.1.3 Establish Agricultural Marketing Agencies

The transformation of agriculture holds the key to economic diversification and sustainable growth, but development in the sector itself must be diversified. In the last four years government has concentrated efforts on agricultural input supply, output expansion and productivity improvement while the marketing of agricultural commodities has been downplayed. Nothing seems to have been learnt from the same mistake made by previous administrations especially from 2003 to 2007 when farmers' were encouraged to expand production and their hopes were later dashed due to marketing inadequacies leading to episodes of boom and bust cycles in the agricultural economy and downswing in the growth of agricultural GDP. The desired productivity improvements and competitiveness in Nigerian agriculture have been difficult to achieve over the years due to weaknesses in the commodity marketing system and the lack of attention to develop the commodity chains, produce value added commodities and enhance market access. As efforts are now being made to develop the value chains, even

more vigorous efforts must be made to develop the market to diversify the sources of wealth creation and employment generation within the sector. The ongoing attempts to create agricultural marketing and trade development corporations should be re-visited by the new administration with a view to redesigning the agencies and moving rapidly to ensure that they commence operation before the end of 2016.

5.1.4 Recapitalize BoA and prepare it for listing on the Nigerian Stock Exchange

To diversify source of agricultural financing government should recapitalize the bank of agriculture (BoA) and commercial it so that it operates as a commercial agricultural bank with savings and credit functions properly developed. With time the bank should be prepared for listing on the Nigerian Stock Exchange.

5.1.5 Increase domestic production of modern agricultural inputs

The seed industry has been growing in leaps and bounds since 2012. The number of seed companies has increased from 11 to about 77. But the same cannot be said about fertilizer as well as chemical and other protective products. Government should create enabling environment for the domestic production of these inputs to avoid critical supply shortages, reduce import dependency, create jobs and save foreign exchange.

5.2 Conclusions

The 2008 food crisis has been successfully curtailed in Nigeria. The crisis triggered policy responses beyond short-term relief measures. The medium to long-term measures which were articulated way back in 2009 were re-designed in 2011 and embedded in the agricultural transformation agenda which commenced operations in 2012. So far, the agenda has achieved considerable success leading to substantial increase in food production, reduction in food imports and stabilization of food prices. A major lesson from this experience is that a stable policy direction devoid of administrative disruptions, political distortions and regional sentiments in policy development and implementation is a sine qua non for sustaining growth and development in the agricultural sector and in particular for consolidating the achievements of the past five years. It will also be necessary for the government to take complementary actions to liberalize the financing of agriculture with emphasis on 'green finance' and diversify development within the sector itself. Finally, government should pay more attention to the issue of climate change and intensify the ongoing efforts to develop 'climate smart' agricultural programmes in the country.

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