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## **Smoothing food price trends in Nigeria**

Political economy issues and policy vistas

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**Abstract:** This study reviews the political economy issues surrounding the 2008 food crisis in Nigeria; the lessons learned from management of the crisis; analyses the performance of policies aimed at stabilizing prices; and proffers policy measures for preventing future occurrence. The study finds that the country has not been under any threat of food crisis since the 2008 episode. Since 2011, medium-term policies and strategies are redesigned and entrenched as major components of the agricultural transformation agenda. The implementation of the agenda has led to an increase in domestic food production, reduction in food imports, and stabilization of food prices.

**Keywords:** food prices, Nigeria, political economy, policy

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## 1 Introduction

In spite of its huge endowment of natural resources, Nigeria is a net importer of food. Among the various food commodities imported, rice, wheat, and sugar rank very high. In the context of globalization, any crisis that occurs in the international market regarding these commodities will be felt in Nigeria and indeed anywhere in the world. Thus it is in the context of the international dimensions of the 2008 food crisis that its nature and 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. 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, the 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 had assumed the dimension of a crisis 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 its effects started during the first week of May. This paper reviews the political economy issues surrounding the crisis and undertakes an assessment of the policy responses and implementation performance since 2011. It begins with an overview of the nature and impact of the food crisis in Section 2. The lessons of experience arising from the way the crisis was managed are presented in Section 3. Section 4 examines the implementation performance of the policy responses during the post-crisis period, to give 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 a future occurrence of such a crisis. And in this vein further measures are proffered to strengthen the implementation process as the paper is rounded off in Section 5.

## 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 they skyrocketed between 2007 and 2008, especially in the case of rice, sorghum, cassava, soybean, maize, millet, and wheat. Even after 2008, the prices of many crops continued to rise, with the exception of rice. This is due to three main factors: first, demand pressures from neighbouring countries, some of which have experienced food riots; second, the 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). The third factor is the high cost of transportation in Nigeria during the period, particularly occasioned by the increase in the international price of petrol that occurred simultaneously with the soaring of international prices of rice and wheat. As Nigeria was also importing fuel during that period, such increase in the price of petrol was transmitted to the domestic economy, leading to an escalation of transportation costs.

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 2007–08 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 until 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 with the USD continued to depreciate from 2005 to 2010. It was NGN132.9 in 2005, NGN137.4 in 2007, and NGN139.27 in 2008. It depreciated further to NGN148.9 in 2009 and NGN150.3 in 2010. Moreover, the inflation rate, which was in single figures before the crisis, rose considerably from 6.6 per cent in 2007 to 15.1 per cent in 2008 and down to 12 per cent in 2009. The domestic inflationary pressure, inadequacies of the foreign currency market, and imported inflation through massive imports of petroleum products (which jacked 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. Consumers were worse off, however. 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 Curbing food price crisis: the political economy lessons**

The political economy analysis of the 2008 food crisis in Nigeria (Olomola 2013a), offers lessons which are useful in understanding the policy responses and the way they can be used to smooth food prices in the country. In what follows we present key areas from which such lessons are manifested. The lessons derive from the type of actors involved in resolving the crises, 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 Participation of multiple interest groups**

The 2007–08 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. A diverse group of stakeholders (government, donors, the 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 found to be 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.

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 Federal Ministry of Agriculture and Water Resources (FMAWR) while in the National Assembly, the House of Representatives and Senate organized public hearings, 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, to package the policy measures for necessary approval by the government, and to 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 arrives 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, the 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, as it had jumped by about 100 per cent in just a couple of months prior to that. It was established that the rice output in 2007 was 3.4 million metric tonnes, out of which only 1.4 million metric tonnes was milled, leaving 2.0 million metric tonnes 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 capita consumption was 6.5 million metric tonnes or 4.2 million metric tonnes milled rice equivalent at 65 per cent recovery rate; and that the harvest of paddy in 2008 was estimated at 3.94 million metric tonnes.

### **3.2 Timing of policy responses**

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 dimensions and connotations 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 FMAWR (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 it was some time before it was reluctantly vacated. It effectively created a lull in the policy response and put the executive arm of the government on the defensive, rather than staying at the forefront to study the situation properly and provide a 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 NGN80 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 USD2.8 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 NGN10 billion for the provision of credit to farmers to boost food production. In this way, the government was able to assuage the apprehensions of both consumers and producers. This is a demonstration of the influence of producers' associations as the government muddled through by way of working out a beneficial process for the producers in tandem with cheap imports of rice that benefited consumers. 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 take 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, the timing of responses, policy choices, and effects, as well as the factors that circumscribed the selection of policies implemented.

### **3.3 Recognition of future perspectives in policy responses**

While articulating measures to address the 2008 food crisis, policy makers recognized the need to prescribe policies with short-, medium-, and long-term dimensions. For instance, in the short term the federal government released 65,000 metric tonnes of various grains and gari (processed cassava) to the public, which led to a reduction of prices of some tradeable and non-tradeable food items such as maize, sorghum, millet, and gari. The government also purchased 110,000 metric tonnes of imported rice from local stores in different parts of the country at the prevailing market price for sale to the consuming public at a subsidized price. Moreover, the government approved the suspension of all levies and duties on rice imports with effect from 7 May until 31 October 2008. This stimulated the private sector to place orders for rice imports to the tune of almost 10 million metric tonnes. The actual quantity of rice imported was only 172,518 metric tonnes, which led to a 45 per cent fall in prices.

The medium-term measures included (i) boosting food production through special allocation of 1.68 per cent of the federal budget for developing agro-allied industry, improved seeds, and production of food crops during 2008-11; (ii) provision of NGN10 billion from the rice levy account as a credit scheme at a concessionary interest rate, in support of the local rice-processing capacity; (iii) provision of NGN200 billion intervention fund by the government to implement a commercial agricultural credit scheme (CACS) for crop and livestock production, commodity processing and marketing, as well as storage and input supplies; (iv) earmarking of NGN15 billion to assist in increasing the national strategic food reserve capacity from 300,000 to 600,000 metric tonnes. The aspects of the policy response in the long term included (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 to increase storage capacity; and (iii) the setting aside of 1.68 per cent of the Natural Resources Fund for agricultural research.

### **3.4 Commitment to price stabilization in policy articulation and implementation**

In the aftermath of the food crisis, the government resolved to reduce Nigeria's dependence on food imports, boost domestic production, enhance farmers' access to modern inputs (with an

increase in input subsidy rate from 25 to 50 per cent), and encourage commercial banks to lend to the agricultural sector by introducing the Nigerian Incentive-based Risk Sharing System for Agricultural Lending (NIRSAL). As a demonstration of the government's commitment to stabilize prices and prevent a recurrence of the food 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 the administration of President Jonathan, who was elected into office in April 2011. The expectation was that the overall impact will reduce food inflation and enhance food security. In the next section, details of some of the relevant policy measures aimed at achieving these objectives are examined.

#### **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 another food price crisis similar to that in 2008. The relevant components of the administration's ATA, and complementary policies which have helped to expand production and stabilize prices, are the growth enhancement support scheme (GESS, GES system), 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 GESS**

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 five million farmers annually for four years for the delivery of subsidized agricultural inputs via their mobile phones using an electronic-wallet app; (2) deliver input subsidy directly to farmers to ensure that modern inputs are procured at affordable prices and used at the right time and place; (3) increase the use of fertilizer from 13 kg/ha to 50 kg/ha in order to enhance the productivity of farmers; and (4) liberalize the procurement and distribution of fertilizer, and strengthen government policy and regulation to bring about better quality and improved private sector participation. The process of targeting farmers to benefit from the input subsidy programme 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 NGN6.65 billion in 2012 to NGN22.92 billion in 2013 and NGN41.19 billion in 2014. This implies that the total public spending on fertilizer subsidy (by federal and state governments) over the period increased from NGN13.30 billion in 2012 to NGN45.84 billion in 2013 and NGN82.38 billion in 2014. The number of farmers who 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 north-west zone recorded the highest share of 53, 32, and 32 per cent in 2012, 2013, and 2014 respectively, compared with the south-west, which recorded the lowest share of 3, 5, and 8 per cent respectively (Olomola 2015a). With better targeting of farmers, improved management of supply chain and monitoring of input distribution since 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 these are by no means insurmountable. There are administrative, technical, financial, social, and political constraints, as well as weak collaborative process, which often lead to delays in service delivery.

## **4.2 Value chain development initiative**

By and large, activities for the development of agricultural commodities' value chains 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 goats, piggery, dairy, leather, beef, aquaculture and artisanal fishery. Table 1 presents the key inputs distributed under the value chain development programme and the associated redemption rates. In 2013, the redemption rates in the crop sub-sector ranged from 6 per cent (for cocoa) to 77 per cent in the case of sesame. In 2014, the redemption rates increased considerably, ranging from 57 per cent (for cocoa) to 88 per cent 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 is the case in the crop sub-sector. The redemption rate for poultry, which stood at 95 per cent in 2013, declined to 84 per cent in 2014. In the case of beef, the redemption rate, which was only 18 per cent in 2013, fell to 15 per cent 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 per cent. The activities continued in 2014; although there was a slight drop in the redemption rate to 86 per cent.

## **4.3 Performance of the SCPZ**

The SCPZ is one of the key pillars of the ATA in which the government seeks to identify major clusters of agricultural enterprises 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 Federal Ministry of Agriculture and Rural Development (FMARD) is to implement the SCPZ programme in partnership with state governments, ministries, departments and agencies, 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 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 who are located within an SCPZ, and increased government investments in roads, logistics, storage facilities and utilities.



Table 1: Major inputs distributed and redemption rates for agricultural value chain development

Commodity/ enterprise	2013			2014		
	Redemption rate (%)	Seeds distributed (metric tonnes)	Fertilizer distributed (metric tonnes)	Redemption rate (%)	Seeds distributed (metric tonnes)	Fertilizer distributed (metric tonnes)
<b>Crop</b>						
Soybeans	73	834	1,744	60	769	2,758
Cassava	73	232,292	2,821			
Ginger				74	58	124
Groundnut <sup>1</sup>	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 <sup>2</sup>	6		624,799	57		
<b>Livestock</b>						
Poultry <sup>3</sup>	95	28,500	36	84	220,900	169
Sheep and goats <sup>4</sup>	28		3,860	64		
Piggery <sup>5</sup>	24	679	121			
Dairy <sup>6</sup>	8	467	143			
Leather <sup>7</sup>	100		882			
Beef <sup>8</sup>	18	10,472	1,104	15	27	1
Aquaculture <sup>9</sup>	88	3,681,500	553	86	2,359,000	361

## Notes

1. SSP fertilizer was entered in column for fertilizer.
2. Total pesticides used in litres, comprising Teractive, Actara, Champ DP, Funguran, Ridomil Gold, Ultimax, was entered in column for fertilizer.
3. Day-old chicks and chicken feed were entered in column for seeds and fertilizer. Chicken feed is in metric tonnes.
4. Feed was entered in column for fertilizer.
5. Disinfectants in litres were entered in column for seeds.
6. Dairy feeds were 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.

Source: Olomola (2015b).

#### 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 an output of the rice value chain development under the ATA. Establishing the plants would enable Nigeria to produce milled rice of acceptable quality to meet consumer preferences and international standards, and thereby reduce the huge rice imports into Nigeria.

The plants were to be built by Chinese companies on a 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 USD957.85, 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 would be delivered in the first phase and 30 plants in each of the remaining phases. The first phase was to last for 12 months, while the two other phases were to last for six months each; making the total duration for the delivery of the 100 plants 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 metric tonnes per day or a minimum paddy-processing capacity of 30,000 metric tonnes per year was considered too large to be sustainable. There were fears about producing sufficient quantities of paddy within the time stipulated for the commencement of operation, and about maintaining a regular supply of paddy so the plants could 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 the Nigerian private sector under the management of the Bank of Industry. The investor would run the mill and make repayment to the Bank of Industry, which, in turn, would undertake repayment of the sovereign loan to China Exim Bank. Before the transfer, the Bank of Industry and the Bank of Agriculture would maintain credit administration relationships with the plants until all development costs were 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 no less than 20 per cent 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) There was difficulty in securing land within the time stipulated for project commencement. Each plant would require 5 ha for its premises and an additional minimum of 2000 ha of farm land for the development of an outgrowers scheme for the supply of paddy feed stocks. Altogether, a total of 200,500 ha 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) could require a considerable length of time, which might be more than a rice industry that is in need of urgent transformation could afford. Many states which have to accommodate three plants or more will need time to work out the compensation for land and to make all necessary payments in accordance with proper 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 USD70 million in a fully mechanized rice farm and new rice mills which provide total capacity of 210,000 metric tonnes per year. The domestic conglomerate, Dangote plc also announced in August 2014 plans to invest USD1 billion in rice production in Nigeria.

With regard to the cassava industry, 18 plants were to be developed under a turn-key contract with the China Heavy Machinery Corporation (CHMC) at a total cost of USD153 million (at USD8.5 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 per day; and this would require 1,000 metric tonnes of cassava feedstock per day. 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 had 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, promoting 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 to establish ten integrated rice mills and six integrated cassava mills across the country. The agreement provides for a loan facility to the tune of NGN13.6 billion to be facilitated by the federal government for investors to access the facility at 5 per cent interest rate per annum. Loans under the agreement are 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, so all ten combined gives 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) (mentioned earlier), introduced in 2009 and the NIRSAL, which was introduced in 2010 and commenced operations in 2011. With regard to the CACS, available data from the Central Bank of Nigeria show that by the end of 2012 a sum of NGN199.12 billion has been disbursed for 269 projects consisting of 239 private projects and 30 state government ones, including the Federal Capital Territory (FCT). Despite the inadequacies, this initiative has made a 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 per cent in 2009 to 3.9 per cent in 2012. This positive trend, however, cannot 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 fund (ACGF), the self-help group linkage banking, the trust fund model to enhance agricultural credit supply, the interest rate drawback programme (IDB), and the agricultural credit support scheme (ACSS), all introduced at different periods by the Central Bank of Nigeria. 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 released by the Central Bank of Nigeria 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 NGN96.811 billion in 2010. These increased to NGN198.17 billion in 2012 and NGN237.0 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: (1) credit risk guarantees (CRGs) on loans made to agribusiness investors, farmers, companies, and other related participants; (2) interest drawback; 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 guarantees, NIRSAL has issued a total of 53 CRG covers valued at NGN19.304 billion from 2012 to 2014 (August). In addition, 18 GES CRGs valued NGN3.883 billion were approved through five banks under the 2014 NIRSAL-GES framework; this brings the cumulative disbursement under NIRSAL GES scheme to NGN32.947 billion for 158 projects. Progress is also being made in respect of the IDB. The IDB claims are being paid quarterly in respect of each of the projects. Cumulatively, 25 projects have benefited under the IDB to date (August 2014) and the total IDB claims paid stood at NGN206.216 million. With regard to the GES, the total IDB paid by 2014 stood at NGN198.904 million for 73 projects. Even though NIRSAL provides incentives to attract the banking sector to lend to agriculture, it took considerable time and effort 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 the government was determined to implement its ATA to the letter, and that the banking sector has a lot to gain from financing the supply of inputs—a critical component which would require investments running into billions of NGN. 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; this led to the disruption of the 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 changed in 2013, however, as many input supply companies embraced the GES scheme. This is because companies had confirmed the government's commitment to pay according to the 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, 13 commercial banks granted loans to the agrodealers to finance their input distribution across the country. Nonetheless, a substantial part of the NGN19.612 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 per cent), 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 USD100 million. 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 USD34 million, 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 per cent 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 to 49 per cent, 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 USD3–10 million in annual revenues, with a minimum annual revenue threshold set at

USD1 million. The initial lifespan of the fund has been set at ten years with the possibility of extending by three additional years (FMARD/OBG 2015).

#### **4.6 Performance of complementary policy measures**

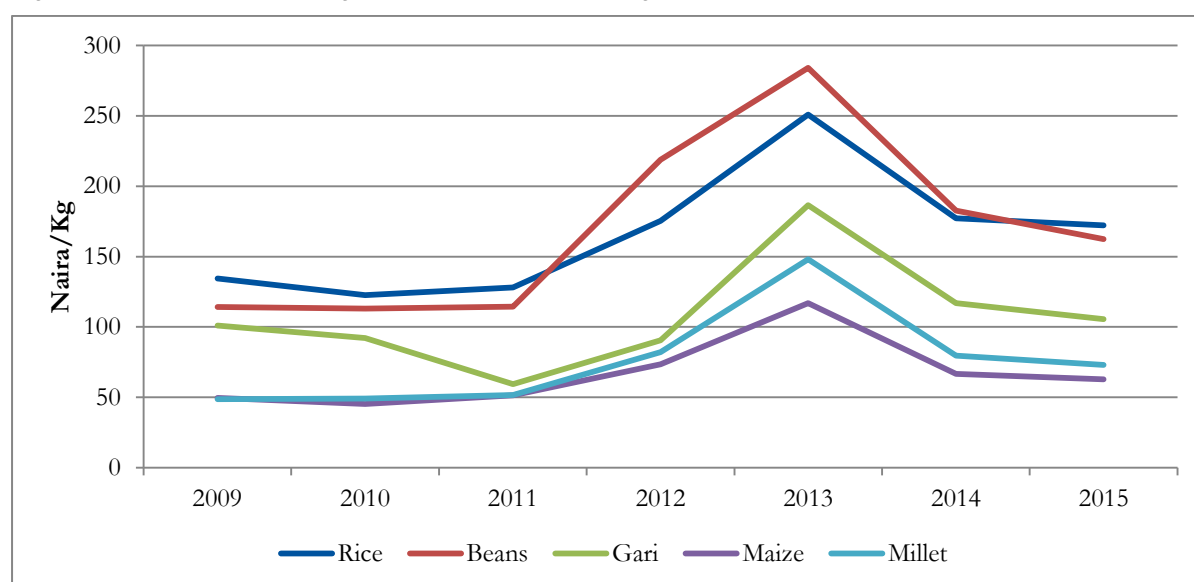
The two categories of policies that are supportive of the main components of the ATA analysed above are (i) the policy to substitute wheat flour with 40 per cent high-quality cassava flour (HQCF) in the production of bread and (ii) tax incentives. Regarding the former, the government adopted the policy as part of its ongoing efforts to reduce the burden of wheat imports. As part of the strategies, legislation mandating that bread be produced with 10 per cent cassava flour was first passed in 2005. The efforts continued in 2013 when FMARD recommended increasing the proportion to 20 per cent. Following complaints by bakers regarding the difficulty of reaching the specified blend, FMARD established a cassava bread development fund of USD66 million 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 3.2 metric 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 per cent cassava flour. Three corporate bakers have already implemented the 20 per cent cassava bread standard ahead of parliamentary approval. A target of 40 per cent cassava flour inclusion has been set for 2015 in the implementation of this policy. By 2014, the federal government proposed a sum of USD22.3 million to be deposited with the Bank of Industry for upgrading the equipment of SMEs to enable them to increase the production of cassava flour and to serve as an incentive to sustain supply in response to the 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 imports are concerned. For instance, wheat imports alone averaging about 4 million metric tonnes per year come at a cost of about USD1 billion (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 to become more productive. 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 introduced in 2012 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 an increase in the levy on imports of any commodities that Nigeria can produce (starch, sugar, and wheat). Specifically, the import levy of 5 per cent for brown rice and 30 per cent for polished milled rice, 5 per cent on raw sugar, and 10 per cent on starches were increased. Thus, from 1 July 2012, wheat flour attracted a levy of 65 per cent to bring the effective duty to 100 per cent, while wheat grain attracted a 15 per cent levy to bring the effective duty to 20 per cent. The levy of 25 per cent on brown rice was increased to 30 per cent. In addition, to encourage domestic rice production, a levy of 40 per cent was placed on imported polished rice, leading to an effective duty rate of 50 per cent. From 31 December 2012, all rice millers were to move towards domestic production and milling of rice, as the levy of 50 per cent was raised to 100 per cent. Besides, all tax waivers and concessions for rice and wheat importation were abolished (Olomola 2013b).

The implementation of the aforementioned schemes, initiatives, and policies has led to an increase in domestic food production, reduction in food imports, and stabilization of food prices. As shown in Figure 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 factors that built up inflationary pressure during the period were the price of fuel (petrol), which increased from NGN65 per litre in 2011 to NGN97 per litre in 2012. The flooding affected no less than 34 of the 36 states in the country (FMWR 2012). It resulted in 363 deaths, affected 7 million people, displaced 2.3 million others and damaged 597,476 houses (Soriwei 2013), with adverse consequences for 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 ATA to address the consequences and prevent widespread food shortages. From 2012 to date (August 2014), no crop has recorded a production shortfall for two consecutive seasons in many parts of the country.

Figure 1: Real retail prices of agricultural commodities in Nigeria, 2009–15

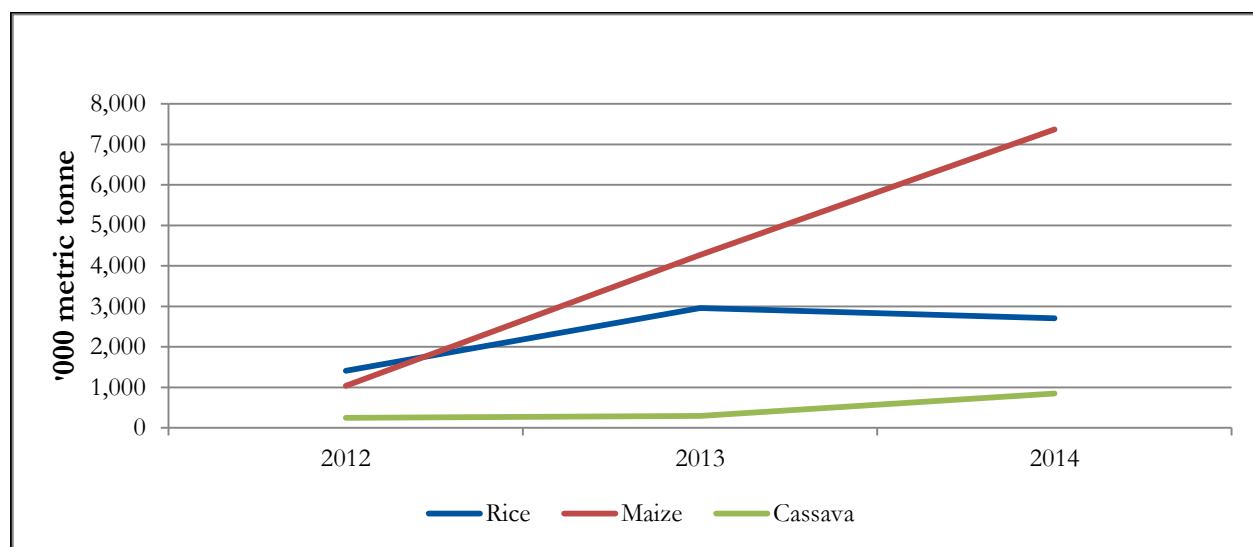


Source: Author's illustration using data from FEWSNET, Abuja.

Available data show that rice production increased from 1.41 million metric tonnes in 2012 to 2.96 million metric tonnes in 2013 and 2.71 million metric tonnes in 2014. Sorghum production increased from 60,000 metric tonnes in 2012 to 73,423 metric tonnes in 2014. In the case of cassava, production increased from 250,000 metric tonnes in 2012 to 850,000 metric tonnes in 2014. Output expansion is most pronounced in the case of maize, which witnessed an increase in production from 1.02 million metric tonnes in 2012 to 4.27 million metric tonnes in 2013 and 7.37 million metric tonnes in 2014 (Figure 2).

Overall, the ATA added 11.07 million metric tonnes of food to the national supply in 2014, which, combined with food production in 2012 and 2013, is 21.5 million metric tonnes or 107 per cent of the 20 million metric tonnes food target by 2015. This achievement has led to a reduction in Nigeria's total food import bill from NGN3.19 trillion in 2011 (USD21.1 billion) to NGN635 billion (USD3.5 billion) by 2014 (Adesina 2015).

Figure 2: Production of selected food staples under Nigeria's ATA, 2012–14



Source: Author's illustration using data from FMARD, Abuja, 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 the National Agricultural Seed Council (NASC) and Federal Fertilizer Department (FFD) to improve the quality of inputs being supplied to farmers. The 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 who adulterate seeds and producers who 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 limiting programme implementation solely to the tenure of a particular administration. 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. According to Olomola (2015b), 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 strictly following the correct sequence—from creating an agenda to implementation and evaluation—is

of the utmost importance. 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 decisions for the design of collaborative programmes. Moreover, the federal and state governments should involve the Local Government Areas 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. Between 2010 and 2014, the government concentrated efforts on agricultural input supply, output expansion, and productivity improvement, while the marketing of agricultural commodities has been downplayed. This has been the bane of agricultural transformation, not only in Nigeria but also in many African countries (Ajakaiye and Olomola 2011). Nothing seems to have been learned 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 a downswing in the growth of agricultural gross domestic product (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 revisited 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 Bank of Agriculture and prepare it for listing on the Nigerian Stock Exchange*

To diversify source of agricultural financing government should recapitalize the Bank of Agriculture and commercialize it so that it operates as a commercial agricultural bank with properly developed savings and credit functions. 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. The government should create an 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 redesigned in 2011 and embedded in the ATA which commenced operations in 2012. So far, the agenda has achieved considerable success, leading to



a 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 2010–14. It will also be necessary for the government to take complementary actions to liberalize the financing of agriculture, with emphasis on ‘green finance’, and to 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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