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The Political Economy of Food Price Policy

The Case of Zambia

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Abstract

The global food price crisis of 2007/08 raised fears about the impacts of higher and more volatile food prices for the poor in Zambia. Like in the past, the implementation of the strategies to deal with the rising food prices, especially for the staple crop maize were delayed due to ineffective response policies, mistrust between government and private sector, protracted discussions, inaction amongst key agriculture stakeholders and rent-seeking behaviour by some. Using the political economy framework, this study examines how the country responded to the 2007/08 global food crisis and the lessons learnt for dealing with future food crises.

Keywords: food crises, political economy, maize grain, Zambia, Africa

JEL classification: E3, E6, H5, Q1

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1 Introduction

Like many countries in the world, the availability, access and affordability of food in Zambia is at the centre of the country's food security policy and key for the survival of any government in power. Unstable and high prices for food staples such as maize, wheat, and rice have severe economic, social, and political consequences.[1] The global food price crisis of 2007 and 2008 raised fears about the impacts of higher and more volatile food prices for the urban and rural poor in Zambia.

Past large price swings for the major staple food, maize, reinforced the general perception that food prices are far too strategically and politically important to leave to the market. If left to do so, they would expose poor farmers and consumers to unacceptable price spikes and collapses (Chapoto and Jayne 2009). The government of Zambia's response to the global food crisis of 2007 and 2008 was to immediately impose an export ban on maize as well as set up a technical committee to make recommendations on how to deal with the situation. However, it was only after the retail prices for maize meal became unbearable high triggering food riots in Kitwe, a mining town in the Copperbelt province when the government scrambled to deal with the problem.

Evidence from past drought-induced food crises reveals that the country has not learned from past experiences as the response strategies have remained the same. The strategy involved an immediate maize export ban/restriction without looking at implications on regional trade; agreement on the quantity of maize to be imported, and how much each of the different stakeholders should import; request for import duty waivers from the Ministry of Finance and National Planning (MoFNP), and the provision of subsidized maize grain to millers for onward transmission to consumers. The outcome of using this package of strategies has often not been effective in solving the crises as the agreed implementation plan is fraught with problems. With the existing high levels of mistrust between government and the private sector, opposing self-interests among the key interest groups and some vested interest amongst certain individuals in both the public and private sector led to inertia in dealing with the problem.

While there has been much effort to study the causes of the past global food crises, there is little knowledge of the policy processes and the related political economy issues that contributed to various responses. A few studies have helped to catalogue events and responses in the country, for example, Govereh (2009), Chapoto and Jayne (2009) and Jayne et al. (2009). These studies outlined in detail the timeline of events and responses although political economy issues were not at the centre of their analyses. international non-governmental organizations (NGOs) in Zambia also helped to raise awareness of the likely impact of the global food price crisis on the poor and vulnerable households by outlining how they were positioning themselves to respond to the impending crisis. Unfortunately, most of the reports or analyses by NGOs were done at the height of the global food crisis and tended to overstate the crisis and its impact since their main focus was to attract funding to support their humanitarian efforts in the country. On the other hand, press reports covering the local food price crisis tended to be driven mostly by what was going on outside of Zambia. This

[1] See Newberry and Stiglitz (1981); Byerlee, Jayne, and Myers (2006); Timmer (2000); Chapoto and Jayne (2009); Dehn, Gilbert, and Varangis (2005); Govereh (2009); and Govereh, Jayne, and Chapoto (2008).

failed to take into account local conditions and political economy issues pertaining to the government responses to the impending crisis. It was only after the country's food crisis had deepened, that the local media started to pay more attention to the domestic situation.

This case study uses political economy analysis framework to better understand how the Zambian government responded to past food price escalations with special emphasis on the most recent global food crisis. Indeed, Zambia saw price escalations of wheat, rice, and soybeans in 2007 and 2008, whilst maize prices rose in 2008 and 2009. Maize, as the main staple crop, continued to attract the most attention from the government, hence the response strategies focused on maize grain and maize meal. Therefore, this study looks at the political economy issues concerning food prices in Zambia, with special emphasis on what happened on the maize sector.

The study is organized as follows: Section 2 outlines the country context and policy-making process. Section 3 overviews food price trends, previous price crisis episodes and policy responses, as well as estimates of price transmission between the international market for maize and local prices and estimates of domestic price transmission both spatial and vertical. In particular, Section 3 presents a brief analysis of policy responses implemented in dealing with the 2008 and 2009 food crisis as well as noting who was responsible for making the decisions and the factors that influenced those decisions. Section 4 presents a brief assessment of the impacts of the policy responses on farmers, urban and rural consumers in terms of poverty, nutrition, and incomes, and government income and expenditure. Conclusion and policy recommendations are presented in Section 5.

2 Country context

Despite the rapid growth of GDP in the past decade, poverty rates in Zambia remain very high and have marginally decreased over the years (Figure 1). The gains from general economic growth are not helping close the inequality gap especially in the rural areas of Zambia (Chapoto et al. 2011; Tembo et al. 2010). Addressing the high rural poverty rates remains a government priority in the national development programmes, but solutions have proven elusive. The main impediment is not simply a lack of technical knowledge concerning what needs to be implemented, but realizing that such knowledge cannot be translated into action unless the policy process is capable of allocating scarce public resources in ways that reflect this knowledge. Also, Chapoto et al. (2011) argue that political economy and associated governance problems are increasingly recognized as crucial.

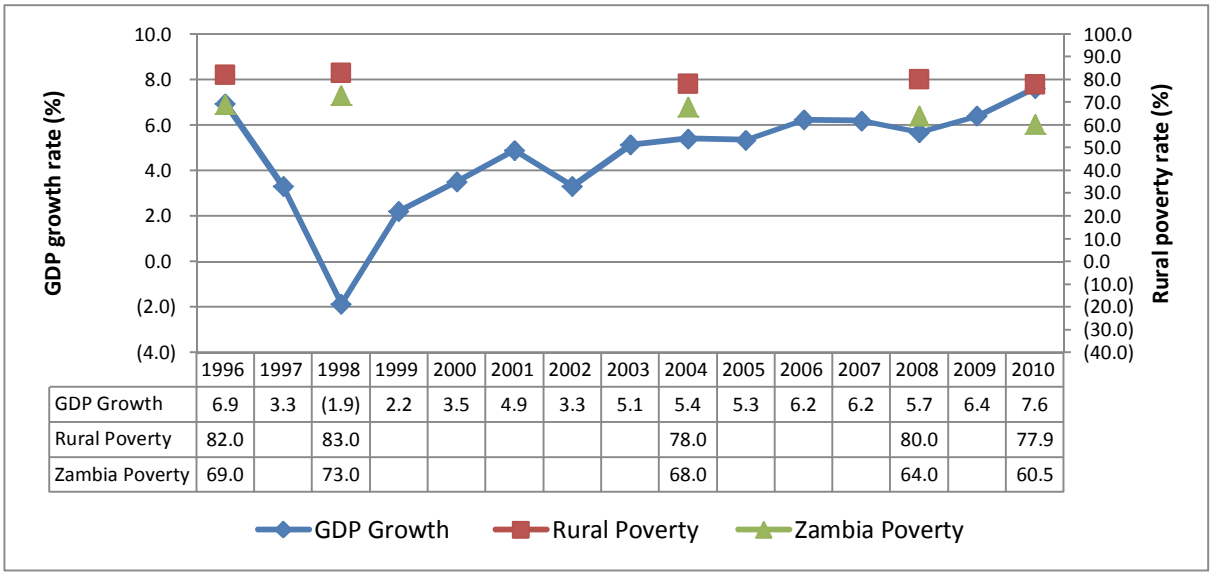
2.1 Zambia agricultural sector

Zambia's agricultural sector is characterized by over 1.5 million smallholder farm households and approximately 2,000 large-scale farmers (MAL 2011).[2] Smallholder farmers account for a significant proportion of the total maize production and sales, while large-scale farmers contribute significantly to total crop production and sale of soybeans, sugar, and wheat (Tembo et al. 2010). An attempt to understand the scope of policy options and responses to

[2] Smallholder farmers (small- and medium-scale) are defined by the Central Statistical Office (CSO) as farmers that cultivating no more than 20 hectares each year, whilst large-scale farmers are those farmers cultivating more than 20 hectares.

food and price crises in Zambia requires an understanding of (i) the structure of the agricultural sector in the country, (ii) the historical role of food policy and the 'social contract' between the government and the people, and (iii) the increasing politicization of food policy especially for the main staple crop, maize.

Figure 1: GDP growth rates and poverty incidence trends, 1996–2010



	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
GDP Growth	6.9	3.3	(1.9)	2.2	3.5	4.9	3.3	5.1	5.4	5.3	6.2	6.2	5.7	6.4	7.6
Rural Poverty	82.0		83.0						78.0				80.0		77.9
Zambia Poverty	69.0		73.0						68.0				64.0		60.5

Source: based on CSO data files and CSO (2006, 2011).

Like most countries in Africa, white maize in Zambia is a strategic political crop. Maize became the cornerstone of an implicit and sometimes explicit 'social contract' that the post-independence government made with the indigenous Zambian farmers and urban consumers to address the neglect of smallholder agriculture during the former colonial period whose policies was focused on white commercial farmers (Jayne and Jones, 1997). The social contract meant that the government had to ensure that smallholder farmers received higher producer prices whilst consumers accessed cheaper food. In order to achieve these two opposing objectives, the Zambian government adopted a controlled marketing system. This was done through the National Agricultural and Marketing Board (NAMBOARD) and later through the Zambia Co-operative Federation until the system became financially unattainable (Govereh 2009, Tembo et al. 2010). In addition, the government heavily funded extension services, seed research, and fertilizer subsidies (used mainly on maize) to benefit smallholder farmers resulting in a huge increase in yields and maize output.

With market liberalization in 1991, the government of Zambia stopped subsidizing production and consumption of maize, immediately causing the prices of basic food commodities including maize to sharply increase. Consumers resorted to rioting, so food pricing policy became highly politicized under the new multiparty democratic system. Due to this pressure, the Movement for Multiparty Democracy (MMD), the political party that was in government, decided to revert back to some government controls on the food market. This resulted in the establishment of the Food Reserve Agency (FRA) in 1996. Unlike its predecessor, NAMBOARD which was the sole buyer and seller of grain in the country, FRA, a parastatal, was originally conceived to hold buffer stocks to dampen price variability and, when necessary, provide liquidity in the maize market during the initial years of market liberalization while the private sector was establishing itself (Jayne and Jones 1997).

However, beginning in early 2000, food policies in Zambia have been characterized by the resurgence of increased government participation in the maize market participation via FRA , state restrictions on the private export of maize, and unpredictable changes in trade tariff rates, quantities traded, and prices offered and paid by FRA. Ostensibly, these state activities have been in response to perceived failings of the private sector to provide reliable markets and stable prices for smallholder farmers' surplus maize production (see Nijhoff et al. 2002; Chapoto and Jayne 2009; Tembo et al. 2010). Over the years, FRA has arguably become the dominant player in the maize market, in some years purchasing from small holder farmers more than 70 per cent of the marketed surplus at above market prices.

Price support through FRA and fertilizer subsidies under Farmer Input Support Programme (FISP), have become the major instruments of government policy. While in some aspects, current operations undertaken by the government are similar to those adopted at independence, there are some noteworthy changes. Specifically, the private sector is no longer barred to operate in the market by statutory measures. In principle, the private sector is now encouraged to perform marketing functions alongside the public sector. However, in practice, the private sector is often prevented from doing so due to government use of discretionary maize pricing and trade policy instruments, such as variable export bans and restrictions, variable import tariff rates, government import programmes, and the distribution of subsidized inputs (Chapoto and Jayne 2009).

Grain production and marketing

Wheat and soybeans sub-sectors: Large-scale farmers dominate Zambia's wheat and soybeans production with two farmer categories: individual commercial farmers and a few corporate farm entities. For the wheat sub-sector, the corporate farm entities are those that are vertically integrated—from farm production to wheat processing and products retailing. A good example is ZAMBEEF, which in 2011 bought the largest wheat farm—Mpongwe farms—to provide wheat for their mill which in turn provides flour for their bread-making enterprise; bread which is the sold through their own retail/butcheries shops and other retail shops in the country. In 2010, there were 168 wheat growers and 14 wheat mills in the country (ACF 2010).

Most of the wheat is grown in four provinces, Lusaka, Copperbelt, Southern, and Central, and is produced under forward-contracting and pre-financed by some large-scale millers. Volumes traded on the Zambia Agricultural Commodity Exchange are very small suggesting that there is very little wheat available on the open market.

Wheat and soybean prices have been influenced by both external and internal supply factors. Since the two crops are produced under forward-contracting, the producer prices are based on import parity prices, hence, are driven by the global market. The rising international wheat and soybean prices in 2007 prompted a supply response from the large-scale farming sector resulting in increased wheat and soybean production in 2008 and 2009. For example, the area devoted to the wheat crop increased by 8 per cent from 31,624 hectares in 2008 to 34,297 hectares in 2009 (MAL Food Balance Sheet of year 2009). The import parity price of wheat peaked at around US$752 in July 2008 and started declining after the 2009 surplus wheat production. Responding to the global food crisis, the government has committed itself to protecting local farmers from cheaper wheat imports in order to hasten the country becoming wheat self-sufficient. This came through a statement from the former President Rupiah B. Banda, announcing a ban on all wheat imports at a press conference in June 2009. On the

other hand, no restrictions have been placed on the export of locally produced wheat flour, meaning wheat flour and bread prices in Zambia will reflect export parity prices but wheat flour production will be constrained by the availability of wheat grain produced by local farmers. However, wheat is grown in rotation with maize and soybean, so depending on the performance of the maize or soybean market, wheat production in the country is prone to huge fluctuations hence the government cannot afford to ignore the wheat sector. For example, in October, 2011 the Bakers Association of Zambia wanted to increase bread prices by 500 Zambia Kwacha (ZMK) per ordinary loaf from an average of 4,500 ZMK to 5,000 ZMK due to the high wheat flour prices but, the new President Michael C. Sata stopped, through a press conference, this from happening. Instead, he threatened to allow wheat grain imports into the country unless the issue was quickly resolved. Surprisingly, a week after the stakeholders' meeting had agreed to import 60,000 metric tonnes (mt) of wheat and for wheat farmers to reduce their price from US$600 to US$500. The Vice President at the launch of the 2011/12 wheat production season assured the farmers that the government was committed to protecting them and would not allow wheat imports. With such a pronouncement from the President's office, it was unlikely that the Ministry of Agriculture and Livestock would move ahead to issue import permits. Also, there were reports that wheat farmers were resisting to reduce their wheat price from US$600 to US$500.

Maize sub-sector: As mentioned earlier, maize is the most important crop in Zambia and its production and marketing is subject to great political influence. The global crisis of 2007–09 saw the government of Zambia focusing its efforts on addressing the rising maize and maize meal prices.

Maize is grown by more than 80 per cent of the rural smallholder farmers. It accounts for 25–30 per cent of the gross value of smallholder crop output and roughly 40 per cent of the country's calorie intake (Zulu, Jayne, and Beaver 2006, Smale and Jayne 20101). Like most countries in the region, the smallholder market structure is highly concentrated, with between 2–5 per cent of all the small- to medium-scale farmers supplying 50 per cent of the marketed surplus and the remaining 50 per cent comes from the rest of the small farmers producing a market surplus (Tembo et al. 2010). Of the total maize sales in the country, about 15–20 per cent comes from the large-scale commercial sector.

In a good harvest, the smallholder sector produces more than 90 per cent of the total maize production and 80–85 per cent of the total maize sales in the country. Table 1 shows that since 2004, Zambia has increasingly become maize self-sufficient. With good rainfall and sustained huge government subsidies on both the production and marketing side, the country recorded back-to-back bumper harvests in 2010 and 2011. Ignoring the huge financial losses currently being incurred due to storage losses and failure to dispose of the stockpiles of maize as a result of FRA buying maize at above market prices, the availability of plentiful maize on the market helped in most part to keep the global food crisis at bay.

Table 1: Maize production, domestic supply, consumption requirements and food balance trends, in '000 mt, 2001–12

Year	Opening stock	Maize production forecast	Estimated consumption requirements	Projected maize food balance
	(A)	(B)	(C)	F=(A+B-C)
2000	35	856	1,267	(376)
2001	60	1,053	1,314	(201)
2002	61	802	1,321	(458)
2003	20	602	1,203	(581)
2004	100	1,207	1,187	120
2005	180	1,214	1,208	186
2006	191	866	1,142	(85)
2007	20	1,424	1,285	159
2008	433	1,366	1,549	250
2009	390	1,211	1,459	142
2010	62	1,889	1,748	203
2011	849	3,020	2,207	1,662
2012	771	2,853	2,588	1,036

Source: Ministry of Agriculture and Livestock (various years).

Note: The maize food balance denotes the surplus or deficit based on the crop forecast computed as the sum of opening stock and estimated production minus projected demand for human consumption, brewery, and feed industries.

2.2 Key decision actors in food policy issues

Food policy in Zambia is formulated at both the technical and political level. However, it is adopted only at the political level. During the food crisis, the policy-making process was overwhelmingly dominated by the political level. Technical operatives had limited input into the decision-making process. The major stakeholders, farmers, and millers had direct access to the policy adopters at a very high level.

The executive branch of government comprises of cabinet ministers and chaired by the president of the Republic of Zambia. The secretary to the cabinet is the head of the civil service and ultimately all policy positions that originate from ministries pass through his/her office. Ministries are headed by ministers, and are responsible for policy-making and providing a link between their ministry and parliament. Below the minister, is the permanent secretary, who runs all technical and administrative issues of the ministry. Each ministry is

responsible for generating its own relevant policy positions which are produced into a document called a 'cabinet memorandum' which is submitted to director(s), the permanent secretary, and finally to the minister for approval. Once approved, the documents are sent to the policy analysis and co-ordination section in the secretary to the cabinet's office. After approval, the cabinet memorandum is finally sent to the cabinet for debate and approval.

Ultimately, all power in the cabinet is vested in the head of State. Although, a minister can lobby for policy change, his/her limits are set by policy statements made by the political party in power. For example, during the food crisis of 2008 and 2009, the executive branch did not openly veto any policies but in most parts the aspirations of the political party in power and recommendations of lobby groups with access to the cabinet were prioritized. Also, the fact that the minister of agriculture and livestock is a member of the cabinet that is chaired by the state president, the executive branch was definitely briefed about the situation as well as recommendations that were coming from various stakeholders during their weekly meetings. It is not surprising that the cabinet was involved because any government should be concerned about the plight of its own people. However, the problem becomes apparent on the policy responses that are chosen, which in most cases ignores the technical input from the relevant ministry or research organizations, but takes into account the input of very powerful interest groups.

Zambia's parliament has an oversight role on government policy implementation although, some of the issues not requiring changes or enactment of new act(s) or laws are dealt at cabinet level and not taken to parliament for ratification. However, from time to time, the parliamentary committee on agriculture, for instance, makes requests for briefings and updates on various policy implementation issues. One of the major weaknesses of this system is that a policy can be radically changed by the cabinet disregarding technical input from the lower level. Ultimately, any policy is only as good as the cabinet. This is especially crucial given that powerful interest groups often directly lobby cabinet members. This often, tips the weight against the more technical policy positions.

The policy planning process in Zambia involves several different levels of government. The Ministry of Agriculture and Livestock (MAL) co-ordinates the policy planning process as it relates to national food security and other supply side policies. This mostly involves the national food balance sheet which gives the net position of food at the national level. A parallel structure in the office of the vice president implements policy as it relates to hunger and vulnerability of rural communities affected by calamities. During the food crisis of 2008 and 2009, the two policy processes continued to run parallel to each other and did not overlap.

MAL, through the department of agribusiness and marketing, is responsible for implementing agricultural marketing policies. The department is responsible for the issuance of import and export permits for most food commodities including maize as well as managing the country's public market information system. Internal marketing policy is generally implemented through FRA. The main policy tools that are at the disposal of MAL include: issuance of import and export permits based on the crop forecast results; stock monitoring through the stocks committee; recommendations to the cabinet on the level of market participation by FRA; and dealing with plant and phyto-sanitary matters and the issuance of appropriate importation and exportation clearance for agricultural commodities. Cross-border trade policy is administered through the Zambia Revenue Authority, which has the mandate to manage all customs functions with MAL's phyto-sanitary officers stationed at most of the major borders.

Recently, the maize monitoring committee was transformed into the stocks committee which is the main inter-ministerial technical body that routinely meets to discuss the national food security status (stocks), specifically focusing on the major cereals, maize, wheat, and rice. The committee is chaired by MAL permanent secretary and in his absence the director, agri-business and marketing takes the chair.[3] As of May 2008, the committee was still trying to get recognition from the government and seeking to be empowered by an act of parliament as the legal stakeholder body that the government would rely on for advice regarding food policy issues such as, making recommendations on how to deal with the rising food prices and FRA involvement into the grain market, especially the floor price and/or the amount of grain to purchase from smallholder farmers. Although, transparency is often emphasized in dealing with any food crises, depending on the nature of the food security decision to be made, the decision-making is characterized by high information asymmetry amongst major stakeholders. For instance, MAZ does provide consolidated information on stocks held by its members. However, competition amongst the individual milling companies means that they are often very hesitant to share accurate stocks information even to the association. This makes policy-making very difficult. For instance, in December 2009, millers reported lower than expected stocks. But, when the government offered a price subsidy to millers, the reported quantity of available stocks increased significantly. The lack of transparency among the players in the milling industry is partly due to the way the industry is organized. The cost of credit in Zambia has historically been very high. This means most mills are not able to keep significant inventory of grain for processing. The implication of this has been that mills with the highest inventory are able to influence the market prices more than mills with lower inventory. Consequently, inventory information is a very closely guarded secret. This has proven to be one of the biggest challenges in the grain market decision-making process. In years of cereal deficits, inventory information is also used by the milling industry to lobby government for intervention; this introduces considerable issues of information asymmetry.

Interest groups

The two biggest interest/lobby groups in Zambia are the Zambia National Farmers Union (ZNFU) and Millers Association of Zambia (MAZ). The Grain Traders Association of Zambia (GTAZ) has increasingly gained some prominence over the last 5 years or so. However, the organization has very limited membership and the wide scope of consumer issues has made the association relatively less effective when dealing with specific food policy issues. Other lobby groups include the Zambia Consumer Association (ZACA) and the Jesuits Centre for Theological reflection (JCTR). ZACA has been in existence since 2000 and is supposed to be the major advocacy group representing consumers instead of MAZs when it comes to maize meal prices. JCTR has been very instrumental in highlighting issues affecting the poor in the country and during the global food crisis of 2007 and 2008 via their monthly consumer bulletin. However, they do not carry the same influence as the ZNFU and MAZ whose recommendations influenced how the government dealt with the food crisis.

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[3] The stocks committee comprises of: Ministry of Agriculture and Livestock, Ministry of Finance and National Planning, Central Statistical Office, Zambia National Farmers Union, Millers Association of Zambia, Zambia Farm Growers Association, Zambia Peasant Small-scale Farmers Association, Food Reserve Agency, Grain Traders Association of Zambia, National Food and Nutrition Commission, Bank of Zambia, Indaba Agricultural Policy Research Institute (formerly Food Security Research Project), Agricultural Consultative Forum FEWSNET Zambia, Zambia Agricultural Commodity Exchange, and Zambia Co-operative Federation.

The ZNFU represents the interest of farmers, though most of its prominent members are mostly drawn from the commercial farming sector. Although the membership of the union is not publicly announced, the total number of large-scale agriculture holdings in Zambia numbers no more than 2000 (Ministry of Agriculture and Livestock 2011). On the other hand, the country has over 1.5 million small- and medium-scale agricultural households who can become members of the ZNFU through any small-scale farmers' associations who are required to pay an affiliation fee**.** According to the union's guidelines under this membership category: '…Once the affiliation fee has been paid, all members of the association become automatic members of the ZNFU…'[4]

The Peasant Farmers Association of Zambia is supposed to represent the interests of the smallholder farmers but its membership is very limited and it does not have a well-organized structure similar to the ZNFU's. Generally, ZNFU is very vocal on pricing and trade issues for the staple grains (maize, wheat, and soybeans) and inputs (fertilizer, fuel, and electricity). With the exception of maize, which is mostly grown by the smallholder farmers, the union is very active on issues that address the commercial farming sector in the country. Some commenters and critics from the peasant farmers association think that ZNFU does not fully represent the interests of the small-scale farmers because it was formed initially to represent commercial farmers, hence should concentrate on moving the commercial farming sector forward rather than try to inadequately represent the interests of smallholder farmers. Their argument is that, issues of the small farming sector are more complex and require different lobby mechanisms because ZNFU's agenda for the small-scale farmers has mainly been limited to fighting for higher maize producer price offered by the government's FRA and the amount of fertilizer and level of fertilizer subsidy under FISP. Since these issues are highly political, the union tends to ignore empirical evidence regarding maize production and marketing characteristics of smallholder farmers and facts about the effectiveness of the government entitlement programmes in terms of resource use and effect on overall agriculture development. Unfortunately, the emphasis on subsidy/entitlement programmes for smallholder farmers has resulted in under-funding of the key agriculture drivers, such as irrigation, roads, and research and development, as the governments' resource envelop to agriculture is very limited. As a result, the obsession with the government's fertilizer subsidy and maize price support programmes has led to smallholder farmers not demanding increased public investments into the key agriculture drivers but high maize prices and fertilizer subsidies.

On the other hand, the second most influential lobby group is the MAZ. MAZ is a self-financing association that was formed to represent millers in Zambia with a production capacity of 1.5 metric tons per hour or more. The association's objectives are: (I) To promote the interests of the milling industry in Zambia; (ii) To assist the Zambian government with the country's food security; (iii) To foster international and regional trade for the industry; (iv) To create dialogue with the government on behalf of the millers on trade policies and budgetary allocations; and (v) To provide a ready market for maize growers in Zambia.

Since 2001, MAZ has increased its level of influence on maize issues in Zambia. This influence has been achieved through its ability to influence government's policy on maize and maize meal prices during food crises. The association has long been plagued by

4 Available at: http://www.znfu.org.zm/index.php?option=com_content&view=article&id=46&Itemid=53

allegations of collusion in price setting. These allegations have always been denied by the association. During the past food price crisis, MAZ was able to convince government to intervene by allowing FRA to sell subsidized grain to them in order to reduce the consumer prices. Other stakeholders especially grain traders and ZNFU complained to the government about the preferential treatment of a few large-scale millers who have their major operations in Lusaka (capital city) and Copperbelt (major mining province) ignoring other millers who are not members of MAZ. Thus, non-members of MAZ find it difficult to access subsidized maize grain from the FRA as the grain allocation per month will not be sufficient to cover everyone.

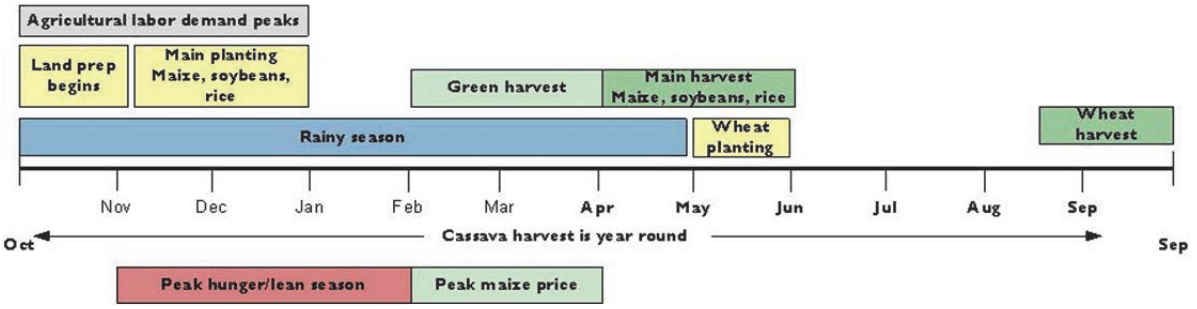
Donors and co-operating partners in Zambia are important in providing assistance to the Zambian government whenever there is a food crisis especially by helping to finance food aid importation for vulnerable groups whenever there is a food crisis. However, in most cases, the donors' role in the agricultural sector has mainly been limited to advisory through the Troika (World Bank, Netherlands, and United States). During the food crisis, Food and Agriculture Organization of the UN (FAO) funded a number of meetings to encourage stakeholders to discuss issues on how to deal with the global food prices. Through these meetings and a project on Policies for the Effective Management of Food Price Swings in Africa sponsored by FAO, Govereh (2009), published a paper on 'The 2007–08 Price Swing: Impact and Policies in Zambia'. This study catalogued the timeline of the food crises in Zambia and policy responses.

3 Past food crises, price trends, and price transmission

3.1 Experiences from past food crises

In the past decade, Zambia has experienced four episodes of food crises, in 2001–02, 2002–03, 2005–06 and 2008–09 marketing seasons.[5] Unlike the most recent food crisis in 2008–09 that happened during the global financial and food crisis, the first three episodes were caused by severe drought conditions in the country that resulted in food balance shortfalls. Zambia's agriculture is mainly rain-fed, so crop production in the country is vulnerable to severe weather shocks. Production shortfalls always have caused prices of the main staple crop to escalate especially during the hungry/lean season in November through February. Figure 2, summarizes the seasonal calendar and critical events timeline in Zambia.

Figure 2: Seasonal calendar and critical events timeline



Source: Adapted from FEWSNET, Zambia monthly report with authors' additions.

5 Zambia's marketing season runs from 1st May to 30th April.

Lessons learned from past food crises

Zambia has not learned from past experiences on how to plan and quickly respond to food crises. With similar and less successful response strategies in the past, one wonders why the government in collaboration with the relevant stakeholders does not put together a standard operation strategy on how to deal with future food crises. The answer lies in the political economy surrounding food issues in the country, a subject that is central to this paper.

The common characteristics of the past food price crises that hinder the successful implementation of the agreed upon plan are as follows:

1. The government through the Ministry of Agriculture and Livestock (formerly Ministry of Agriculture and Co-operatives) has always been open to the stakeholders' input before the onset of a food crisis. However, as evidenced from past crises the execution of the agreed plan is fraught with problems resulting in the crisis worsening before serious action is taken.
2. A high level of mistrust exists between the government and the private sector. The private sector seems to be always uncertain about government actions especially when it comes to imports. This is because the government has in the past sanctioned the FRA to release its stocks at subsidized prices to only a few selected millers thereby, hurting traders and/or millers who would have imported maize.
3. Once the alarm bell is sound through the crop forecast and national food balance sheet about an impending crisis, the government always imposes ad hoc export restrictions/ban. The effectiveness of such a response is highly contended because informal exports will continue to flow out of Zambia illegally. Also, ad hoc export bans have made the country to become an unreliable regional grain supplier thereby curtailing the growth of the private sector participation in regional trade.
4. The refusal and delays to grant duty waiver requests by the MoNFP shows lack of inter-ministerial dialogue with the Ministry of Agriculture and Livestock and other related government agencies, especially when the country requires them to respond quickly to a food crisis.

3.2 Policy responses to the 2007–09 global food crisis

- Policies in response to the rising food prices in 2008 and 2009 fall into three categories as follows:
- Trade-oriented policy responses that use policy instruments, such as reduction of import tariffs and restricting exports to reduce prices and/or increase domestic supply;
- Consumer-oriented policy responses that provided subsidies to consumers, social safety nets, tax reductions, and price controls; and
- Producer-oriented policy responses to support farmers to increase crop production, for example, fertilizer subsidies through the FISP and FRA producer price support

This section discusses the policy responses by tracing the timeline of the food crisis in Zambia.

3.2.1 Export restrictions/ban

The food security update by FEWSNET at the end of December 2007, reported localized maize and maize meal price escalation in some parts of the country especially, the flood

ridden southern province. In January 2008, Zambia joined Malawi and Tanzania in imposing an export ban to safeguard the country from likely shortfalls and curb further food price increases. There is no evidence that this was done in a co-ordinated way. Each country was trying to protect itself from the looming food crisis triggered by the global events. This response was a result of the continued pressure from politicians, consumer groups, and press reports warning the government to respond to the impending food crisis due to the floods and likely impacts of the global food crisis which by 2007 was affecting other countries.

Maize export restrictions are a common feature in Zambia and dates back to the1960s and have continued to be used in the past food crises. Whenever, the country experiences a maize production deficit, export ban/restrictions through the non-issuance of export permits is invoked. Since the region has the same growing season, a drought in Zambia usually means a drought in most of the neighbouring countries. Therefore, the decision to restrict exports is made out of fear that the millers and traders in search of higher prices will export most of the local stocks thereby exacerbating the food problem. Unfortunately, such restrictions have not worked well in the past because any ban requires strict policing, something that is not possible in Zambia, a country sharing borders with eight countries. Illegal exports tend to increase during this time and are hard to detect, hence, making the problem even worse unlike when borders remain open and the government treasury collects revenue through export tariffs. However, when the situation improved, there was a delay in lifting the ban because the government was averse of lifting the ban fearing public backlash.

A good harvest in 2009 led to various stakeholders including traders, millers, and farmers to pressure the government to lift the ban because of the potential retrogressive effects on farmers and the maize market. Finally, in August 2009, the government lifted the ban having verified that there were enough stocks from the 2008/09 harvest. This was done six months after maize prices had started to decline in March 2009.

3.2.2 FRA pan-territorial pricing

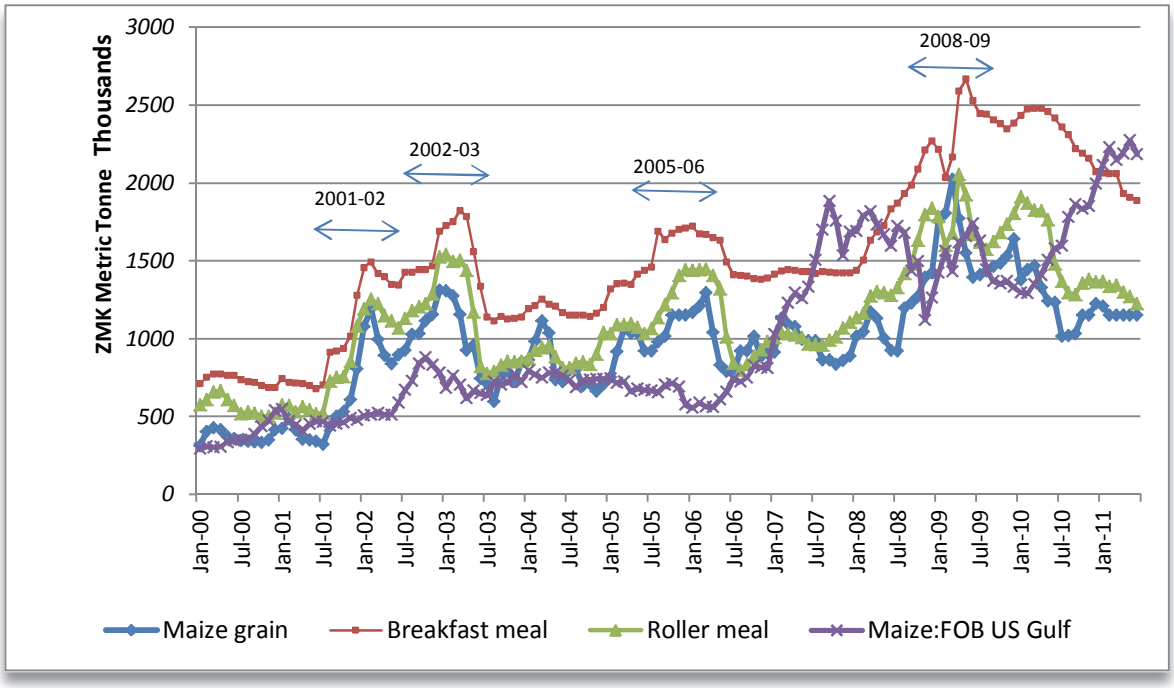
In June 2008, the FRA announced a buying price of ZMK 45,000 per 50 kg bag (about US$260/ton), an increase of 16 per cent from the previous season. On the other hand, anticipating higher returns later in the year due to the global food crisis, millers, and other private players started the 2008–09 marketing season by aggressively buying maize at a price higher than FRA floor price, something that was uncommon at that time of the year. FRA tried to counter this by raising its price to ZMK 55,000 per 50 kg bag (about US$304/ton) but due to the tight maize supply in the market, especially on the line of rail, they failed to reach their target of 88,000 mt. Instead FRA managed to procure only 72,000 mt at the end of an extended buying season in October 2008. Figure 3 shows an increase in maize and maize meal prices. This was mainly due to the stiff competition between the private sector and FRA as well as from some smallholder farmers holding grain off the market in anticipation that they will benefit from higher prices later in the season (FEWSNET 2008).

3.2.3 Maize imports and import duty waiver

At a meeting held 25 July 2008 between the government and the agriculture stakeholders and chaired by the Minister of Agriculture, MAZ, GTAZ, and ZNFU disputed the national balance sheet for maize grain announced in May 2008 indicating a surplus of 200,000 mt for the 2007/08 agricultural season. They argued that the annual maize consumption of 50,000 mt was understated given the growth of the breweries and the stock feed sector. At this meeting, the FRA declared having maize stocks amounting to 150,000 mt, MAZ, 55,000 mt,

and GTAZ, 25,000 mt. From these stocks, it was ascertained that precautionary measures needed to be taken by the private sector through buying futures on South African Futures Exchange (SAFEX).

Figure 3: Nominal price trends 2001–11: Lusaka maize grain, breakfast meal, roller meal, and FOB US maize gulf prices, in ZMK

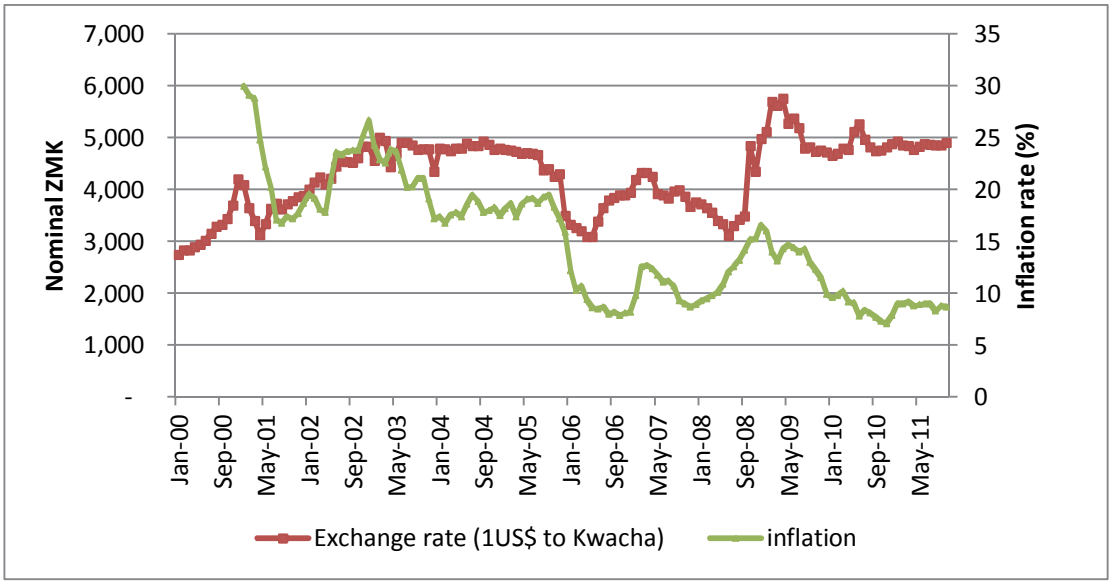


Source: based on CSO (various years) and www.sagis.org.za.

However, given past experiences when government through FRA released stocks on the market to selected millers at a time when private sector imports were just hitting the market, traders wanted guarantees from government that this was not going to happen. On the other hand, the farmers wanted to make sure that maize imports by traders did not disadvantage local farmers who were still selling their maize. All parties agreed to have a memorandum of understanding (MOU) drawn up and signed by all parties.

As a requirement, the Ministry of Agriculture and Livestock had to send the draft MOU for vetting by the Ministry of Justice. Unfortunately, the Ministry of Justice indicated to the Ministry of Agriculture and Livestock that two clauses included in the MOU were not favourable to the government. In particular, the private sector had included clauses that could give them the ability to re-export the maize if at the time of importation there was enough maize in the country. In addition, they also wanted an import duty waiver. Unfortunately, the latter was outside the jurisdiction of the Ministry of Agriculture but required the MoFNP to make a ruling. The idea of the private sector locking into contracts on SAFEX was abandoned. In the meantime, as these discussions were progressing, maize prices were increasing and the ZMK had lost ground to the US$—from 3500 ZMK to 5000 ZMK (see Figure 4). This meant maize imports were going to be more expensive, irrespective of who the importer was going to be—government or private sector. The private sector requested the MoNFP to peg the exchange rate at July rates of 1US$ to 3500 ZMK to facilitate their maize imports. However, this request was also not granted.

Figure 4: Zambia's exchange rates and Inflation rate, 2001–11



Source: based on Central Statistical Office (various years).

In October 2008, there were reports of a food riot in the Copperbelt province targeting retail shops because of the high prices of maize meal. This was a wakeup call for the government to understand the extent to which the country was exposed to the rising food crisis. With maize meal outlets targeted, the government's concern was to find immediate solutions to quickly reduce maize meal prices and re-engage stakeholders on the issue of maize imports.

As of November 2008, neither the government nor the private sector had arranged to import maize and maize stocks held by FRA, MAZ, and GTAZ were reported to be 208,000 mt in mid-November, a 16 per cent decrease from 250,000 mt in July. The retail maize prices were now in the range of US$350 to US$400 per mt compared to US$176 per ton on the SAFEX exchange. Thus, the maize price had by now risen above the import parity price from South Africa.[6] On 24 November, 2008 a select committee of cabinet ministers mandated the FRA to urgently import 100,000 mt of maize wherever it could be found. This was an indication that the decisions about the food crisis were now being made by the president's office.

As the FRA arranged to import this maize, there were reports of increased local maize stocks and the traders were calling for the government to stop purchasing more expensive stocks from outside since they had enough stocks locally. According to the grain traders, maize stocks that were pre-contracted to millers and not included in the uncommitted stocks was now available on the market since millers were now getting subsidized maize from FRA. Also, millers who were not members of MAZ challenged the stocks that MAZ reported to the stocks monitoring committee in July as they were never consulted. After further consultation the government revised its import requirements to 35,000 mt.

On 5 December 2008, the Minister of Information and Broadcasting Services and Chief government's spokesperson, General Shikapwasha, announced at a press briefing that the

6 Import parity prices are calculated as the sum of the FOB price, transport charges from source to Lusaka, and an additional 10 per cent to cover handing and insurance cost at the source price.

government had set up a high-level task force to deal with the rising food crisis. This committee was different from the technical committee that was set up at the onset of the crisis. The task force was to be chaired by the Minister of Agriculture with a mandate to urgently come up with a national action plan to deal with the situation. This marked a turning point in how the country was going to deal with the escalating food prices, in particular maize meal.

The Minister indicated that this high-level task force had been set up in response to the concerns expressed by various people and organizations about the state of food security in the country and how it had impacted the prices of maize meal and its availability. According to him, the reported food shortages were a result of the failure of the global economic systems, irresponsible sale of maize in some communities and households and the floods that had been experienced in the last rainy season. To avert the crisis, the government had estimated that 100,000 mt of maize needed to be imported in order to fill the shortfall until the next harvest in May 2009.

3.2.4 Consumer subsidies

To cushion consumers from the rising maize meal prices, the government after meeting with stakeholders decided in December 2008 to subsidize maize grain to millers and requiring them to pass along lower maize meal prices to consumers. FRA was to release 30,000 mt of maize per month for four months to selected millers at US$275 per mt, and millers would then blend an equivalent amount of commercial stocks at market prices that ranged between US$410–420 per mt. The millers would then guarantee a low retail price of 53,000 ZMK per 25 kg bag instead of the market price of 65,000 ZMK per 25 kg. Unfortunately, retail maize prices remained above the 53,000 ZMK mark, so the government reconsidered its position and unilaterally decided to release 100 per cent subsidized stocks at US$220 per mt to be processed into maize meal without blending with commercial stocks. This meant FRA had to double its supply per month to 60,000 mt. Since FRA stock releases were inadequate to cater for millers' requirements, the government was compelled to sign a legal instrument to procure the maize stocks held by the millers at a price of US$385 per mt and releasing the maize at a price of US$220 per mt in December 2008. This innovation also failed to influence countrywide maize meal price reductions. Worse still, not all millers were able to access the cheaper maize provided by FRA and thus, could not reduce their prices (Tembo et al. 2010). At the same time, there was a big outcry from grain traders who were now failing to sell their more expensive stocks. After protracted negotiations, FRA agreed to purchase 70,000 mt of maize from the traders in two parts, 40,000 mt at the time of signing the agreement and 30,000 mt in March 2009 at a price of US$405.95.

The release of subsidized maize grain to selected large-scale millers with a guarantee that they would in turn reduce maize meal prices by 23 per cent from 65,000 ZMK to 53,000 ZMK, did not work well. With the continued price escalation, the press and other stakeholders began to blame the millers. Box 1 gives an excerpt of some of the headlines in the press regarding this situation. The Minister of Agriculture even went to the extent of threatening to push for the removal of the subsidy to millers as the programme was not benefiting the consumers. On the other hand, millers were threatening to increase maize meal prices if this happened. Eventually in March 2009, the government reduced the subsidy rate from 50 per cent to 40 per cent with maize meal prices remaining very high.

Box 1: Press reports on-millers and maize meal prices during the food crisis of 2008–09

Headline	Article available at:
ZNFU Wants Millers Audited *Published 19 June 2009*	http://allafrica.com/stories/200906190469.html http://www.znfu.org.zm/index.php?option=com_content&view=category&id=46&Itemid=67
Millers are hoarding Maize – Government *Published 12 November 2008*	http://www.lusakatimes.com/2008/11/12/millers-are-hoarding-maize-govt/
Millers being blamed for mealie meal price hikes. *Published 5 November 2008*	http://www.lusakatimes.com/2008/11/05/millers-being-blamed-for-millie-meal-price-hikes/
Millers Association of Zambia Dispelled Rumours over Existence of Cartel Among Millers Muvi TV	http://www.muvitv.com/?p=3692

The upshot of these results is that the government of Zambia needs to seriously review its policy of providing consumers with price relief through subsidizing maize grain to a few large-scale millers. As in the past, this policy has failed the country although, general subsidies are easier to implement, but they fail to meet their goal of reducing prices; instead they distort the market and the big winners will be those millers who are able to access the subsidized grain. The government should consider offloading maize to the open market so that the poor consumers have access to low cost maize that can be milled cheaply at local hammer mills as well as other small-scale mills (Chapoto and Jayne 2009).

3.2.5 Producer-oriented policies

Input subsidy: The main government response to the food crisis of 2008 involved mostly supply-side policies. These included ramping up FISP, targeting more small and medium-scale farmers. A major reason for focusing on supply-side interventions is that the support base for the then ruling MMD party was overwhelmingly comprised of rural farming households. Focusing the subsidy on this demographic was more likely to increase support for the ruling party. After the death of President Levy Mwanawasa in August 2008, fertilizer subsidies and higher maize producer prices became a campaign issue during the elections to replace him. Results from a study by Mason, Jayne, and Myers (2012) shows that the amount of fertilizer distributed was highly correlated to the election outcomes.

Zambia's agricultural policies and good rainfall in most seasons have seen the country move from being a net deficit to a surplus maize producer. Therefore, responding to the global food crisis through increased subsidies towards maize production was a more preferred policy direction. Since 2001, Zambia has provided smallholder farmers with subsidized fertilizers. However, with the rising food and fertilizer prices in 2007, the government increased the subsidy for fertilizers distributed under the FISP. Initially, farmers eligible for subsidized fertilizers were required to pay only 50 per cent of the fertilizer market price but were now required to pay only 25 per cent.

In February 2008, the Zambian parliament approved the 2008 budget with a planned spending of 187 Billion ZMK for fertilizer subsidies (approximately US$42 million). Two months after the budget was approved, fertilizer prices further increased by more than 60 per cent compelling the government to seek an additional 305 billion ZMK (US$68 million), to cover the increased procurement costs. The total expenditure on fertilizer subsidies released from the 2008 budget amounted about 33 per cent of the total amount spent by the whole Ministry of Agriculture. In addition, the number of beneficiary farmers increased from 120,000 to 200,000. However, the implementation of the FISP programme continues to be riddled with problems that limit its effectiveness in raising maize production. The concerns about FISP include corruption, poor delivery, poor targeting, leakages, lack of training, and absence of monitoring and evaluation. The elite argue for the continuation of the fertilizer programme through government procurement and distribution via a handful preferred companies as most companies are excluded due to a tendering requirement that the company should have a track record working with the government. The resistance to reform the programme is likely driven by a vested interest by people who derive personal benefits from the programme. Research has recommended the use of an e-voucher to deliver the subsidy, thereby eliminating the need for government to tender and distribute inputs while including the private sector and encouraging competition.

Producer price support through FRA: With the continuing desire to promote smallholder maize production, the government through FRA buys all its stocks from the smallholder farmers at prices above the market price. This is mainly due to pressure exerted by ZNFU and members of parliament. As it will become more apparent later, this policy only benefits about 35 per cent of small-scale farmers with the top 2–5 per cent of the well-endowed farmers benefiting the most because they are able to sell 50 per cent of all the marketed maize. In 2008 and 2009, there was extensive political pressure for FRA to announce its floor price even before the crop forecast and the national food balance sheet were announced by the Ministry of Agriculture. This was due to the allegations that millers and traders were ripping off farmers by buying maize early at below market prices. The FRA announced a price of 60,000 ZMK (US$269 per mt) per 50 kg bag in 2008 and 65,000 ZMK (US$291 per mt) per 50 kg bag in 2009, all these floor prices were above prevailing market prices of 40,000–45 000 ZMK per 50 kg bag (US$179–US$200 per mt), whilst SAFEX prices were averaging US$258 per mt in 2008 and US$184 per mt in 2009. The argument for raising the FRA purchase price above market price in a deficit period was that smallholder farmers needed this incentive to keep producing maize for the country to remain food secure. Over the years and especially during food crises and election periods, FRA's involvement in the buying and selling of grain is elevated though the impact on reducing poverty is minimal and highly debatable.

3.2.6 Tax changes

Some of the tax proposals made by the high-level task force were adopted in the 2009 budget. In order to promote agriculture production through mechanization, the government, through the national budget of 2009 announced that all agricultural equipment including small tractors, ploughs, pumps, and sprayers were VAT zero rated. The tax policy changes were intended to reach the small and medium-scale farmers who do not operate as registered enterprises. Also, the 25 per cent duty on gypsum imports was scrapped in order to promote local fertilizer production. With the rising transportation costs due to the rising fuel costs, the government also removed customs duty on commercial trucks. The impacts of these measures have not been subject to any scrutiny but it is reasonable to assume that these tax

measures were going to help grow the agriculture sector and help prepare the country to better withstand production shocks.

3.3 Relationship between world food prices and Zambia food prices

Similar to Minot (2011), this study uses a simple vector error correction model (ECM) to examine the relationship between world maize prices and maize prices in Zambia, domestic spatial maize price transmission between Lusaka and four other districts markets in the country, as well as vertical price transmission between maize grain and maize meal. The price transmission model consists of the local retail prices and the US Gulf FOB price. All prices were converted to local nominal Zambian prices by multiplying with the exchange rate.

3.3.1 International to domestic price transmission

The results show that there is no statistically significant long-run relationship between local maize prices and the US Gulf FOB maize prices and South Africa, SAFEX maize prices (Table 2). This may not be very surprising because Zambia is a landlocked country that has in the recent past been able to produce maize surpluses and only importing maize from South Africa in severe drought years. The caveat to this finding is that domestic policies and traders actions in Zambia were largely trigged by what was happening on the international market despite the fact that the country was not in an import position. Unfortunately, it is beyond the scope of this paper to try to sort this out empirically.

During the global food crisis, maize prices in Zambia started to escalate in July 2008, a time when global maize prices were trending downwards (Figure 5). This was mainly due to speculative maize purchases by the traders and millers and general bidding up of prices by both government and private sector over the limited maize surplus at the beginning of the marketing season. Prices continued to rise until March 2009 when the new harvest had started hitting the market.

Table 2: Transmission of US gulf maize prices to domestic maize prices in Zambia[a]

Province/commodity[b]	Location	International price[b]	Johansen test
			Prices co-integrated
Lusaka	Lusaka	FOB US Gulf maize	No
Lusaka	Lusaka	South Africa	No
Eastern	Chipata	FOB US Gulf maize	No
Southern	Choma	FOB US Gulf maize	No
Central	Kabwe	FOB US Gulf maize	No

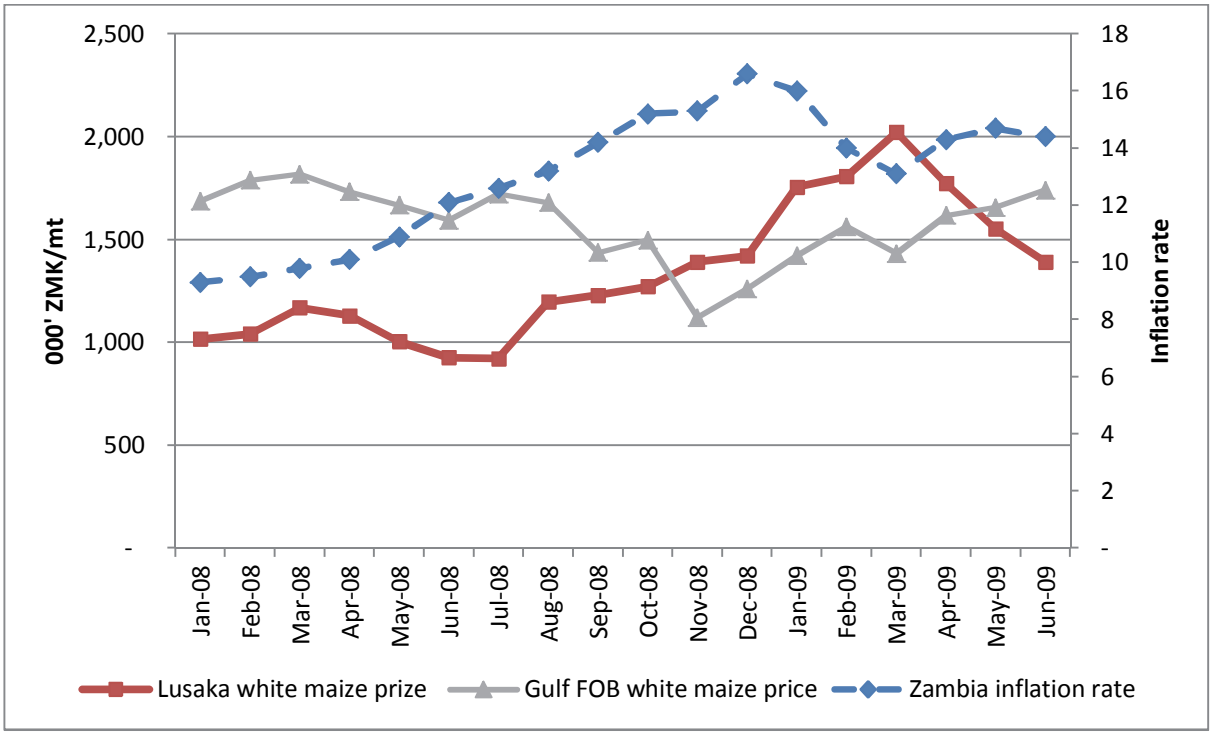
Source: author's calculations.

Notes: [a]The error correction model could only be estimated if the Johansen test confirmed that the local and international prices are co-integrated; [b]US Gulf prices and all the local prices have a unit root confirmed via the ADF and Philip Perron test.

On the other hand, global maize prizes started to increase again in November 2008 and continued to increase beyond March 2009 when maize prices in Zambia had started to decline. The price trends showed in Figure 4 support the results from the transmission model that no long-run relationship existed between local maize prices and the US Gulf FOB maize prices and South Africa. Instead, the rising maize prices in Zambia were in most part driven by what was happening domestically than driven by global maize prices. However, the

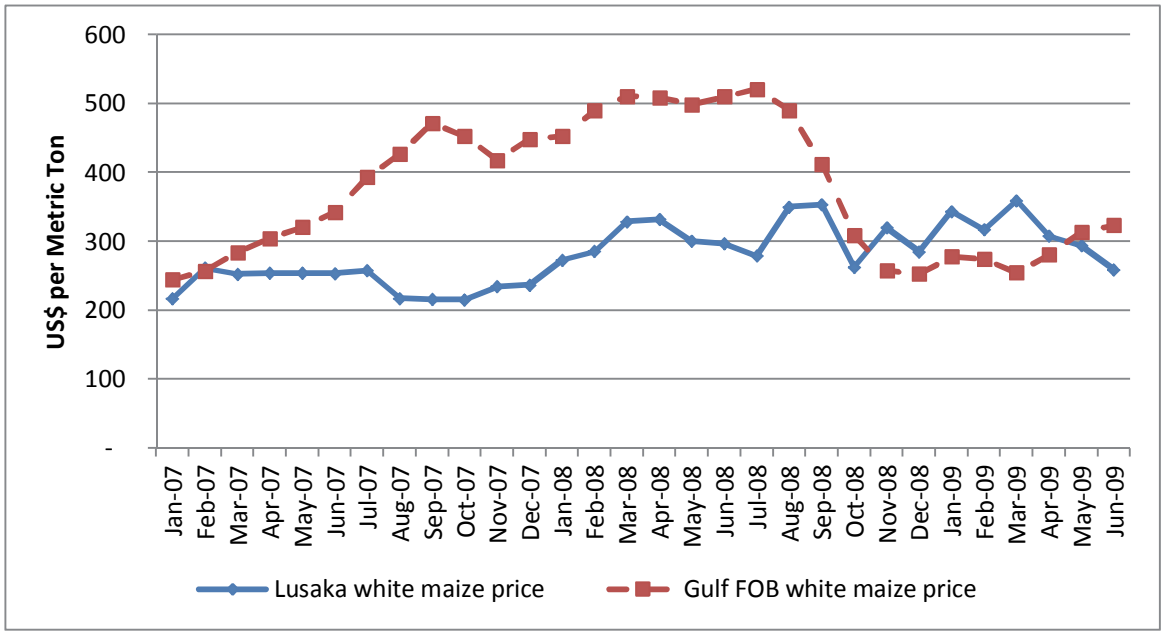
general inflation in the country was rising due to the increase in prices of inputs such as fertilizer, diesel, labour, and transport. The rising inflation was also accompanied by the depreciation of the ZMK against the US$, from 3,186 ZMK per 1 US$ to 5,500 ZMK between June 2008 to July, 2009 making imports more expensive (Figure 5a). Figure 5b shows the US$ denominated prices and it is apparent from this graph that Zambia grain prices did not skyrocket.

Figure 5a: Lusaka nominal retail maize grain prices, US Gulf FOB white maize grain prices and Zambia general inflation rate



Source: based on CSO (various years) and www.sagis.org.za.

Figure 5b: Lusaka US$ retail maize grain prices and US Gulf FOB white maize grain prices



Source: based on CSO (various years) and www.sagis.org.za.

3.3.2 Domestic vertical price transmission

As expected, changes in the retail maize grain and maize meal prices are co-integrated, with the results showing that more than 70 per cent of the variation in maize grain prices is, in the long-run, transmitted to retail super refined (breakfast) and roller meal prices irrespective of the location of the market. Lusaka, the capital city has the highest long-run adjustment coefficients for roller and breakfast meal, 83 per cent and 92 per cent, respectively (Table 3).

The speed of adjustment is higher with the less refined meal (roller meal) prices compared to breakfast meal with the exception of Kasama where the speed of adjustment is equal for the two commodities, averaging 12 per cent per month. These results seem to suggest that retailers are slow to adjust breakfast meal prices when maize prices change, making the super refined meal prices stickier than less refined meal prices. Therefore, the government's preferred way of dealing with short-run price increases through supporting a few larger millers producing primarily super refined meal is likely to be less effective because with the desire to maintain a higher profit margin, millers are less likely to use the subsidized maize to produce more roller meal. Instead, they benefit more from producing the super refined breakfast meal which gives them the highest margin and longer shelf life. However, the millers contend that their mills produce 60 per cent roller meal and 40 per cent breakfast meal and it is not correct to say that they prefer one form of meal than the other because the technology produces both. It remains a vexing problem to understand why the Zambian government does not realize that poor consumers are not well served by the preferred short-term intervention of subsidizing maize grain through millers.

Table 3: Transmission of maize grain price changes to retail breakfast and roller meal prices; wheat flour to bread prices[a]

Location	Commodity 1	Commodity 2	Johansen test	Error correction model[b]		
			Prices co-integrated	Speed of adjustment	Short-run adjustment	Long-run adjustment
Lusaka	Breakfast meal	Maize grain	Yes	-0.051	0.048	-0.920***
Choma	Breakfast meal	Maize grain	Yes	-0.092***	0.027	-0.800***
Kabwe	Breakfast meal	Maize grain	Yes	-0.038**	-0.001	-0.862***
Kasama	Breakfast meal	Maize grain	Yes	-0.120***	0.056*	-0.792***
Lusaka	Roller meal	Maize grain	Yes	-0.139***	0.066	-0.831***
Choma	Roller meal	Maize grain	Yes	-0.251***	0.073	-0.726***
Kabwe	Roller meal	Maize grain	Yes	-0.172***	0.073	-0.828***
Kasama	Roller meal	Maize grain	Yes	-0.136***	0.124**	-0.746***

Source: author's calculations.

Notes: [a]All local retail price levels have a unit root confirmed via the ADF test and Philip Perron test; [b]The error correction model could only be estimated if the Johansen test confirmed that the local and international prices are co-integrated.

3.3.3 Domestic spatial price transmission

Results in Table 4, show that Lusaka maize grain prices are co-integrated with Chipata, Choma, Kasama, and Kabwe prices. As expected, the speed of adjustment is highest for Kabwe prices, 25 per cent per month because of Kabwe's proximity to Lusaka. The second highest is Kasama with 22 per cent, this is rather difficult to explain because Kasama is more than 600 km away from Lusaka. The lowest speed of adjustment is reported for Chipata, 9 per cent, meaning that it would take about 10 months for Chipata maize prices to adjust back to the long-run equilibrium when there is a 1 per cent change in Lusaka maize prices.

Table 4: Transmission of Lusaka maize grain prices to other domestic district markets in Zambia[a]

Commodity	District markets	Capital City markets	Johansen test	Error correction model[b]		
			Prices co-integrated	Speed of adjustment	Short-run adjustment	Long-run adjustment
Maize	Chipata	Lusaka	Yes	-0.087	0.242*	-1.118***
Maize	Choma	Lusaka	Yes	-0.189*	0.003	-1.061***
Maize	Kabwe	Lusaka	Yes	-0.252***	0.192	-1.004***
Maize	Kasama	Lusaka	Yes	-0.224***	0.338*	-1.101***

Source and notes: see Table 3.

4 Policy impact

This section discusses the impacts of various policies used by the Zambian government to respond to the food crisis of 2008 and 2009 by using evidence drawn from various studies.

4.1 Impacts on the poor

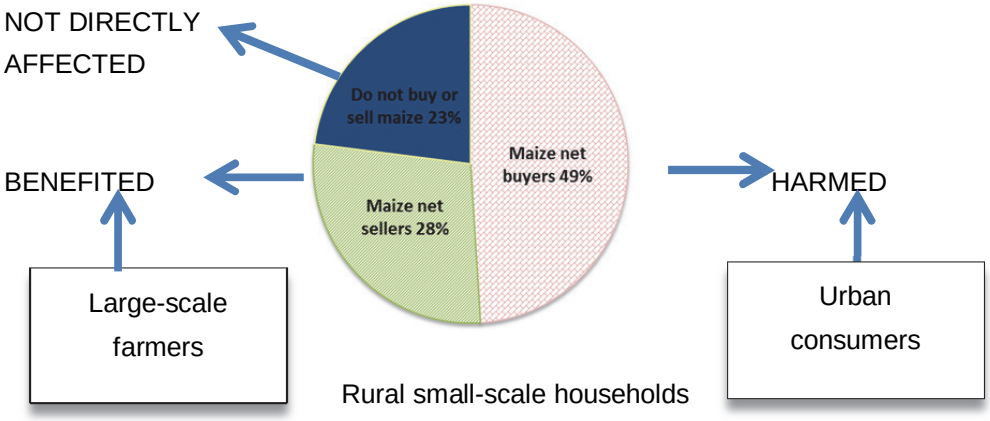
The increase in food prices is a big threat to the welfare of the poor, both urban and rural, who also constitute the majority of the Zambian population. However, the impacts will vary depending on the characteristics of different households (Govereh 2009, Jayne et al. 2009).

Amongst the rural households, net producers are likely to have gained from the surge in food prices especially for maize whilst, net buyers were disadvantaged since they rely on the market for their food needs. Figure 6, shows the distribution of rural farming households by maize market position (based on 2008 rural agricultural survey) and the impact of the food crises on different groups in Zambia.

On one hand, the net sellers, approximately 28 per cent of the small-scale farmers and the large-scale farmers, clearly benefited from higher maize grain prices. The urban consumers and 49 per cent of the rural population, who are net buyers of maize, were negatively affected by the escalating maize and maize meal prices. The greatest impact was felt in the hungry season when prices rose above import parity.

Unfortunately, government marketing activities and policy decisions during normal and abnormal years have thus far been largely unresponsive to these statistics. For example, the FRA and the private sector usually attempt to purchase the entire marketed maize surplus, leaving virtually nothing for purchase by rural farmers during the lean season. The grain is instead bought and hauled to urban centres, where it is sold to millers thereby disadvantaging the majority of the poor rural households, who are net buyers of grain.

Figure 6: Distribution of rural farming households by maize market position and the impact of the food crises on different groups in Zambia



Source: author's compilation; maize market position statistics derived from Tembo et al. (2010).

Furthermore, FRA's sale of subsidized grain to large millers, who sell relatively expensive maize meal, further disadvantages the poor in urban areas who would prefer to purchase grain from the market and send it to small and cheaper grinding mills. Evidence indicates that many of the urban and rural poor rely on these less expensive ways of procuring their maize meal as long as grain is available in local markets for purchase (Mwiinga et al. 2002; Mason et al. 2011). However, when the supply of grain in local markets dries up, consumers are forced to switch to more expensive packaged maize meal, or cut the number of meals they eat per day. Mwiinga et al. (2002) estimated that low-income urban households could save roughly 7–20 per cent of their monthly income if they were able to purchase grain and mill it

into roller meal (mugaiwa) at a local grinding mill, rather than relying on more expensive commercial alternatives.

Mason and Jayne (2009) reported that urban households spend a large percentage of their incomes on food especially amongst relatively poor households. The share of food items in the total value of households' consumption range from 46.2 per cent to 46.6 per cent in the heavily populated urban areas of Lusaka and Kitwe, to 50.7 per cent to 54.6 per cent in the smaller northern towns of Mansa and Kasama. Among households in the two poorest quintiles, food budget shares ranged from 60.0 per cent to 73.1 per cent, indicating that these households have very little disposable income to spend on essential non-food items.

In addition, Mason and Jayne (2009), showed that a lot of poor households are not able to buy a 25 kg bag of maize meal, hence, resort to buying small repacks *'pamelas'* at a price per kg that is about 30 per cent higher.

In another study looking at whether staple foods were becoming more expensive for urban consumers in Zambia, Mason et al. (2010) found that the purchasing power of wage earners had risen over time relative to the price of maize and maize meal, even at the height of the 2008 and 2009 food crisis. Thus, wage earners were earning more and could afford more maize now than throughout the period of 1990 and early 2000s. Although these results provide some hope for the urban consumers, one has to be cautious not to make the wrong conclusion, especially, given the very high unemployment rate in Zambia. The majority of the people survive on informal activities hence, are not captured in their study.

In a nutshell, these results show that the impact of rising food prices is greatest on the poor people who spend most of their income on food. However, the poor urban consumers and rural farmers suffered from rising food prices because of ill-implemented responses to the escalating food prices. Unfortunately, this trend has continued unabated because of the failure of government policies and strong lobby groups who continue to ignore empirical evidence regarding the impacts of various policy choices in the past. This is not because of their insensitivity to the plight of the poor, but the politics surrounding the main staple food and other key grains. Individual lobby groups, whose desire is to serve their own constituency, tend to pressure the government to implement policies that do not give the highest benefit. For example, the ZNFU has continued to lobby for higher subsidies to farmers, higher FRA buying prices and a ban on wheat imports. Whilst, on the other hand, the MAZ has in the past used their access to high government officials to influence FRA to offload maize to its members at subsidized rates with the promise of reducing consumer maize meal prices to consumers, ask for the removal of export bans whilst pushing for open borders for wheat flour. Such a tug of war that exists amongst the key lobby groups tends to force the government to choose policies that are politically popular ignoring their costs to the country and the impact on the poor. Political expediency in dealing with past food crises has always resulted in unintended consequences to the poor.

4.2 Impact to the treasury

The level of government intervention was costly and exacerbated the degree of uncertainty in the market, something that could have been avoided with good planning. With the adequate warning provided to government as early as July 2008 regarding the impending maize shortages, early planning for imports could have saved the government 230 billion ZMK (approximately US$50 million). In addition, the sale of maize by the FRA should have started

much earlier and would have prevented the prices from climbing to above import parity prices. The timely planning for imports would have ensured that moderate imports were purchased with the help of the private sector at a cheaper price and arriving before the start of the lean season in November 2008.

4.3 Mistrust between government and private sector

The attempt to deal with the rising food reinforced the mistrust between government and the private sector. The government accused private traders of acting as saboteurs who only cared about their interests and profits whilst poor people suffered. On the other hand, the traders accused the government of favouring the interests of a few stakeholders, hence, prices remained very high.

5 Conclusion and recommendations

In Zambia, the effect of the rising global food prices was not felt until late 2008 and early 2009. This study argues that failure by the government and other stakeholders to quickly respond to the global food crisis was the leading cause for the escalation of maize prices in the country rather than being driven by what was happening on the international scene. Like in the past, the implementation of government policy responses to deal with the rising food prices, especially for the major staple crop maize, were delayed due to ineffective response policies, protracted discussions and inaction amongst key agriculture stakeholders.

This study exposes a number of key areas that need to be addressed if the government is to be successful in dealing with future food crises. The first point of entry is the need to acknowledge and deal with the high level of mistrust between government and private sector especially for the maize sector. Dialogue is necessary at all times to address any impasses.

Second, strong lobby groups with access to high political officials should be discouraged to push for solutions outside the main technical committee tasked to deal with food policy issues as they tend to short-circuit the system and ignore sectorwide solutions to the detriment of the whole country. Procedures need to be established beforehand and all parties should be compelled to stick to them. For example, if the CAADP process is successfully implemented, issues to do with food crises should be dealt with outside the political arena but by an independent marketing council empowered by an act of parliament that provides leadership in dealing with any future food crises.

Third, the government needs to review its policy of providing consumers with price relief through a few large-scale millers. The policy is easy to implement in the short-run but, past attempts to use this strategy failed to have a meaningful effect on retail maize meal prices. Instead, the government should consider off-loading maize to the open market so that the poor consumers have access to low cost maize. Local hammer mills and other small-scale mills can be utilized rather than forcing consumers to buy more expensive super refined maize meal from the commercial mills.

Since the government co-exists with the private sector, a rules-based market system will benefit the country in that the market will become more predictable. From past experiences, it is not realistic to assume that the Zambian government will sit on the sidelines and let market forces deal with any food crises. However, as this study has shown, the government fails to

leverage private sector funds when dealing with food crises because of past unpredictable behaviour by the government that tend to make the private sector seek guarantees before making any investments. If the government insists on participating directly in agricultural markets, predictable and transparent rules governing state involvement should be established to reduce market risks.

Similar to crops such as rice, maize without borders policy may be an important part of an overall maize long-term policy with the potential to reduce the impacts of food price escalations resulting from natural causes or global events. However, a lot of people fear that allowing external market shocks to be transmitted into local markets will cause unbearable pain to the poor in the country. This could be true in a static environment, but regional trade may be able to encourage private investment into technologies and institutions that broaden the scope of the market to better absorb prices shocks. However, this is unlikely to happen if the Zambian government continues to impose ad hoc export bans, import restrictions, as well as implementations of domestic price policies in an unpredictable and ad hoc fashion.

Policies that fail to include empirical evidence about the characteristics of the people they are trying to serve usually fail to achieve their intended results. The country should move towards a situation where politicians or policy makers should embrace empirical evidence rather than shy away from research results that deviate from the conventional wisdom. Depoliticizing government subsidy programmes will assist greatly in moving the country in this direction. However, this may be one of the toughest recommendations to be adopted because of the power of some civil servants and politically linked private companies with vested interests. These people tend to resist recommendations to reform politically popular, but less effective programmes in favour of short-term personal gains. Good examples include the two most popular programmes in the country, the maize producer price support via FRA and fertilizer subsidy under FISP. Despite study results that have revealed the shortcomings of these two programmes and their impact on long-term government investments on key agricultural drivers, the programmes have remained a top priority for most politicians. It may be true that elections can be won through these programmes but it is very irresponsible for public officers and interest groups to push for programmes that only benefit a few. Moving forward, the only workable recommendation that might resonate with most politicians in the country is for the government to continue supporting these programmes but at the same time effectively reform them to achieve greater benefits at the least cost. Of course, the best alternative to achieve broad-based agricultural growth is for the government to prioritize investments in market infrastructure and institutions instead of supporting a small group of farmers through these subsidies.

With similar and less successful response strategies in the past, the government in collaboration with other relevant stakeholders should put together a standard operation strategy on how to deal with future food crises rather than waiting for a crisis to happen. An effective early warning system is required to trigger the response strategy with all players playing their part as per the operational strategy. Instead of waiting until it is too late, the MoFNP should be engaged at the early stages of the problem as they have the final say on all pricing policies. This may be one of the ways to start dealing with the mistrust that exists between government and private sector thereby helping to quicken the policy responses to future food crises.

Last, the Ministry of Agriculture and Livestock should move the process forward of enacting the Agricultural Marketing Act, in order to guide all private and public agricultural marketing

activities in Zambia. The draft Agricultural Marketing Bill agreed upon by the stakeholders in 2010 and revised in 2011 provided guidance on the involvement of the government in the fertilizer, seed, crops, and livestock markets. In particular, it proposed: the formation of an independent marketing council to help the country deal with food crises; limits the role of FRA to only handling strategic grain reserves as well as requiring FISP to be reformed, particularly with regards to not limiting the coverage of the subsidy to mostly fertilizer but requiring the use of an electronic voucher to include the private sector dealers into the procurement and distribution of inputs.

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