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Who holds the Keys to Change the Status Quo?**

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The Indaba Agricultural Policy Research Institute is a non-profit company limited by guarantee and collaboratively works with public and private stakeholders. IAPRI exists to carry out agricultural policy research and outreach, serving the agricultural sector in Zambia so as to contribute to sustainable pro-poor agricultural development.

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EXECUTIVE SUMMARY

Maize occupies a central position in Zambia's agricultural political economy as both the national staple food and primary smallholder crop. The political importance of maize can be traced back to the earlier colonial period where maize has always been at the center of Zambian agricultural policies, with input and output price subsidies being the hallmarks of the country's policy approach. Currently, maize input and output subsidies absorb over 50% of the agricultural budget, a situation that has shifted funding from other key agricultural growth divers such as farmer education and extension, research and development, and infrastructure irrigation.

As a result of the deeply political nature of maize in Zambia, and the extensive use of price subsidies to promote production and manage food prices, the private sector has tended to take a cautious approach to investing in the sector. At the same time, maize productivity levels remain well below global averages, maize commercialization in the smallholder sector remains highly concentrated, maize meal prices are highly volatile, and rural poverty remains high. A combination of these facts suggests an urgent need for agricultural policy changes.

The study has three objectives: a) to better understand the political economy factors that account for current input and output marketing policies in Zambia's maize sector; b) to understand why policy recommendations intended to improve the sector have not been adopted; and c) to develop realistic recommendations that will help support reforms to increase maize production and trade, promote agricultural diversification, and increase private sector investment in the sector.

Based on key informant interviews and review of literature the study highlights the following findings:

First, the path dependency of maize policies in Zambia reflects entrenched beliefs among policy makers that can be traced back to the post-independence period where the legitimacy of the single party state was in many ways predicted on closing the income gaps between rural and urban populations by ensuring cheap maize supplies to urban wage earners and high maize prices to farmers. This dependency still reflects the government's continued maize subsidy policies.

Second, a number of powerful lobby groups including the Zambia National Farmers Unit (ZNFU), Millers Association of Zambia (MAZ), and some large fertilizer companies that have been supplying government with fertilizers under the Farmer Input Support Programme (FISP) have a direct link to the State House and can lobby for policy changes that benefit their constituency with disregard to the negative effects on the sector.

Unfortunately, the piecemeal and *ad hoc* changes to the sector based on desires of the powerful lobby groups has not helped the country to achieve meaningful growth in agricultural productivity, poverty reduction, or broad-based economic growth.

Third, the Executive (Cabinet/State House) was found to wield the most power in commanding the other actors in the sector. Respondents identified a so-called *Command Triangle* that holds the keys for sustainable policy changes in the maize sector. This command triangle consists of the President, Minister of Finance, and Minister of Agriculture and Livestock. It was not possible to determine the actual line of command especially with the actors in the triangle, as some decisions made in the past were extremely convoluted and

unclear, making it very hard to determine where an order originates and to hold particular actors and institutions accountable for their actions.

This study identified some key areas that need to be explored in order to push for long lasting policy changes in the maize sector as follows:

1. The need for a paradigm shift: To bring about long lasting changes to the maize marketing policies in Zambia, there is a need for strong collective action at the highest level especially with the command triangle. The Executive needs to make a deliberate and consistent effort to depoliticize the maize sub-sector in order to achieve broad based growth in the agricultural sector. The current situation where ministers are frequently reshuffled does not promote stability and in most cases the appointments are more political rather than based on the experience and the contribution the person would bring to the sector.

2. Improved sector coordination: Currently, actors are seen to push their agendas independently and decisions affecting the different actors are not coordinated. This lack of coordination perpetuates the status quo. Thus, to have meaningful progress in policy changes, there is need for sector actors to come together and push for policy reform in a coordinated fashion especially in areas where their interests align.

3. Area specific fertilizer recommendations: Recapitalization of Nitrogen Chemicals Zambia (NCZ) may not provide the answers that Zambia needs to provide solutions to the low agricultural productivity problem. NCZ does not possess the ability to fully respond to the wide-ranging fertilizer needs of the country. The current blanket fertilizer recommendation under FISP does not take into account spatial soil fertility differences in the country. Hence NCZ's mandate to produce compound D fertilizer for FISP fails to recognize these differences. In order to record meaningful productivity growth, the country needs to move towards having area specific fertilizer recommendations that may require setting up strategic fertilizer blending plants around the country. With government fully backing such a strategy, the country will crowd in more blending factories in different provinces/districts of the country. Instead of being directly involved in fertilizer production, the government should consider allocating some resources towards updating the country's soil fertility maps, as well as encouraging fertilizer recommendations based on soil tests, a system that does not complement the current FISP program where only two fertilizers are distributed throughout the whole country.

4. Policy advocacy: Decisions in agriculture are made with what are perceived as immediate political rewards. If the government would like to provide effective social protection, then part of the solution lies in allocating more of FISP and FRA resources to alternative but more effective forms of social protection programs. When farmers, who are the main actors affected by these policies, understand the massive costs of the current programs at the expense of them seeing tangible benefits, they could then assist in pushing for policy reform. Also, the need for a well-informed, strong, and independent civil society cannot be over emphasized.

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ACRONYMS

COMESA	Common Market for Eastern and Southern Africa
FISP	Farmer Input Support Programme
FRA	Food Reserve Agency
FSP	Fertilizer Support Program
GTAZ	Grain Traders Association of Zambia
IAPRI	Indaba Agricultural Policy Research Institute
MAL	Ministry of Agriculture and Livestock
MAZ	Millers Association of Zambia
MCTI	Ministry of Commerce and Trade Industry
MMD	Movement for Multiparty Democracy
MoFNP	Ministry of Finance and National Planning
NAMBOARD	National Agricultural Marketing Board
NCZ	Nitrogen Chemicals of Zambia
SADC	Southern African Development Community
SAP	Structural Adjustment Program
PF	Patriotic Front
UNIP	United National Independence Party
USAID	United States Agency for International Development
ZAMACE	Zambia Agricultural Commodities Exchange
ZNFU	Zambia National Farmers Union

1. INTRODUCTION

Maize has continued to occupy a central position in Zambia's agricultural political economy. The political importance of maize can be traced back to the earlier colonial period, with maize input and output price subsidies being the hallmarks of the country's policy approach. The past and current agriculture policies are maize centric and have continued to undermine Zambia's potential to diversify the agricultural sector, which has further inhibited inclusive growth. Maize production and marketing has taken center stage through the provision of input and output subsidies, under the Farmer Input Support Program (FISP) and the Food Reserve Agency (FRA) respectively. These maize input and output subsidies currently absorb over 50% of the agricultural budget at the expense of other key agriculture drivers.

However, Zambia continues to grapple with low agricultural productivity and high rates of rural poverty despite its high concentration on subsidies. The heavy reliance on the FISP and output price support via the FRA has proved to be costly and ineffective at addressing high rural poverty rates and low crop productivity. These programs have been found to benefit better off households instead of more than 70% of the poorer farming households. For example, between 2004 and 2008 roughly 2% of the smallholder farmers accounted for the top 50% of marketed maize surplus, while most of the surplus is accounted for by the few bigger farmers cultivating 4.8 hectares of land and above (see Table A1). Therefore, FRA purchases are most likely hastening this concentration and transferring large sums of public spending to wealthier household. Empirical evidence has also shown that nearly 50% of rural farm households are net buyers of maize; hence the majority of the poor smallholder farmers and consumers are hurt by the FRA above market price which tend to push the grain prices up (Mason and Myers 2011).

Results from national surveys also show that fertilizer distributed under the FISP program usually reached farmers late (though improved in recent years), and continues to go disproportionately to wealthier households that have more land, livestock, and farm equipment and mostly to those who can buy commercial fertilizers. Despite this evidence, there seems to have been resistance to reform the program, suggesting that there are strong forces preventing the implementation of needed changes that are able to hold the system backwards. Furthermore, despite calls to ramp up efforts to design and implement fertilizer programs that recognize the spatial variability of soil fertility and climatic conditions in the country, Zambia continues to rely heavily on the general fertilizer recommendation *one-size fits all*, which is uniform across geographic locations and crops. The government has continued to invest heavily in Compound D fertilizer, which is not suitable to large parts of Zambia where the soils are acidic¹ (Lungu 1987; Burke, Jayne, and Black 2012; Chapoto, Chabala and Kamanga 2015 (forthcoming)). Furthermore, there is evidence suggesting that the use of inappropriate fertilizer continues to undermine maize productivity (Dayanatha and Behjat 1993; Mason and Jayne 2012).

Discretionary and unpredictable FRA intervention, on the other hand, continues to be the greatest policy problem plaguing the maize marketing system and food security in Zambia. Generally, the actual and potential government interventions by the FRA generate private

¹ Use of compound D fertilizer (NPK 10-20-10+6.5%S) in acidic soils causes a chemical reaction that *locks* the nutrients intended for the plant into the soil in an altered chemical state. Instead, use of lime in such soils is encouraged.

sector uncertainties and inaction leading to a cycle of recurrent need for government intervention. All this comes at a very huge expense to the treasury and causes headaches for politicians who are concerned about the country's budget deficit. The government expenditure, which is highly skewed towards maize, has also shown to stifle broad based agricultural growth because little money is going to key drivers of agricultural growth such as rural infrastructure (roads, rail, and telecommunication), agricultural research and development, market information, irrigation, and institutions that foster the development of effective markets, and complementary services such as agricultural extension and credit (Chapoto et al. 2015).

Apart from the politicized maize policies, Zambia's trade policy has also been highly unstable. Stop and go trade policies have led to skyrocketing consumer prices and increased informal trade, suggesting that Zambia is failing to take advantage of regional markets and opportunities to increase tax collection. Chapoto and Jayne 2009 show that countries (including Zambia) that had unpredictable maize marketing and trade policies had the highest price variability and unpredictability compared to countries that had an open border maize policy. The later took advantage of trade in both deficit and surplus years whereas countries like Zambia continued to be in panic mood resulting in knee jerk policies that curtail meaningful agriculture growth.

As a result of the deeply political nature of maize in Zambia, and the extensive use of inefficient subsidies to promote production and manage food prices, the private sector has tended to take a cautious approach to investing in the sector. At the same time, maize productivity levels remain well below global averages, maize commercialization in the smallholder sector is highly concentrated, maize meal prices are highly volatile, and rural poverty remains high. The combination of these facts suggests an urgent need for policy change. Therefore, the main question is how the Government can help unlock the potential of the Zambian agriculture sector to achieve meaningful pro-poor agricultural growth.

1.1. Objectives

Behind this backdrop, this study uses the political economy analysis framework to better understand the policy-making process, power structures, and dynamics involved in the maize and inputs markets in order to get a better understanding on how to influence policy changes in the maize sector. The specific study objectives include the following:

- (1) To better understand the political economy factors that account for current input and marketing policies in Zambia's maize sector;
- (2) To understand why policy recommendations intended to improve the sector have not been adopted; and
- (3) To develop realistic recommendations that will help support reforms to increase maize production and trade, promote agricultural diversification, and increase private sector investment in the sector.

1.2. Data and Methods

To address the objectives, the study combines qualitative and quantitative research methods. The key research tool utilized is a participatory mapping method called Net-Map (Schiffer and Hauck 2010), which allows for the collection of quantitative and qualitative data using

semi-structured interview approach. Net-Map is an interview-based mapping tool that is used to help understand, visualize, discuss, and improve situations in which many different actors influence outcomes. Determining linkages, levels of influence, and goals allows users to act strategically in these complex situations² (Schiffer and Hauck 2010). The tool can be adapted to any situation, and in this case, it is applied to gain an understanding of the political dynamics of maize in Zambia and identifying the main key levers of change, their primary policy objectives, how they are linked, and their ability to influence policy outcomes.

Using this procedure, semi-structured interviews were carried out with key informants who are knowledgeable about the Zambian maize sector. The key informants were drawn from public institutions, private institution, civil societies, regional bodies, and some influential individuals in the maize sector (see Table A2). The different perspectives of the various informants were aggregated using VisualLyzer to control against potential bias. The informants were asked to identify the main actors in the maize sub-sector who are influential in changing or maintaining the current maize policies. They were also asked to identify the linkages that exist among the actors and to rate how much power/influence each actor had in blocking or supporting policy change. From this analysis, and in combination with our knowledge of the sector, we derive recommendations of who and how to change the current status quo in the maize sub-sector.

The rest of the paper is organized as follows: Section 2 discusses the evolution of the maize marketing and trade policies in Zambia; Section 3 uses the Net-map procedure to help understand the political economy issues in the maize sector in order to identify the key levers for policy change; and Section 4 concludes and presents some recommendations on how to reform the maize sector.

² Net-Map has been applied on studies in International Trade and Policy Reform and Governance see Aberman and Edelman (2014) and Raabe et al. (2010).

2. EVOLUTION OF THE MAIZE MARKETING AND TRADE POLICIES IN ZAMBIA

The current agriculture policies in Zambia are rooted in a historical and political context. Since independence, agricultural policies in the country have remained politically sensitive and skewed towards the promotion of maize production as the major staple food crop. Following in the footsteps of the colonial government, which promoted the production of maize by providing subsidies to mainly commercial farmers, the new government pursued the same policies but widened the support to millions of the rural smallholder farmers. This has continued with varying degrees of success. In order to understand why it remains a challenge to have meaningful changes in the maize sub-sector, we trace the history of the current maize policies and show that there is strong path dependency. Since independence, Zambia has gone through five distinct political regimes (herein after referred to as republic) with minor differences in agricultural policies as discussed under each republic.

2.1. First Republic (1964-1972)

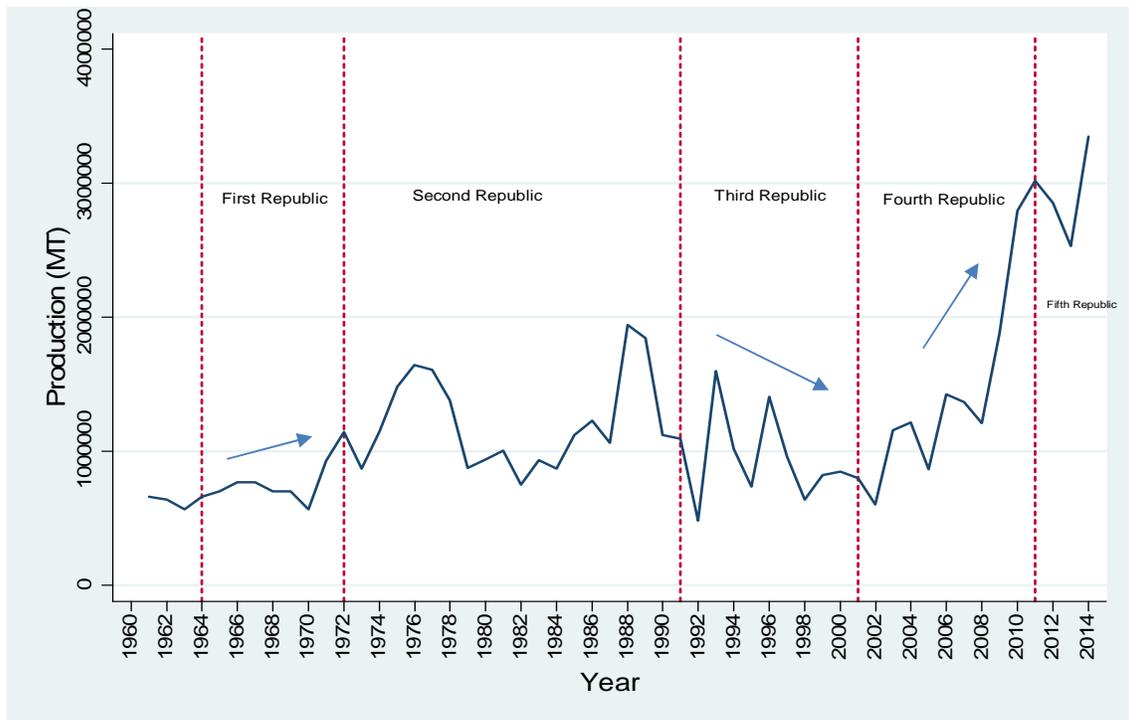
Zambia gained independence from Britain in 1964. The newly elected United National Independence Party (UNIP) government under Dr. Kenneth Kaunda inherited a colonial agriculture structure that provided production support and marketing services to commercial white farmers and an elite group of African farmers neglecting the millions of poor smallholder farmers. Immediately after coming into power in 1964, the new government formulated and articulated a new national philosophy, called humanism, which had roots in broader African and third world socialist movements and drew on ideas of equity (Sitko 2013). Humanism was articulated as a means of redressing the neglect for smallholder farmers during the colonial government, by continuing and expanding the provision of farmer support to smallholder farmers. Maize as a staple continued to receive major government support and maize self-sufficiency became a key government policy. Given UNIP's socialist ideology, agricultural marketing was state controlled and done through state enterprises. In 1971, the government introduced fertilizer and consumer maize meal subsidies.

During this first republic, state crop buying stations in the rural areas were expanded, first through the National Agricultural Marketing Board (NAMBOARD) in 1969 and later through the Zambia Cooperative Federation (ZCF). Trade restrictions in terms of exchange controls, quantitative controls, and import and export restrictions were also imposed as a way of protecting the maize sector. The production support and marketing controls by the government brought about some growth in the sector resulting in an increase in maize area production in general as shown in Figure 1. However, implementation of these policies was very expensive and placed serious strain on the nation. In order to continue with these humanistic policies the government resorted to try and fully control the agricultural sector leading to what we are calling the second republic but still under UNIP.

2.2. Second Republic (1972-1991)

The second republic started with the introduction of a one party state in 1972 when the UNIP government banned all other political parties and assumed more control in the economy. During this period, subsidies, and price controls continued to be implemented at a large scale.

Figure 1. Maize Production from 1961 to 2014



Source: FAOSTAT 2013; CSO/MAL Crop Forecast Survey 2014.

In 1973, the ruling party instituted changes in the marketing system, by introducing a new system of pan-territorial and pan-seasonal prices for maize, thus stimulating surplus maize production throughout the country. Unfortunately, to sustain the massive input, credit, output market, and subsidy programs the government became increasingly dependent on external lenders. This meant that the government had to lose some degree of control over its agricultural policies (Govereh, Jayne, and Chapoto 2008).

The fast emerging fiscal crisis and the pressure from donors propelled government to implement its first structural adjustment program (SAP) in 1978 and second SAP between 1985- 1991 (World Bank 2004). Consumer and producer subsidies were reduced, NAMBOARD was abolished in 1989, and the government undertook a partial liberalization of the grain markets (Mwanaumo, Masters, and Preckel 1997; Tembo et al. 2009). All these changes were designed to reign in state spending on agriculture to a level that could be sustained given the meagre government revenue base. However, the partial liberalization of the grain markets, as well as the total removal of maize subsidies coupled with depreciation of the exchange rate led to widespread urban riots in 1986. This led to the government reverting to price controls and subsidy provision in 1987 as a way of curbing the unrest, as well as to try to regain popularity among the people (Mwanaumo, Masters, and Preckel 1997; Thurlow and Wobst 2004). In addition, through public discontent and nationwide calls, the UNIP government was forced to lift the ban on political parties in 1990 resulting in the formation of a number of new political parties. The food riots of the late 1980s still lingers in the memories of Zambian politicians today and provide a political rationale for maintaining a large state presence in the maize sector.

2.3. Third Republic (1991-2001)

The third republic (1991-2001) was born after the UNIP government lost elections in 1991, ushering in the Movement for Multiparty Democracy (MMD) government under Dr. Fredrick Chiluba. The MMD's policy agenda was centered on getting rid of state enterprises, which were seen to be running down the country. This saw the new government accelerating and expanding the reform process by removing input and price subsidies, exchange controls, quantitative controls, and import and export restrictions thereby, completely liberalizing the foreign exchange market (Howard and Mungoma 1996). The essence of these reforms was to remove policies that were seen as impeding the role of markets and private sector investment in the Zambian economy.

The process of liberalization was however, disrupted by the severe drought in 1991/92 season which led to a massive reduction in maize production (see Figure 1) and a sharp increase in the market maize prices. The combination of a sharp withdrawal of government support and the severe drought shaped the early experience of market liberalization and highlighted in the minds of many the problems with food market liberalization. This was then repeated in 2001. Prior to the 1991 crisis, there was no private sector operating in Zambia's maize economy, due to the tight controls of the previous regime; and hence after the collapse of NAMBOARD, there was no private trading system to fill the gap. In many ways, this also colored how policy makers view the private sector. The small-scale assemblers/wholesalers and some large-scale wholesalers, tend to enter the market in April-July (early post-harvest period) and try to absorb as much small farmers' production as possible, because maize prices are usually at their lowest during this period. This has led them to gain notoriety and named *exploitative briefcase buyers* as people think that these buyers are after taking advantage of farmers by offering uneconomical maize prices and are unable to effectively absorb the country's maize surpluses (Sitko and Jayne 2014). However, this is more an artifact of the past than a current reality.

Hence in the interest of national food security, which is often equated to maize self-sufficiency, the government through the enactment of Food Reserve Agency Act of 1995 established the Food Reserve Agency in 1996. The FRA's original mandate was to establish and administer a national food reserve alongside private maize trade. In addition, FRA was to use the reserve as a buffer stock to cushion maize price variability and to provide liquidity in the maize market. To control maize domestic supply as a way of stabilizing food prices, the government regulated maize trade through the issuance of statutory instruments banning exports or imports. Table A3 in appendix, summarizes some of the trade policy shifts since the 1990s. The Ministry of Agriculture and Livestock at times imposed import and export restrictions by issuing less permits and/or deliberately delayed their issuance. Nevertheless, all these *ad hoc* trade restrictions have often distorted the market and create trade uncertainty among the private players resulting in food shortages and price spikes (Chapoto et al. 2010).

2.4. Fourth Republic (2001-2011)

After failing in his bid for a third term in 2001, Chiluba was replaced by another MMD candidate, Levy Patrick Mwanawasa who dubbed his government the New Deal government. With the economy reeling from the effects of market reforms, the Mwanawasa government decided to re-establish maize input and output support programs. Coincidentally, Zambia like some other countries in Africa had her debt forgiven making it possible for the government to

implement these programs without putting a lot of strain on the national budget. In addition, with an increase in budget support rather than project aid, there was flexibility in the government's budget to reintroduce subsidies. Essentially, agricultural policies implemented under this republic were somewhat similar to the principles of the first republic with the exception that private sector participation in the maize was legal.

During this regime, the new deal government progressively began to roll back the maize market liberalization agenda, and pushed for policies that were in line with the *social contract* position. It introduced the Food Security Pack program in 2001. This was a 100% grant-based program, which targeted households that cultivated less than 1 hectare of land and were vulnerable households but could be viable farmers. In 2003, the government through the FRA began purchasing maize especially in remote areas as a way of providing market access to the smallholder farmers, as was the case with NAMBOARD. It also resumed large-scale distribution of subsidized fertilizer to registered farmer cooperatives through the newly introduced Fertilizer Support Program (FSP) in 2002/2003, after discontinuing the Food Reserve Agency Fertilizer Credit Program due to low recovery rates.

In 2005, the government amended the Food Reserve Act (No. 20 of 2005) to give the FRA the authority to participate and engage directly into maize marketing. This led to government resuming active participation in the maize market in all areas the country. Since then, the role of FRA in the maize market has continued to grow unabated while the FISP has more than quadrupled. Although FRA's original mandate did not include setting producer prices, the agency since 2006 has been announcing pan-territorial and pan-seasonal prices. This encouraged maize production even in areas where maize production was unlikely to be profitable under commercial conditions thereby reversing the post-liberalization trend of crop diversification (Govereh, Jayne, and Chapoto 2008).

The government policies in the fourth republic helped to encourage maize production particularly through area expansion and the number of farmers producing the crop. In addition, agricultural policies in the fourth republic clearly reinforced the notion that maize policies in Zambia are heavily influenced by past events and policy decisions, which leaned toward government participation in the maize market through a government agency, output price support, and fertilizer subsidies, thereby creating the path dependency we currently see. In 2011 the change of government from MMD to the Patriotic Front (PF) somewhat brought about a new set of thinking about how the agricultural sector needed to be supported, though not much has changed, marking the beginning of the 5th republic.

2.5. Fifth Republic (2011-Current)

Similar to the policies in the first and second republic, the PF government in the fifth republic increased the budgetary allocations to maize subsidy programs and while promising to revamp the implementation of both the input and out subsidy programs. For example, government promised to a) implement FISP through an e-voucher, but as of 2015 it was yet to be piloted and b) promote private sector maize market participation through ensuring that FRA participation in the maize market was predictable and limited to strategic reserves, but FRA in 2014/15 exceeded its target by buying more than double the prescribed quantity. In addition, the government in 2011 recapitalized Nitrogen Chemicals of Zambia (NCZ) with the goal of producing compound D fertilizer locally and providing farmers with cheaper fertilizers. Unfortunately, the history of parastatals in Zambia is not that encouraging and it is

unlikely that NCZ will be cost effective. However, the fact that NCZ is in Kafue district, which is an important and swing district when it comes to winning election, the decisions to keep the NCZ operating will remain political rather than economic. NCZ does not possess the ability to respond fully to the wide-ranging fertilizer needs of the country. The current blanket fertilizer recommendation under FISP does not take into account spatial soil fertility differences in the country. Hence, the NCZ mandate to produce compound D fertilizer for FISP fails to recognize these differences.

Despite the increase in maize production especially in the fourth and fifth republic, formal exports have remained low, mainly because Zambia's maize prices have not been competitive in the region. Zambia is generally a high cost maize producer and with FRA setting prices above the market, Zambia has often priced its maize above export parity prices in the region. The frequent *ad hoc* marketing policies have led to Zambia failing to take advantage of the regional market despite improved maize production. For a decade or so, Zambia's maize production has been above national consumption requirements while neighboring countries of Democratic Republic of Congo, Angola, and Zimbabwe have been in dire need of maize to feed themselves. As such, huge food export market potential in these countries exists. However, the above market prices make maize deficit countries source maize from elsewhere at lower prices—more especially from South Africa, which is a major producer of maize in the region. Table A4 summarizes the key features of the five republics as they apply to the development of the maize sector.

3. POLITICS OF MAIZE AND FERTILIZER

The Zambian maize sector is characterized by numerous actors in both the input and output market. Using the Net-map³ procedure which helps to determine what actors are involved in a given network, how they are linked, and how influential they are, 25 actors from the public and private sector were identified by key informants as being influential in the agricultural policy making process. The actors identified interact in various ways, and how they interact influences how and which policies are made in the maize sector. Two main linkages under which they interact were identified as lobbying and command. The lobbying linkage is when one actor tries to influence another actor for policy change, while the command linkage is when one actor instructs another actor to perform or carry out certain duties/activities. To show these linkages among the actors, social network analysis was undertaken on the aggregated network data from the interviews with key stakeholders using VisualLyzer software.

3.1. Agricultural Policy Formulation Process

The agricultural policy planning process in Zambia involves several different levels of government including the Ministry of Agriculture and Livestock (MAL), Ministry of Finance and National Planning (MoFNP) and the Ministry of Justice. Any agricultural policy changes or new policies are communicated to the Cabinet through a Cabinet memo. The Policy Analysis and Coordination division in the Cabinet office then sends the memo to relevant ministries for review before the relevant Cabinet committee makes recommendations to the full Cabinet for approval, and the policy decision is communicated back to the Ministry for implementation (Koenen-Grant and Garnett 1996; Chapoto 2012). Policies that are approved by Cabinet for implementation are usually more administrative policies. Policies that require enactment of new act(s) or laws are taken to Parliament for debate and vote on the proposed bill. However, it is very rare that Cabinet recommendations fail to pass through parliament because debates and voting is done along party lines.

The State House/Cabinet (hereinafter referred to as the Executive) branch of government plays a very significant role in agricultural policies especially the maize sector. Most of the agricultural stakeholders interviewed said that ‘any change in policy would need to start from the top’. The rural smallholder farming community is of great interest to politicians because they constitute the largest voting bloc in the country. Hence to win the rural vote, the politician must win over the hearts of smallholder farmers by having programs and/or policies targeted at them. The fear of losing elections has contributed to all the *ad hoc* maize marketing and trade decisions made by the government. As an arm of government, the Ministry of Agriculture and Livestock has often times been forced to justify and implement decisions announced from the top. Therefore, maize sector policies can be formulated at the technical level but decisions are made at the political level.

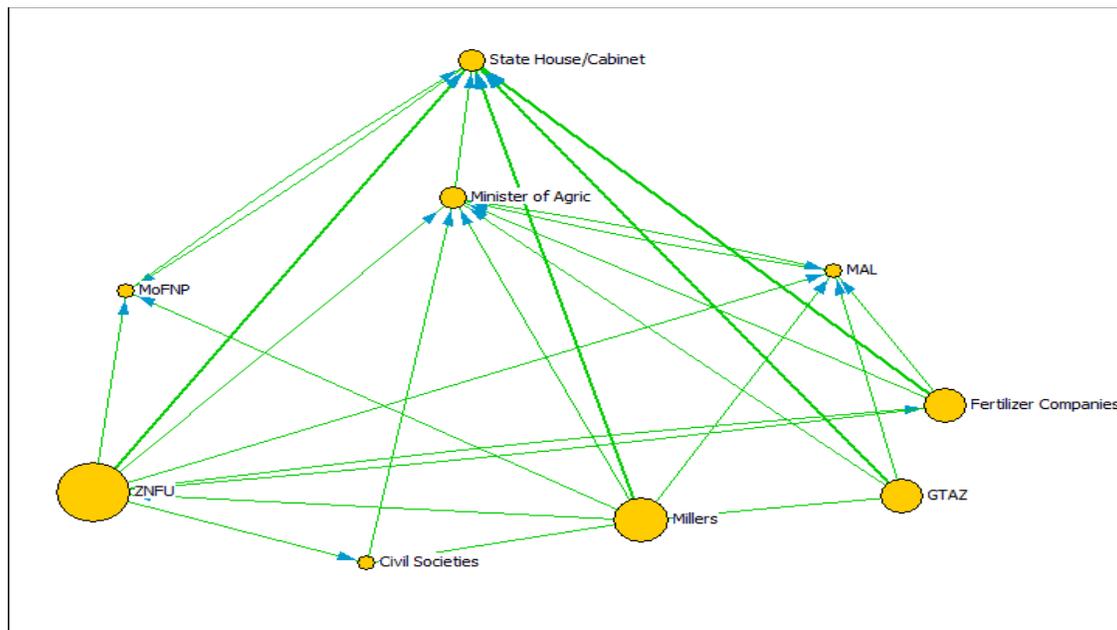
³ Net-Map is an interview-based mapping tool that helps people understand, visualize, discuss, and improve situations in which many different actors influence outcomes.

3.2. Lobbying Network

The lobbying network shows the interactions among the different actors. The Zambia National Farmers Unit (ZNFU), Millers Association of Zambia (MAZ), Grain Traders Association (GTAZ), fertilizer companies have a direct link to State House/Cabinet when it comes to lobbying for policy change (see Figure 2). ZNFU has the largest influence as they have access to a numerous actors in the sector including State House, the millers, fertilizer companies, and lastly GTAZ follows them.

In terms of the maize sector, ZNFU tries to serve the interest of the smallholder farmers by lobbying for input provision and higher output price from the government, however in most instances their lobbying has ignored empirical evidence that suggest that the majority of the beneficiaries have not been the smallholder farmer. The union was said to be a powerful force when it comes to influencing maize policies in the country, due its large membership and its direct link to the Executive. In the past, ZNFU has been able to single handedly lobby for FRA maize price increases, putting them at odds with traders. The union, depending on the crop, can also be at odds or work in tandem with the millers and the MAL. However, as powerful as the union is, there are times when things do not go its way. For instance, on 17 March 2015 the Minister of Agriculture and Livestock announced the importation of wheat, which the millers saw as a welcome move, but this did not sit very well with ZNFU who went to the extent of calling the Minister the *minister of millers*.⁴

Figure 2. Lobbying Network



Source: Authors' calculations with VisualLyzer from interview data. Actors sized according to influence level.

⁴ See <http://www.znfu.org.zm/article/znfu-pains-government-policy-shifts-wheat-and-maize>.

The MAZ on the other hand normally lobby for cheap maize grain from FRA directly to the Minister and/or State House/Cabinet. They tend to push the government to subsidize maize grain by making FRA sell cheaper maize to selected large millers (MAZ members) with the promise to reduce mealie meal prices. This introduces unfair competitive advantage for those who are able to access the cheaper maize from FRA; hence MAZ members are usually not happy with this arrangement because they are also compelled to reduce maize meal prices. However, the larger millers have the most influence, as they are able to lobby for such changes at a high level (State House/Cabinet). Their lobby success is usually mixed. For instance, after the removal of the maize grain subsidy in 2013, they have not been successful with their lobby effort to fully bring back the subsidy. Grain traders represented by the GTAZ fully support an open maize market policy, which some large-scale millers, with access to the State House, oppose. This tug of war is likely to make policy changes in the maize sector much more difficult.

In terms of input marketing, Figure 2 shows that fertilizer companies have almost an equal lobby power as the millers because they also have access to the State House. Because fertilizer is big business in Zambia, large campaign contributions by large fertilizer companies are likely to enable these companies to have direct access to the State House. Key informants indicated that some fertilizer firms have this access while others do not have, suggesting an uneven playing field. Firms not benefiting from FISP program have been supporting the implementation of FISP program through an e-voucher so that they can also benefit from government business, while the few big players who have been winning the FISP tenders lobby the Executive to continue with the status quo.

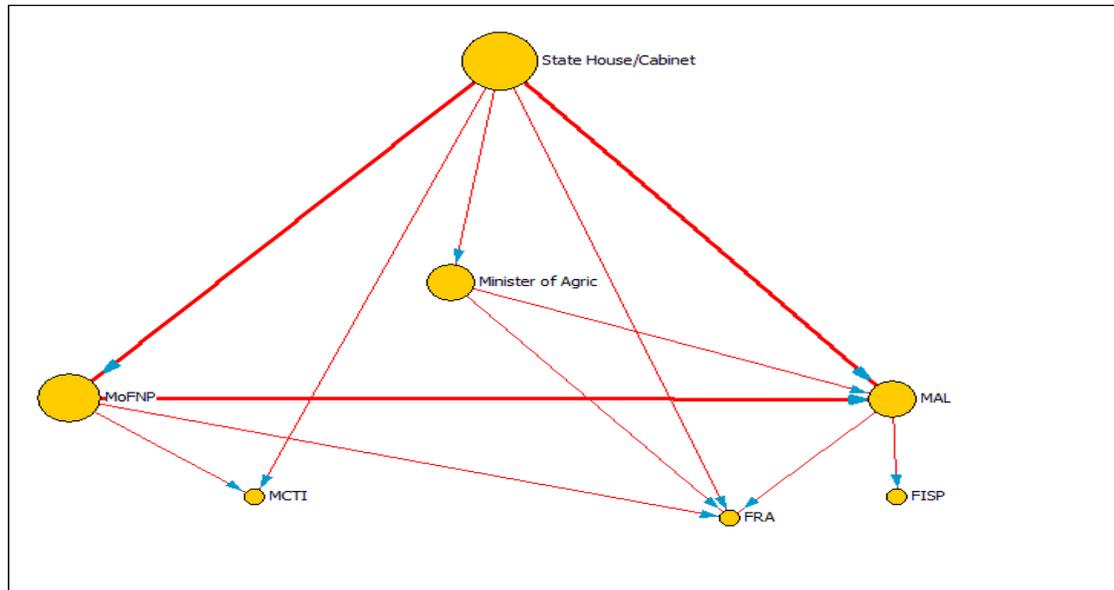
This is probably why some stakeholders interviewed feel that the traditional FISP is so attractive to some because of personal benefits derived from a more centralized distribution system.

Overall, ZNFU, GTAZ, some fertilizer, and seed companies seem to have aligned interests when it comes to lobbying policy change concerning FISP reforms. They are all lobbying for a commodity exchange and the implementation of FISP through an e-voucher system. This alignment by groups of with different interest can be used as an opportunity to push for change especially with changing the implementation of FISP and the capitalization of the commodity exchange.

3.3. Command Network

The results from key stakeholder interviews show that the Executive wields the most power in commanding the other actors in the maize sector. Meaning the Executive holds the keys for maize policy changes. The MoFNP is the second most powerful followed by MAL in terms of the number of actors that they can command. The command network is summarized in Figure 3. The MoFNP commands MAL, FRA, and Ministry of Commerce Trade and Industry (MCTI) through budgetary allocations and pricing policy. As is common in policy networks, the command network is highly centralized around a few government actors (Aberman and Edelman 2014). This can be seen by the larger nodes on the government actors/institutions. The Executive, MoFNP, and MAL form a command triangle and according to the various stakeholder interviews, this triangle possesses the keys to change the current maize sector policies.

Figure 3. Command Network



Source: Authors' calculations with VisualLyzer from interview data. Actors sized according to Influence Level.

At the center of the triangle is the Minister of Agriculture and Livestock who has command over MAL and FRA. The Minister was seen as one of the major pieces to policy change together with the President and Minister of Finance. However, the Ministry of Agriculture has been and is a revolving door, with no single Minister able to gain sufficient control of the Ministry to understand the challenges and advocate for change. Since 2010, the Ministry has had six Ministers of Agriculture. A prominent former civil servant interviewed alluded to that fact that the Ministers of Agriculture have not been able to convince the Executive on the need for bold changes in the sector, instead, there appears to be a preference for agricultural ministers who cannot make independent bold decisions without the blessing of the Zambian President. Given the status quo, the only way policies can change is if the Minister of Agriculture, Minister of Finance, and the President agree on policy issues. Together, these three hold the keys for change in the maize sector.

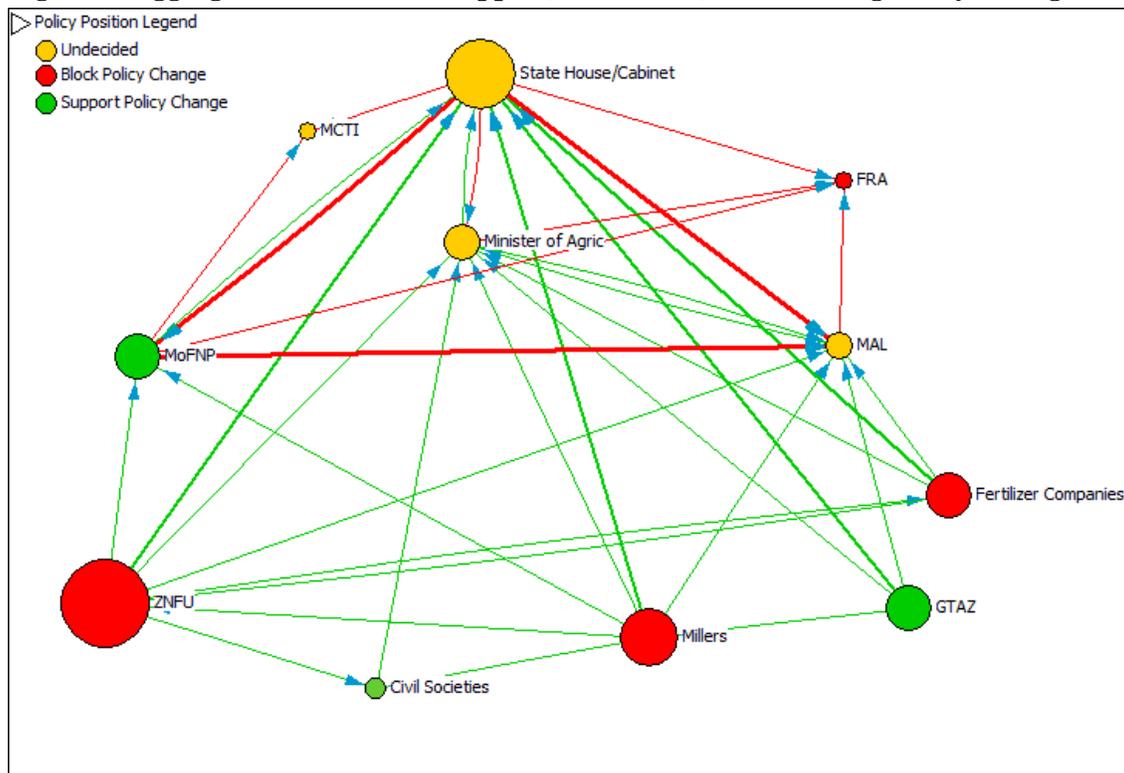
Although, FRA reports to the MAL, the Executive seems to have more power to influence the direction of the policies by commanding both MAL and FRA both formally and informally. For example, during the 2014/2015 marketing session, the Vice President at a political rally announced that FRA was going to buy all the surplus maize from the smallholder farmers and immediately we saw FRA buying above its 500,000 mt target. The Ministry of Agriculture and/or the Minister could not say anything to the contrary because the decision had already been made at the political level. In August 2015, we also saw the President overrule FRA by compelling the agency to raise the announced price to K75 instead of the K70 it had announced the previous week. Unfortunately, these actions leave no budgetary accountability from both parliament and Ministry of Finance. It was also noted that the actual line of command, especially with the actors in the triangle, is extremely convoluted and unclear, which makes it hard to determine where an order originates and to hold particular actors and institutions accountable for actions.

3.4. Who and How to Change the System

The current maize system has remained unresponsive to policy change despite numerous policy recommendations. In order to change the system, the main actors that need to be targeted for policy change are the actors with the highest influence levels in the policy making process. Using results from the aggregated interviews, results for both the lobbying and command network, actors that support, block, or are undecided about policy change were identified by key informants (Figure 4). Actors that support policy change are indicated in green, the ones that block policy change are indicated in red, while those that are undecided are indicated in yellow. The size of each actor’s node shows the influence level that the actor has. As mentioned earlier, the results from key informant interviews indicated that the Executive, MAL, and MoFNP are central to changing the current policies (Figure 4).

From this triangle of actors, the MoFNP fully support policy changes in both input and output markets due to the huge financial strain on the national budget caused by the large unbudgeted expenditures on FRA and FISP. The Executive and MAL seem to be undecided as we continue to witness these programs becoming larger and ineffective. The Executive was said to remain undecided, as some of its member (usually those in the ruling party) believe that FRA and FISP are key to core winning the electoral vote of the rural voters.

Figure 4. Aggregated Network on Support, Undecided, and Blocking Policy Change



Source: Authors’ calculations with VisualLyzer from interview data. Actors sized according to influence level.

The majority of those interviewed indicated that there were opposing forces within MAL; hence it was difficult for the ministry to push for change unequivocally. They said that as long as there is something to be gained from the status quo, people tend to protect it. For instance, those who are thought to benefit directly from FISP and from the operations of FRA tend to oppose any change. This rent seeking behavior is said to be obstructing change. Despite numerous recommendations, the opposing forces have always obstructed the way of progress. The consensus view of those interviewed suggested that some of the MAL technical officers have been compromised because they seem to favor decisions that benefit them personally as opposed to what benefits the agricultural sector. Since ministers of agriculture are often changed, the sector relies heavily on the advice of technical advisors (civil servants), who may have entrenched interests, either financial or otherwise, in maintaining the current system. This perceived rent seeking behavior is said to be clouding maize policy changes.

As long as there is something to be gained from the status quo, people tend to protect it. The stalling of the implementation of the e-voucher in preference for the traditional FISP where tendering, transportation, and distribution is the domain of a small group of people in the MAL who want to preserve it, and those wanting change do not understand why there is opposition to this program. In addition, the enactment of the Agricultural Marketing Bill stalled because the stakeholders advocated for the inclusion of the Agricultural Marketing Council to deal with marketing issues, but some of the MAL technical staff perceived this as a threat to their jobs and ability to control the agricultural sector; hence the bill could not move forward. The critical question is, "How can we change this way of thinking?" Without full cooperation of the ministry's technical staff, it would prove difficult to change the maize policies because they are key in the policy formulation process. Any hesitation on their part tends to delay or derail the implementation of good policies. Currently the MAL only makes policy recommendations and the final decision on policy changes are done by the Cabinet. The Minister of Agriculture relays all the policy recommendations made by MAL, therefore, the Minister of Agriculture is critical to policy change as he can lobby for change in Cabinet. However, it was noted by some respondents that as long as the message from the technical staff is mixed, the minister would not be confident to carry it to Cabinet.

The analysis of the responses from the key informants show that the millers, big fertilizer companies, and ZNFU seem to be the main actors blocking policy change (see Figure 4), because they tend to lobby for policies that have short-term benefits for their constituents disregarding the long-term impact on the sector. In addition, with their access to both the President and Minister of Agriculture their voices usually have significant influence because of the perceived political threat if not heeded. Most of those interviewed felt that the Executive and MAL are usually held at ransom to cave in to piecemeal policy changes that only satisfy a few individuals or groups.

The major actors that were identified to have the power to change the system are those that are undecided in terms of the policy direction they need to take. For example, the Executive makes political calculations about the adoption of any proposed policy recommendations without putting a lot of emphasis on the economics of these recommendations. The actors who want to have the maize policies revamped (MoFNP, GTAZ, and civil societies) were found not to be very influential.

4. CONCLUSION AND RECOMMENDATIONS

Maize and fertilizer continue to dominate agricultural public policy and spending in Zambia. Since 1964 Zambia has seen a number of political changes but maize policy and its related component fertilizer appear to be at the epicenter of agricultural policy leaving very little attention and funding for other subsectors. While there appears to be growing agreement that maize and fertilizer policy have not yielded the required poverty-reducing and productivity-enhancing objectives, there is a stalemate in fundamentally reforming these policies. The country has continued to rely heavily on the Farmer Input Support Program and output price support via the Food Reserve Agency even though they have proved to be costly and ineffective at addressing high rural poverty rates and low crop productivity. The government's heavy investment in Compound D fertilizer and the provision of a blanket recommendation across the country, even though it is not suitable to large parts of Zambia where soils are acidic, continues to undermine maize productivity. Policies on maize trade have remained highly unstable, therefore restraining Zambia from taking advantage of regional markets and opportunities. Calls by stakeholders to reform maize policies have yielded limited success.

This paper used the political economy analysis framework to determine how policy changes can be influenced in the agriculture sector, by providing a better understanding of the policy-making process, the power structures, and dynamics involved in the maize inputs and output markets. Using the Net-Map procedure, 25 actors were identified by key stakeholders as being involved in the maize sector. Two main linkages, which are lobbying and command linkages were found to connect how these actors interact and these linkages were mapped out using VisualLyzer software. The study findings revealed that maize policies have continued to be implemented with the implicit *social contract* in mind, as seen by the continued subsidy programs under FISP and FRA. Continued massive government participation in the input and output maize marketing sector has resulted in crowding out the private sector. Also, the unpredictable maize trade policies have continued to hinder Zambia's regional maize trade opportunities.

The numerous actors in both the input and output maize sector try to influence maize policy by either lobbying for change of the status quo, while others try to maintain the status quo. The ZNFU, MAZ, GTAZ, and fertilizer companies were found to have a direct link to the Executive when it comes to lobbying for policy change. However, of these actors, ZNFU has the largest influence because of its perceived large smallholder farmers' membership base that is thought to influence voting outcomes.

State House/Cabinet on the other hand was found to wield the most power in commanding the other actors in the sector. Meaning the Executive branch of government in Zambia holds the main key for long-term maize policy changes. The command network was found to be highly centralized around three main actors (command triangle), the President, Minister of Finance and National Planning, and Minister of Agriculture and Livestock. These three, if they could align, provide the keys to change the current maize sector policies.

To bring about long lasting changes to the maize marketing policies in Zambia, there is a need for strong collective action at the highest level, especially with the command triangle. The Executive need to make a deliberate effort to depoliticize the maize sector in order to achieve broad based growth in the agricultural sector. This is because any random

pronouncement by the Executive at any fora usually becomes policy and Ministries of Agriculture and Finance are then forced to implement such *ad hoc* policies that often defy empirical evidence and usually lead to heavy unplanned expenditure by the government. Also, the sector requires consistency beginning with the Minister of Agriculture and Livestock position. The current situation where ministers are frequently reshuffled does not promote stability and in most cases the appointments are more political rather than based on the experience and the contribution the person would bring to the sector.

On the other hand, private actors are seen to push their agendas independently and decisions affecting the different actors are not coordinated. This lack of coordination perpetuates the status quo. Thus to have meaningful progress in policy changes, there is need for sector actors to come to together and push for policy reform in a coordinated fashion especially in areas where their interests align. For instance, we found that there was some consensus regarding the urgent need to reform FISP by adopting an e-voucher system in order to crowd in more players and reduce government expenditure on the program and at the same time reach more beneficiaries. In addition, ZNFU, MAZ, and GTAZ have come together and agreed on the need for the creation of a commodity exchange, an innovation that the government can use to meet the country's food security and poverty reduction objectives without disbanding the FRA. Together they managed to convince the government to pass the Statutory Instrument (SI 59) which was required to operationalize the commodity exchange. What remains is to demonstrate that FRA can be a big player in the commodity exchange because instead of procuring maize grain directly from farmers, the agency can do it through the private sector but coordinated by the exchange. This would greatly reduce some of the financial losses currently incurred by the agency due to storage losses, transport logistics, and some of the inefficiencies associated with running a parastatal. In addition, this would crowd in more investment in private storage and certified warehouses that can be used to store the strategic grain reserves.

In terms of the input sector, the recapitalization of NCZ may not provide the answers that Zambia needs to provide solutions to the low agricultural productivity problems. Apart from the bad history regarding the inefficiencies associated with parastatals and the financial hemorrhage they cause to the limited country's financial resources, NCZ does not possess the ability to fully respond to the wide-ranging fertilizer needs of the country. The current blanket fertilizer recommendation under FISP does not take into account spatial soil fertility differences in the country. Hence, NCZ's mandate to produce compound D fertilizer for FISP fails to recognize these differences. In order to record meaningful productivity growth, the country requires moving towards having area specific fertilizer recommendations, which may require strategic fertilizer blending plants around the country. With government fully backing such strategy, the country would crowd-in more blending factories in different provinces/districts of the country. Instead of being directly involved in fertilizer production, the government should consider putting some resources towards updating the country's soil fertility maps, as well as encouraging fertilizer recommendations based on soil tests, a system that does not complement the current FISP program where only two fertilizers are distributed throughout the whole country.

Decisions in agriculture are made with what are perceived as immediate political rewards. Some rent seeking objectives may be hidden behind these exaggerated consequences of maize and fertilizer policy reform. Since rent seeking is extremely hard to expose and prove, emphasizing and promoting the counterfactual is essential. Debunking the thought that

reform will lead to chaos and catastrophe must be the mantra in policy reform. Also providing options of how to gain immediate political mileage through other instruments has not been adequately addressed. FRA and FISP are being used a form of social protection, but an ineffective form of social protection. If it is a social protection that the government wants to provide, part of the solution lies in providing alternative but more effective forms of social protection, for instance, social cash transfers that do not distort the market. If politicians were more aware of what political footprint cash transfers would give them, they would be more willing to reform maize and fertilizer policy. In addition, the need for a strong and independent civil society cannot be over emphasized.

Finally yet importantly, not many farmers understand the opportunity cost of having massive programs of this nature and would not understand when government fails to pay them on time when FRA buys above the budgeted target. Therefore, maintaining the status quo is likely to be politically very costly because the country can no longer afford the continued financial hemorrhage from current operations of the FRA and FISP, which have had very limited impact on poverty reduction and productivity. The current government needs to take the initiative and make bold decisions to implement reforms that will have far more reaching positive impacts in the agricultural sector. The revised Sixth National Development Plan aligned to the PF Manifesto recognizes that agricultural development is critical for achieving inclusive growth and poverty reduction in Zambia, and clearly indicates that to attain more inclusive agricultural growth, there is an urgent need to address the unbalanced agriculture policies that have favored maize production and disadvantaged the production of other crops.

APPENDIX

Table A1. Concentration of the Smallholder Maize Market Structure

Year	% of farm households accounting for top 50% of maize sales	Maize area cultivated among households		Maize yield among households	
		selling top 50% of maize marketed surplus	selling the rest of marketed surplus	supplying top 50% of maize sold (MT/Ha)	supplying the rest of maize sold (Kg/Ha)
A	B	C	D	G	H
2001	2.7	4.8	1.2	3.9	2.1
2004	1.7	7.4	1.9	3.4	1.9
2008	2.1	9.7	2.0	4.2	2.1
2012	4.5	7.2	2.1	5.0	3.1
2014	4.6	5.2	1.1	4.6	3.1

Source: CSO/MACO/FSRP Supplemental Surveys; CSO/MAL/IAPRI 2012; CSO/MAL Crop Forecast Survey 2013/14.

Table A2. List of Identified Actors in the Agricultural Policy Making Process

Public Institutions	<ol style="list-style-type: none"> 1. Food Reserve Agency (FRA) 2. Fertilizer Input Support Programme (FISP) 3. Ministry of Agriculture and Livestock (MAL) 4. Ministry of Agriculture and Livestock Stock Monitoring Committee 5. Minister of Agriculture 6. Ministry of Commerce and Trade Industry (MCTI) 7. Ministry of Finance and National Planning (MoFNP) 8. Parliamentary Committee on Agriculture and Lands 9. Parliament 10. Cabinet 11. State House
Private Institutions	<ol style="list-style-type: none"> 12. Research Institutions 13. Zambia National Farmers Union (ZNFU) 14. Grain Traders Association of Zambia (GTAZ) - 15. Millers 16. Zambia Agricultural Commodities Exchange (ZAMACE) 17. World Food Programme (WFP)
Regional Bodies	<ol style="list-style-type: none"> 18. Common Market for Eastern and Southern Africa (COMESA) 19. Southern African Development Community (SADC)
Others	<ol style="list-style-type: none"> 20. Consumers 21. Retailers 22. Small scale farmers 23. Commercial farmers 24. Commercial Banks 25. Civil societies

Source: Authors' compilation.

Table A3. Key Agricultural Policy Changes and Maize Marketing over the Years

1991/92	<ul style="list-style-type: none">• Economic Structural Adjustment Program initiated in 1991. Donors provide balance of payments support for fertilizer importation. Private trade legalized as National Agricultural Marketing Board (NAMBOARD) is abolished in 1990.
1992/93	<ul style="list-style-type: none">• Government removes import and export restrictions and liberalizes foreign exchange market. Maize meal subsidies reduced in late 1991. However, severe drought delays maize market reform. Government sets floor price, into-mill, and consumer price of maize.
1993/94	<ul style="list-style-type: none">• Government appoints rural banks and co-operatives as buying agents for maize.• Government unable to maintain maize floor price.
1994/95	<ul style="list-style-type: none">• Government announces total decontrol of maize producer prices and elimination of transport subsidies. Privatization of state-owned milling companies.
1995/96	<ul style="list-style-type: none">• Government imposes an export ban on maize grain and maize meal.• Formulation of the Agricultural Sector Investment Program (ASIP), a tool for implementing the government policy of maize market liberalization and market reform, 1994.• Food Reserve Agency (FRA) is established to manage the national food reserve.
1997/98	<ul style="list-style-type: none">• Food Reserve Agency takes over maize input distribution on credit to smallholders.• Pan-territorial pricing re-introduced for FRA-distributed fertilizer; makes private sector fertilizer uncompetitive in outlying areas.
2001/02	<ul style="list-style-type: none">• Government proposes the Crop Marketing Authority (CMA) as a semi-autonomous body corporate, a buyer of last resort whose main preoccupation is to stabilize prices and create markets in remote areas while procuring and selling at market prices and remaining self-sustaining.
2002/03	<ul style="list-style-type: none">• Government bans importation of genetically modified organism (GMO) maize.
2003/04	<ul style="list-style-type: none">• Export permits not issued, effectively banning maize exports.• Government legislation gives powers to local authorities to introduce local taxes. Inter-district grain levies put in place.
2004/05	<ul style="list-style-type: none">• Government raises maize import duty to 15%.• Government issues export permits to selected trading/milling firms.• Amendment of the FRA Act to include crop marketing and maize price setting in addition to its original mandate of managing national strategic food reserve.
2005/06	<ul style="list-style-type: none">• Government restricts export permits to traders and provides FRA with <i>de facto</i> monopoly on the export of maize.• Maize stock monitoring committee put in place to report on stocks monthly. MACO's rationale is to guarantee national reserves before issuing export permit and to supply maize meal at affordable prices.
2006/07	<ul style="list-style-type: none">• Target for strategic reserves revised from 80,000 tons to 200,000 tons.

Table A3. cont.

2007/08	<ul style="list-style-type: none">• Government announced the intent to discontinue subsidies to millers at the end of March 2009
2011/12	<ul style="list-style-type: none">• High food prices and government subsidizes maize to millers.• Maize export ban effected.
2012/13	<ul style="list-style-type: none">• FRA maize subsidizes to millers continues.• Maize export ban lifted and reintroduced.
2014/15	<ul style="list-style-type: none">• Maize export ban lifted.• The Agricultural Credit Act is signed.

Sources: Howard and Mungoma 1997; Govereh, Jayne, and Chapoto 2008; Jayne et al. 2009; Authors' illustrations.

Table A4. Summary of Key Agriculture Sector Policies, 1964 to 2015

Time line	Policy
First Republic (1964-1972)	<ul style="list-style-type: none">• Introduction of fertilizer and consumer maize meal subsidies in 1971• Pan territorial pricing policy implemented.• Expansion of State crop buying stations first through National Agricultural Marketing Board in 1969 and later through the Zambia Cooperative Federation (ZCF).• Trade restrictions in terms of exchange controls, quantitative controls, and import and export restrictions imposed as a way of protecting the industry.
Second Republic (1972-1991)	<ul style="list-style-type: none">• Implementation of its first Structural Adjustment Programme in 1978 and producer/consumer subsidies reduced as part of the SAPs.• Following urban riots the government reverted to price controls and subsidy provision in 1987.• Abolishment of NAMBOARD in 1989 and partial liberalization of the grain markets.
Third Republic (1991-2001)	<ul style="list-style-type: none">• Accelerated and expanded the reform process by removing input and price subsidies.• Exchange controls, quantitative controls, and import and export restrictions removed.• Government's direct involvement in maize marketing minimized.• Establishment of the Food Reserve Agency in 1996 through the Food Reserve Agency Act of 1995, to hold strategic reserves.
Fourth Republic (2001-2011)	<ul style="list-style-type: none">• Introduced the Food Security Pack program in 2001 to help the most vulnerable households.• Resumed large-scale distribution of subsidized fertilizer to registered farmer cooperatives through the newly introduced Fertilizer Support Programme (FSP) in 2002/2003.• Amendment of the Food Reserve Act (No. 20 of 2005), giving FRA the authority to participate and engage directly into maize marketing.
Fifth Republic (2011- to date)	<ul style="list-style-type: none">• Recapitalization of NCZ• Increased FRA buying activities• Increased spending on FISP• <i>Ad hoc</i> maize export policies.• Signing of the Agricultural Credits Act authorizing the use of warehouse receipt system.• Promise to reform FISP and implement it through the e-voucher.

Source: Authors' illustrations.

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