Feed the Future Innovation Lab for Food Security Policy

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AGRICULTURAL INPUTS POLICY UNDER MACROECONOMIC UNCERTAINTY: APPLYING THE KALEIDOSCOPE MODEL TO GHANA'S FERTILIZER SUBSIDY PROGRAMME (2008–2015)

By

Danielle Resnick and David Mather

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ABSTRACT

Ghana's Fertilizer Subsidy Programme (GFSP) was initiated in 2008 in response to the global food and fuel price crisis. Although initially intended to be a temporary measure that became increasingly expensive as Ghana's macroeconomy deteriorated, farmers, civil society organizations, and politicians began to expect the subsidy on an annual basis. This paper applies the kaleidoscope model for agricultural and food security policy change to the case of GFSP. In doing so, it uses a variety of analytical tools to highlight how many of the weak outcomes of GFSP can be attributed to the nature of the broader policy process that has surrounded GFSP as well as the underlying political and institutional context in which policy making occurs in Ghana. Based on semi-structured interviews conducted with knowledgeable stakeholders spanning the government, donor, civil society, and research communities, the paper identifies the bottlenecks that need to be addressed if the program is to be more effective in the future.

Keywords: fertilizer subsidies, Ghana, governance, kaleidoscope model, political economy, policy process

ACRONYMS

AFAP	African Fertilizer and Agribusiness Partnership
AgDPO	Agricultural Development Policy Operation
APSP	Agricultural Policy Support Project
ASRP	Agricultural Services Rehabilitation Project
ASWG	Agricultural Sector Working Group
CAD	Canadian dollar
COCOBOD	Ghana Cocoa Board
DADU	District Agricultural Development Unit
DAEA	District Agricultural Extension Agent
DAP	diammonium phosphate
ERP	Economy Recovery Program
FABS	Food and Agriculture Budget Support
FASDEP II	Food and Agricultural Sector Development Policy II
GAIDA	Ghana Agri-Input Dealers Association
GFAP	Ghana Federation of Agriculture Producers
GFSP	Ghana's Fertilizer Subsidy Programme
GHC	Ghanaian cedi
GoG	Government of Ghana
GSGDA	Ghana's Shared Growth and Development Agenda
IFAD	International Fund for Agricultural Development
IFDC	International Fertilizer Development Center
KM	Kaleidoscope Model
MDAs	ministries, departments, and agencies
MDBS	Multi-Donor Budget Support
METASIP	Medium Term Agriculture Sector Investment Plan
MoFA	Ministry of Food and Agriculture
MoFEP	Ministry of Finance and Planning
MP	Member of Parliament
NDC	National Democratic Congress
NPK	nitrogen–phosphorous–potassium
NPP	New Patriotic Party
PFAG	Peasant Farmers Association of Ghana
PPMED	Policy, Planning, Monitoring and Evaluation Directorate
RADU	Regional Agricultural Development Unit

1. INTRODUCTION

Ghana's Fertilizer Subsidy Programme (GFSP) was initiated in 2008 in response to the global food and fuel price crisis. Although initially intended to be a temporary measure, farmers, civil society organizations, and politicians began to expect the subsidy on an annual basis. Even before the subsidy was halted in 2014 because of the government's inability to pay fertilizer importers, a number of problems were evident with regard to GFSP's design features and implementation modalities. Annual uncertainty regarding the program's design and rollout has been exacerbated by low transparency in decision making and a lack of rigorous GFSP monitoring and evaluation. In addition, the objectives of the program have shifted frequently—from increasing productivity for some or "all" maize/rice farmers, to protecting the food security of the poorest households, to promoting awareness among smallholder maize/rice farmers of the net returns to fertilizer use.

Although the Government of Ghana (GoG) decided to resume the program in 2015, a number of questions related to oft-mentioned problems with program implementation continue to persist.[1] For instance, why is there so much uncertainty and unpredictability regarding the official announcement each year about whether and when a program will be implemented? Why do these announcements come so late relative to the beginning of the main planting season in the south (and only a few weeks before that in the north)? Why have the program objectives and targeting criteria changed so frequently? Why does the GoG continue a program that is financially unsustainable given the current macroeconomic climate? Have there been attempts over time to address some of the problems noted above, and if so, why have they succeeded or failed? And what bottlenecks need to be addressed if the program is to be more effective in the future?

In order to address these and other questions, and to uncover bottlenecks in the policy process that undermine the program's effectiveness, this paper has three main objectives. The first objective is to apply the kaleidoscope model (KM) for agricultural and food security policy change (Resnick et al. 2015) to the case of a large-scale fertilizer subsidy scheme in order to assess the extent to which the operational hypotheses of the KM are robust for a range of applied case studies. The second objective is to apply these policy process tools to the history of GFSP to investigate the extent to which certain known poor program outcomes were the result of inadequacies within the GFSP policy process itself. The third objective is to apply the KM and policy process tools to help identify whether problems with GFSP implementation are related to substantive policy *system* constraints that underlie agricultural policy making more broadly in Ghana, including those that are amenable to reform and those that are not. The analysis presented in this paper is based on the secondary literature and on semi-structured interviews conducted mainly between March and May 2015 with knowledgeable stakeholders spanning the government, donor, civil society, and research communities.[2]

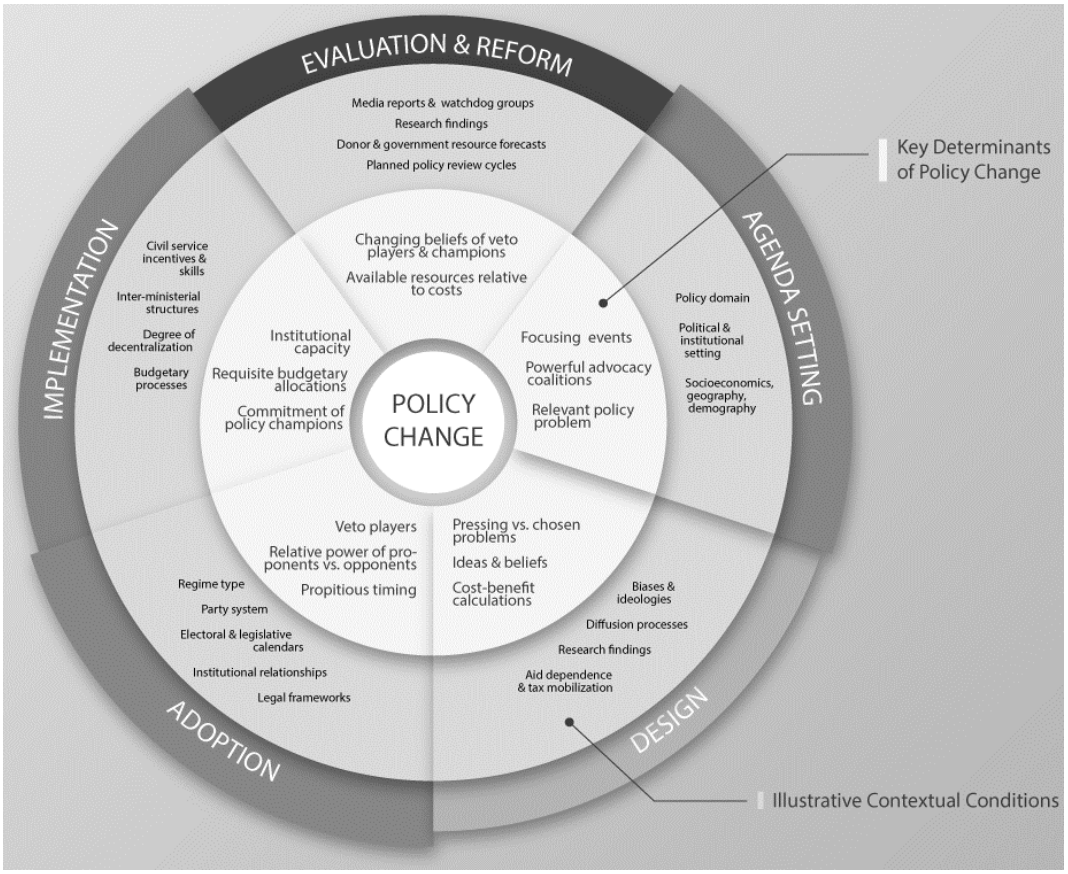
[1]The program resumed in 2015 but with key caveats, namely, that one of the larger international fertilizer importers (Olam) declined to participate before program planning began for this season, and then the largest fertilizer importer, Yara, pulled out of the program not long after it was formally announced.

[2]Some interviewees requested not to be personally identified. Where relevant, we have listed only their institutional affiliation or their stakeholder category, such as "importer" or "donor."

2. THE KALEIDOSCOPE MODEL AND TOOLKIT IN BRIEF

As is now well recognized, sound technical analysis alone rarely results in better designed policies or improved policy outcomes. Instead, there is an increasing recognition that a more in-depth and refined understanding of how policy change occurs, as well as of bottlenecks to achieving better policy implementation and outcomes, is a prerequisite for strengthening agricultural and food security policy. Toward that end, the KM provides an applied conceptual framework to explain drivers of policy change in the agricultural and nutritional policy arenas.

Figure 2.1 The kaleidoscope model of policy change



Source: Resnick et al. (2015, 21).

As discussed in much more detail in Resnick et al. (2015), the KM was inductively derived through an extensive review of actual episodes of policy change from the public administration, political science, and international development literature. In doing so, a relatively small set of variables was identified that consistently appeared as important at a particular stage of the policy process across multiple policy domains and country settings.

To avoid the problem of having too many variables and too few cases, master or macro variables were constructed, and this approach differentiated between primary and secondary variables relevant for influencing each stage of the policy process. Fourteen primary variables are highlighted in the inner circle of Figure 2.1 and are labeled "Key Determinants of Policy Change."

In turn, they are often influenced by the non-exhaustive list of secondary variables presented in the middle circle and labeled "Illustrative Contextual Conditions."

The framework is termed the kaleidoscope model because, just as shifting a kaleidoscope refracts light onto a new pattern, so does focusing on a particular stage of the policy process reveal a different constellation of key variables that is driving change. Like the pieces of a kaleidoscope, many of the underlying variables remain the same, but as policy dynamics unfold, some factors tend to have a disproportionately larger role in driving policy change than others at any particular point in time.

The KM is intended to help answer the question of why a policy change occurs in one geographic locale and not another, in one policy arena but not another, or at one time period but not another. Drawing on other influential studies of policy making in developing countries (Fox and Reich 2013; Kaufman and Nelson 2004), the framework focuses on five key elements of the policy cycle: agenda setting, design, adoption, implementation, and evaluation and reform. This perspective allows one to trace why a policy fails to be implemented by taking into account where gaps may have existed during other stages of the policy cycle. As Hall (1993) highlighted, policy change is rarely one overarching outcome but rather consists of smaller policy changes related to design, adoption, and implementation along the way. By looking at all elements of the policy cycle, the KM offers more nuanced understandings of when and why smaller changes sometimes cumulate and result in larger outcomes while others do not. In doing so, the KM can help pinpoint bottlenecks to policy change and identify whether improved policies are hindered by low capacity, insufficient political will, or both.

Applications of the KM are bolstered by a practical toolkit that centers around five mutually reinforcing tools:

Policy chronologies: Help identify key actions, actors, and dates for each stage of a policy during a specified time frame; they facilitate process tracing and causal analysis by indicating whether or not certain events precipitated subsequent policy changes.

Agricultural policy mapping: Identifies key institutions and frameworks, regulations, norms, communication conduits, protocols, and financial and administrative procedures within the agricultural sector.

Policy-specific mapping: Focuses on a specific policy domain or modality (for example, fertilizer subsidies, seed safety, or land reform) and distinguishes the roles of key actors (in policy formulation, administration, oversight, or knowledge sharing) and the nature of the relationships among them and with respect to the policy.

Stakeholder mapping: Identifies perceived winners and losers from specific policies and their preferences related to the design and implementation of those policies.

Circle-of-influence graphics: Align stakeholders in a two-dimensional space to map their preferences vis-à-vis a policy with their degree of power and influence to make decisions; the main government veto players and policy actors are placed in the center of the circle, and other stakeholders are aligned closer (or farther) from the center based on how much (or how little) influence they have.

3. APPLICATIONS OF THE KALEIDOSCOPE MODEL TO GHANA'S FERTILIZER SUBISIDY PROGRAMME

Setting the Agenda: Why a Fertilizer Subsidy?

As in much of Africa, Ghana's current fertilizer subsidy program is only the most recent incarnation of a previous policy. Since the early 1970s, various regimes subsidized agricultural inputs using an approach common across Africa in those years, in which a government parastatal agency established a monopoly on the distribution of fertilizer and seed. By 1980, the subsidy share for fertilizer in Ghana was 65 percent (Jebuni and Seini 1992). Yet when President Jerry Rawlings' administration implemented the Economy Recovery Program in 1983 to restore macroeconomic stability through structural adjustments, subsidies were gradually phased out and completely removed by 1990. Through the World Bank's Agricultural Services Rehabilitation Project , initiated in 1988, Rawlings' government also pursued graduated privatization of the fertilizer trade with respect first to retailing, then wholesaling, and eventually importing fertilizer (Jebuni and Seini 1992). Since then, the private sector has been responsible for importing all the country's fertilizer.

Table 3.1 Overview of GFSP size and expenditures, 2008–2015

Item	2008	2009	2010	2011	2012	2013	2014	2015
Average subsidy as share of market price (%)	30.3	40.4	41.2	44.2	47.0	25.8	n.a.	21.0
Actual subsidized fertilizer (MT)	43,176	72,795	91,244	176,278	173,755	166,809	n.a.	180,000[c]
Total GFSP spending by MoFA (2006 GHC millions)[a]	16.4	23.6	19.4	49.4	69.8	33.1	n.a.	47.1
MoFA expenditures (2006 GHC millions)[a]	81.25	99.77	103.40	151.70	130.87	159.10[b]	n.a.	214.10[b]
Subsidy expenditures as % of total MoFA agricultural expenditures	20.2	23.6	18.8	32.6	53.3	19.5	n.a.	22.0[c]

Sources: Benin et al. (2013); MoFA (2011, 2013, 2015); Wanzala-Mlobela et al. (2013).

Notes: [a]Real expenditures based on deflator from Ghana's Statistics, Research, and Information Directorate. For 2015, the 2014 deflator estimation was used. [b]Expenditures were based on budgeted figures rather than actual expenditures (MoFEP 2015). [c]Figures reflect expected, rather than actual, size and spending on GFSP for 2015 as reported by MoFA (http://mofa.gov.gh/site/?p=14268). GFSP = Ghana's Fertilizer Subsidy Programme; GHC = Ghanaian cedis; MoFA = Ministry of Food and Agriculture; MoFEP = Ministry of Finance and Planning; MT = metric tons; n.a. = not applicable.

Although fertilizer subsidies were reintroduced in 2003 by the parastatal Ghana Cocoa Board (COCOBOD) under the Cocoa High Technology Programme (Hi-Tech), input subsidies for food crops did not reemerge until 2008.[3] The average subsidy for food crops as a share of the market price was 30.3 percent at the onset of GFSP in 2008 (Wanzala-Mlobela, Fuentes, and Mkumbwa 2013). By 2015, the government had promised to subsidize 180,000 metric tons (MT) of fertilizer and 4,000 MT of seed at a cost of GHC (Ghanaian cedis) 87.6 million (US$22.7 million) and GHC 3 million (US$778,000), respectively.[4] When initiated in 2008, GFSP subsidized 43,176 MT of fertilizer, and the government subsidized GHC 16 million (in 2006 prices). Although the Ministry of

[3]COCOBOD is administered by the Ministry of Finance and Planning (MoFEP), not the Ministry of Food and Agriculture (MoFA) (Kolavalli et al. 2010).

[4]See "MoFA Minister Hon. Fiifi Kwetey Addresses a Press Conference on the 2015 Fertilizer Subsidy Programme." http://mofa.gov.gh/site/?p=14268.

Figure 3.1a Policy chronology of Ghana's Fertilizer Subsidy Programme, 2008

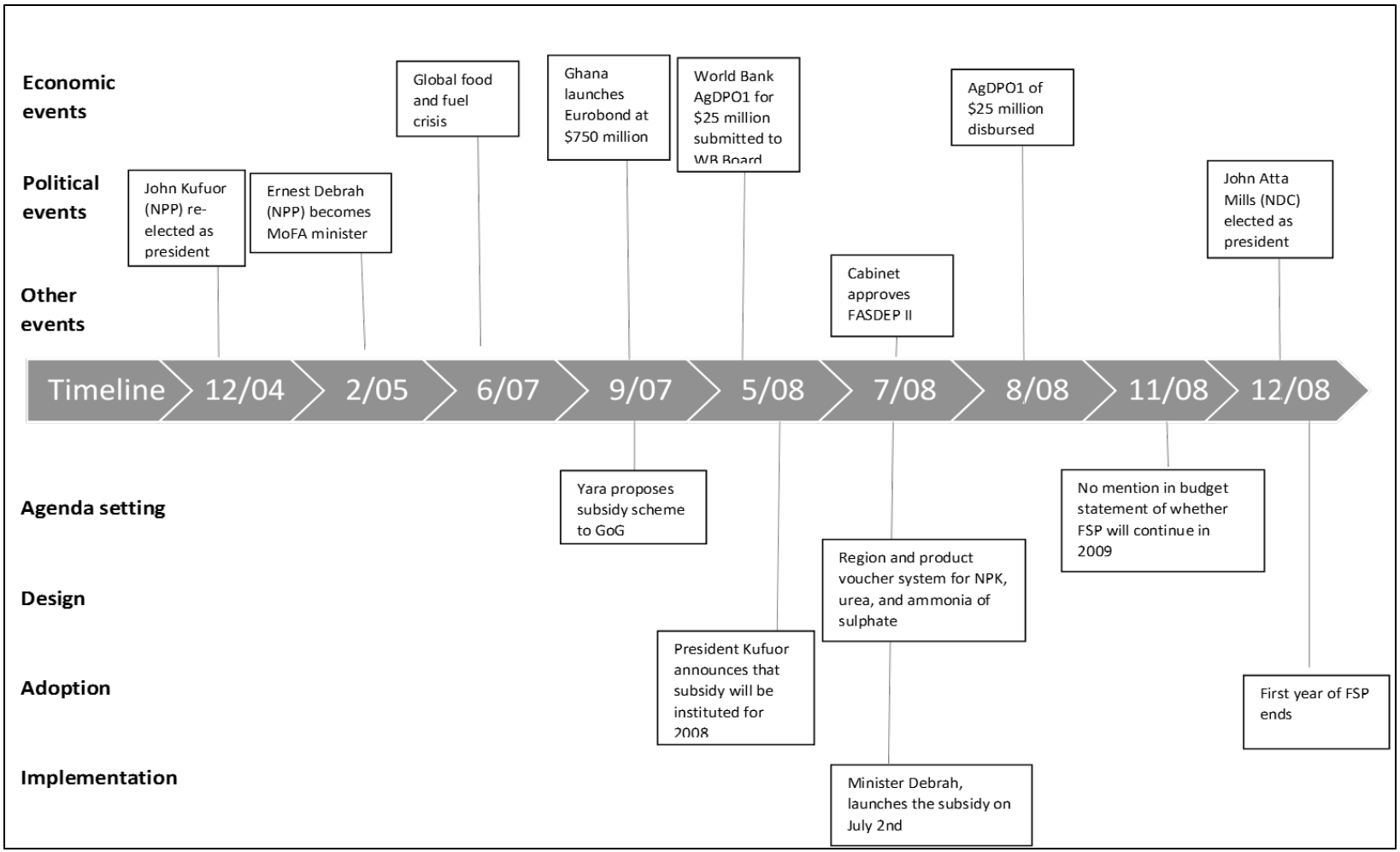


Figure 3.1b Policy chronology of Ghana's Fertilizer Subsidy Programme, 2009–2010

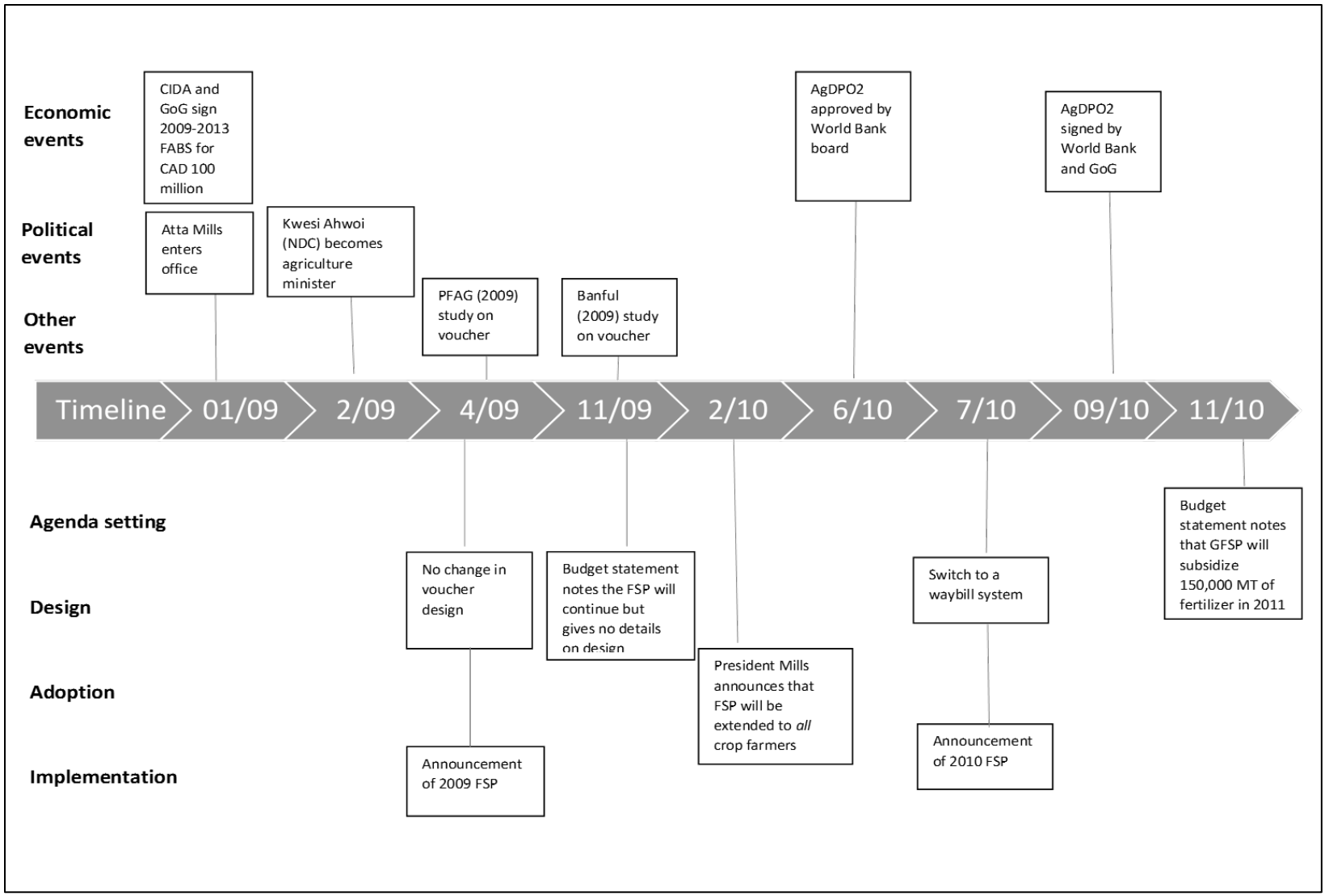


Figure 3.1c Policy chronology of Ghana's Fertilizer Subsidy Programme, 2011–2012

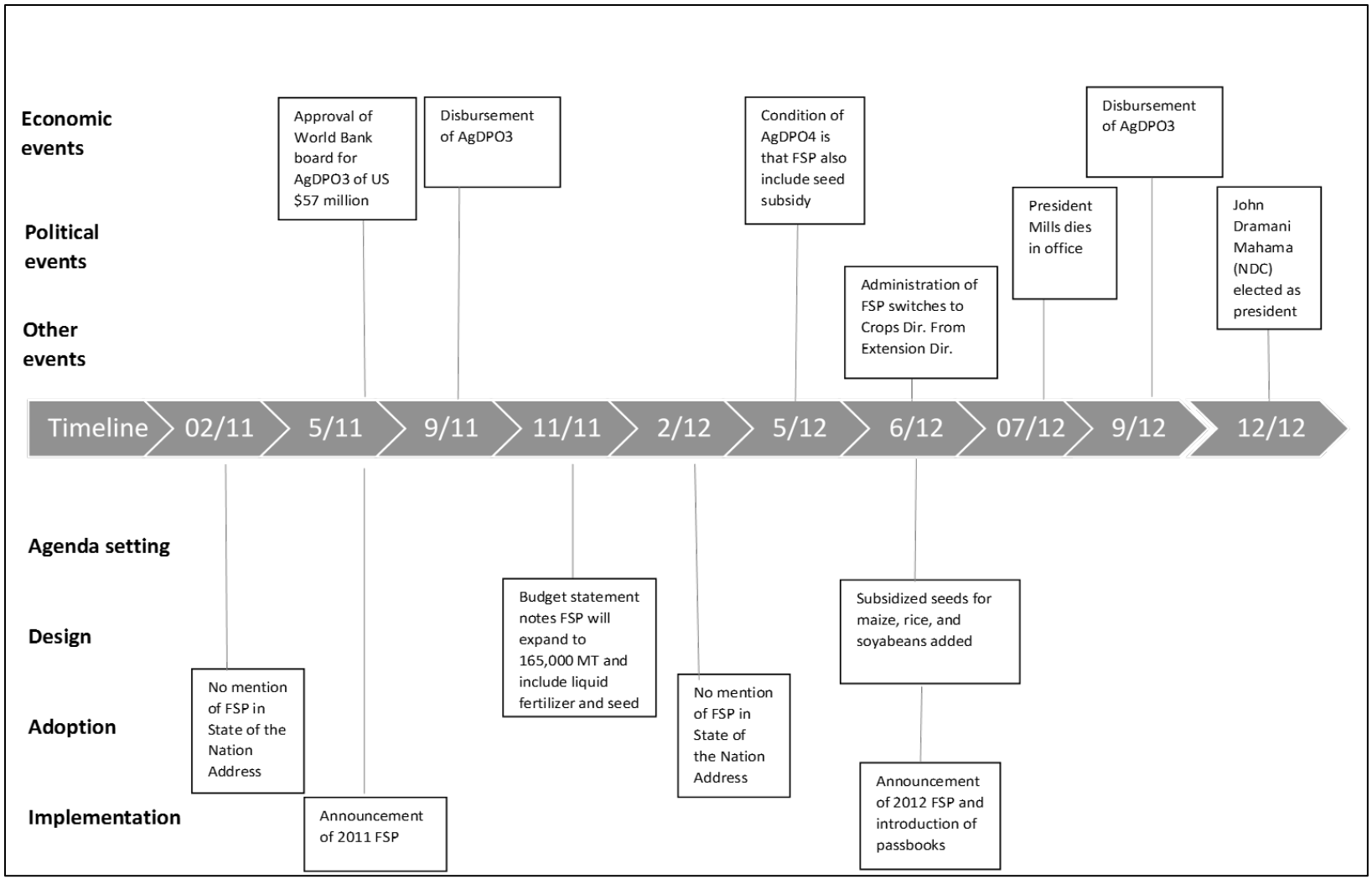


Figure 3.1d Policy chronology of Ghana's Fertilizer Subsidy Programme, 2013-2014

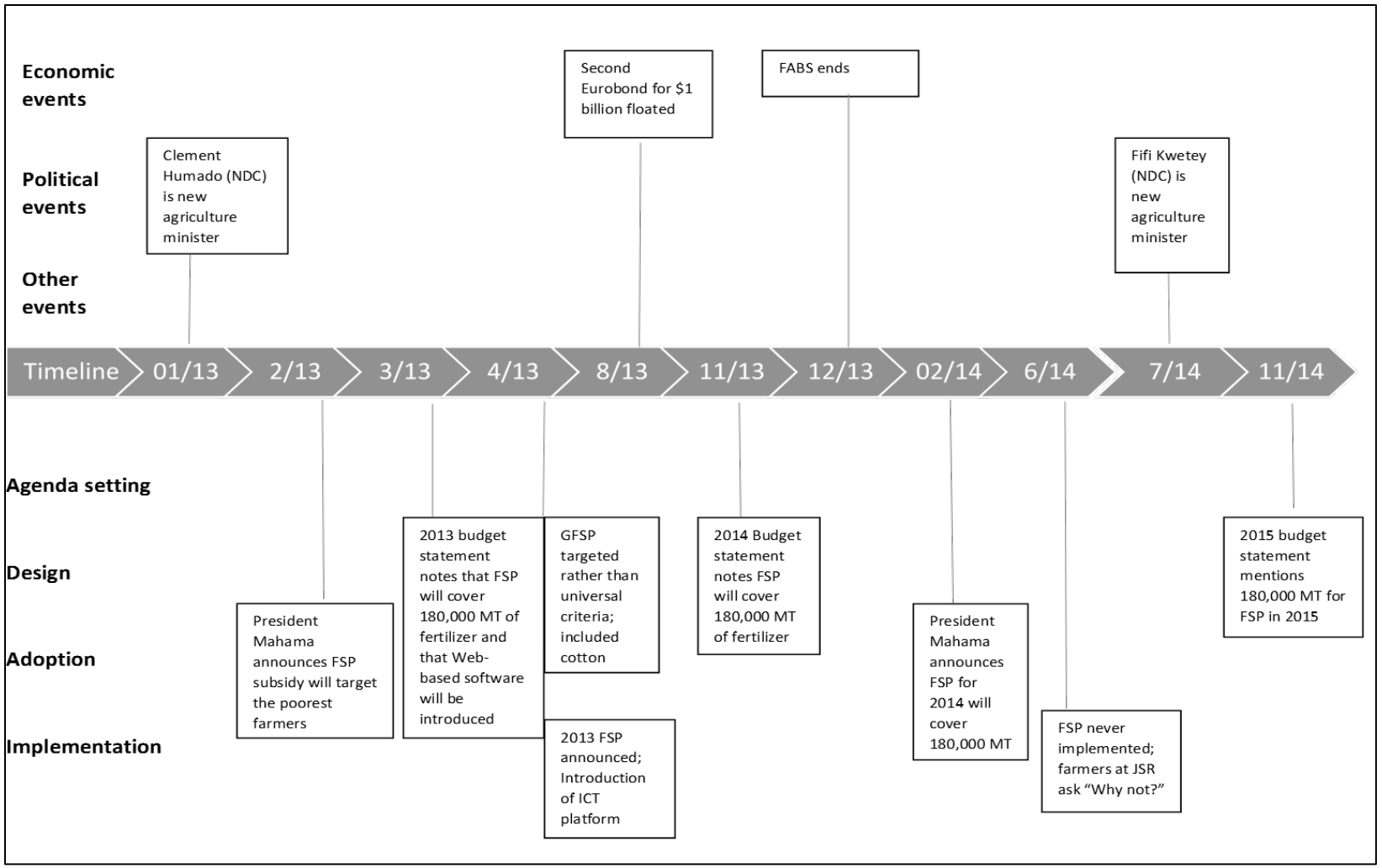
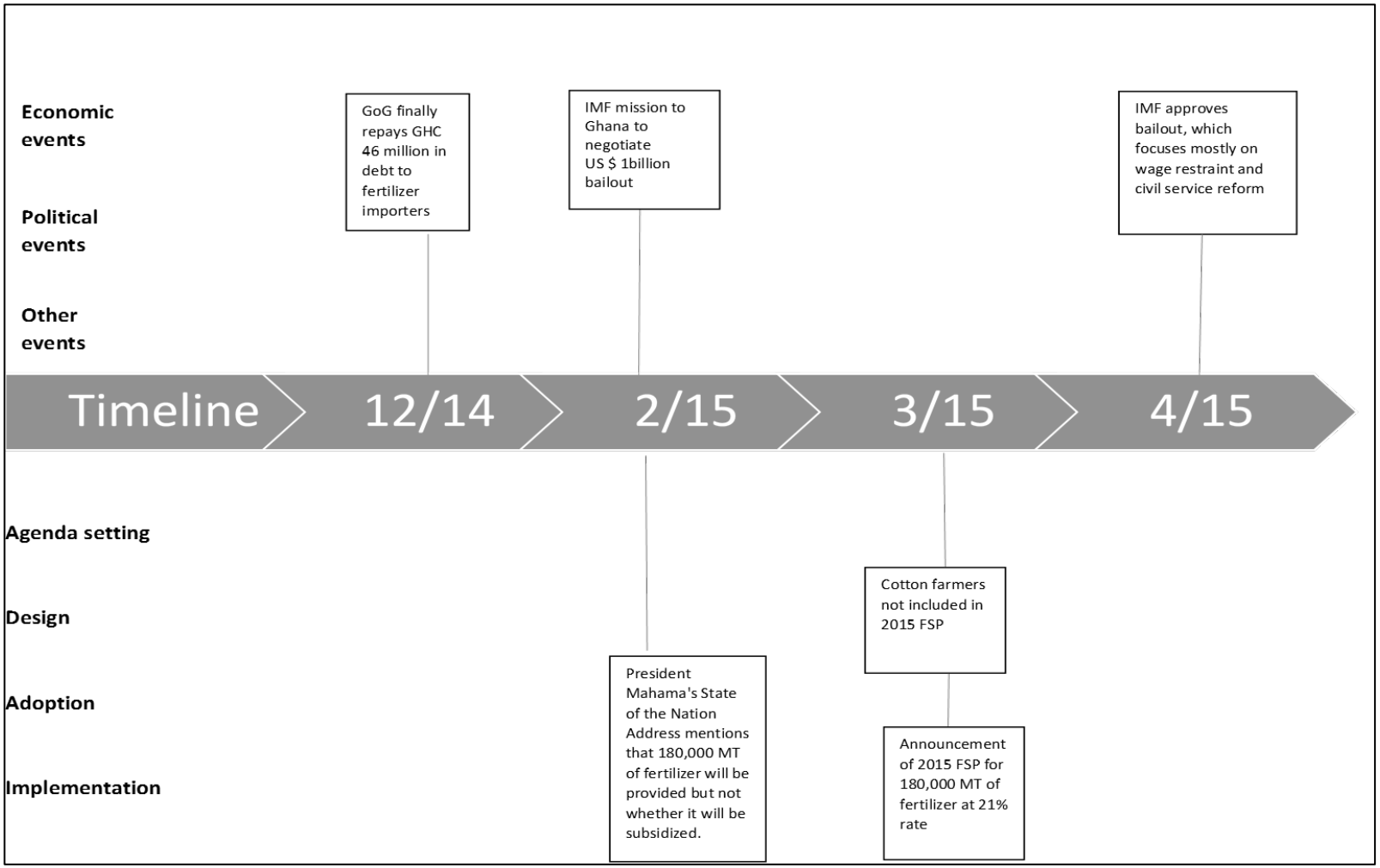


Figure 3.1e Policy chronology of Ghana's Fertilizer Subsidy Programme, 2014–2015



Source: Authors' compiliation based on fieldwork interviews, donor reports, parliamentary hansards, budget speeches, research reports, and the media.
Note: AgDPO = Agricultural Development Policy Operation; CAD = Canadian dollars; CIDA = Canadian International Development Agency; FABS = Food and Agriculture Budget Support; FASDEP II = Food and Agricultural Sector Development Policy II; GHC = Ghanaian cedis; GoG = Government of Ghana; IMF = International Monetary Fund; JSR = Joint Sector Review; MoFA = Ministry of Food and Agriculture; MT = metric tons; NDC = National Democratic Congress; NPK = nitrogen–phosphorous–potassium; NPP = New Patriotic Party; PFAG = Peasant Farmers Association of Ghana; WB = World Bank.

Food and Agriculture (MoFA)'s spending on the program climbed to as much as 53.3 percent of the ministry's total expenditures in 2012, it typically has averaged around 20 percent of expenditures in any given year (Table 3.1). While this level represents an important share of MoFA's overall budget, the share of agricultural expenditures allocated to input subsidies in Ghana since 2008 has been relatively low compared with those in countries such as Malawi and Zambia (Chirwa and Dorward 2013).

As seen in the policy chronology (Figure 3.1), the announcement of GFSP on television and radio by President John Kufuor in May 2008 was preceded by what the KM categorizes as major "focusing events." Focusing events refer to a critical juncture that concentrates attention on a particular issue as a consequence of a food crisis, economic crisis, regime change, natural disaster, or high-level event. In the case of GFSP, the focusing events were floods in 2007 and the global food and fuel crisis of 2007–2008. The floods hurt food crop production in the Northern, Upper East, and Upper West regions, while the global crisis increased the price of fertilizer imports. For instance, between June 2007 and mid-2008, the price of NPK fertilizer increased by 35 percent (Banful 2009). The fertilizer subsidies were part of a broader US$1 billion government package to mitigate the negative consequences of the crisis (IRIN 2008).

Although many countries were affected by the global food and fuel crisis, not all responded with input subsidies to spur food production (Demeke, Pangrazio, and Maetz 2008). This suggests that the focusing event was necessary but not sufficient to push the issue onto the agenda. Indeed, another key factor was that low soil fertility and low fertilizer use have been extremely "relevant policy problems" in Ghana. In the KM, the relevance criterion narrows the range of policy issues that can potentially emerge on the agenda because certain issues will have greater or lesser resonance with the broader public. In Ghana, government policy and donor documents repeatedly stress that Ghana, as of the signing of the Abuja Declaration in 2006, has had one of the lowest fertilizer use rates, estimated at 8 kg/hectare, compared with 21 kg/hectare in the rest of Africa and a long way from the Declaration's goal of 50 kg/hectare by 2015 (Benin et al. 2013; Bumb, Johnson, and Fuentes 2011; MoFA 2011, 2013).[5]

Perhaps most significantly, the policy chronology suggests that GFSP had "powerful advocacy coalitions." In the KM, these advocates can come from a range of sources, including government ministries, political parties, civil society, the private sector, the research community, foreign investors, or donor agencies. Critically, these coalitions need to be powerful in either a material, institutional, or electoral sense. Otherwise, any interest group that had a public policy concern would be able to get it onto the agenda. Banful (2009) claims that Yara Ghana Ltd., which is Ghana's largest fertilizer importer, initially approached the government about the possibility of a subsidy in September 2007, as they perceived that demand for fertilizer was decreasing owing to the price increases. However, in the 2007 budget statement for the year 2008, no mention was made by the minister of finance of a potential subsidy program. Then, six months later, in March 2008, Yara and three additional major importers (Dizengoff Ghana Ltd., Golden Stork, and Chemico) began meeting to discuss a potential subsidy.[6]

President John Kufuor was clearly another major advocate of the policy. After being elected in 2000 and reelected in 2004, he was nearing the end of his second term in office and constitutionally barred from running in the upcoming December 2008 elections. A characteristic of

[5]This rate was also repeated in interviews with MoFA staff in March 2015.

[6]Banful (2009) noted that in the first year after the GFSP began, Yara had a market share of 66 percent.

his presidency was a proclivity for launching "Presidential Special Initiatives," especially in the agricultural sector.[7] Moreover, since no incumbent candidate was running for president in 2008, the degree of competition between the two main parties, the New Patriotic Party (NPP) and the National Democratic Congress (NDC), was expected to be particularly close. The run-up to the 2008 elections was indeed characterized by huge increases in public spending, including an increase in the wage bill for public-sector workers, energy subsidies, and prestige projects (Whitfield 2010). Therefore, the tendency to make high-profile and expensive policy announcements was not unusual. By the December 2008 elections, the NPP's manifesto even promised to rapidly expand the program throughout the country in the coming years (NPP 2008), indicating that the crisis had motivated a longer-term political platform. The NPP candidate for those elections, Nana Akufo-Addo, ultimately lost to John Atta Mills of the NDC, but the latter's margin of victory was only 1 percent.

Policy Design Choices

Even after a policy is securely established within a government's agenda, there can be significant differences across countries in terms of understanding why different policy designs are pursued. This is particularly true in the case of input subsidy programs, in which design choices can vary according to the beneficiaries targeted, the modality for reaching beneficiaries, the level of subsidy, and the types of inputs that are subsidized. The KM emphasizes the importance of whether the focusing event that precipitated the policy highlighted a "pressing problem" (referring to a crisis or shock) or a "chosen problem" (referring to an issue selected by policy makers as a priority without the time pressure of a crisis) (Grindle and Thomas 1989). In addition to this distinction, the influence of ideas and beliefs from key stakeholders and the calculation of costs versus benefits impact design decisions. In understanding the design choices that shaped GFSP, one should consider both the initial design choice of a voucher scheme at the onset of the program in 2008 as well as subsequent changes.

Choice of Initial Voucher Scheme: Why a Targeted Fertilizer Subsidy Program?

As noted in the section above, the GoG was facing a focusing event in 2007–2008—a rapid rise in international prices of grains and fertilizer—that presented them with an unchosen "pressing problem" that required immediate action. Given this time constraint, the quickest way to both alleviate the rapid rise in fertilizer costs and to increase the availability of cereals in Ghana (via increased domestic food production) was to resort to a well-known policy instrument that had been used in the past: agricultural input subsidies. In crisis situations, governments often choose "off-the-shelf" options that are relatively familiar. The fact that Ghana had used input subsidies in the past, and that the Hi-Tech program for cocoa had been in effect for approximately five years, coupled with the influence of key fertilizer importers who favored a targeted subsidy program, made the choice of a subsidy obvious.

In addition, while the cost-benefit ratio of typical public-good investments (such as roads, agricultural research and development, extension) to raise domestic food production is lower than for subsidies, these investments take many years not only to implement but also to achieve increases in domestic food production. For the GoG, their cost-benefit calculation was essentially reduced to rolling out a program that would very quickly increase domestic production or else facing the political and real-welfare costs of not acting in a way that would deliver the desired outcome

[7]Kufuor went on to win the World Food Prize in 2011.

(increased food availability) as quickly as possible. The pressing nature of the problem and the costs of not delivering actual desired outcomes (or at least making a visible effort to do so) were made even more pressing by the fact that, as noted above, presidential elections were going to be held later that same year.

Since the reform and/or complete abolition of state-led input subsidy parastatals of the 1970s and 1980s, the most visible large-scale targeted fertilizer subsidy programs in Africa South of the Sahara utilized only one design, best described as a "government supply chain–targeted fertilizer subsidy" approach. As implemented in Malawi and Zambia, for example, a government parastatal physically handled fertilizer from its arrival at the port all the way to targeted farms. Even so, the GoG instead chose a more private sector–friendly approach in which the private sector physically handled fertilizer from the importation to the retailing stage. The government's role was limited to allocating the right to access subsidized fertilizer to targeted farmers (initially via vouchers distributed to targeted smallholder farmers), deciding on the types and quantities of fertilizer to subsidize (with a focus on those used for food crops), and negotiating with private-sector importers on the subsidy price.

This begs the question of why MoFA and GoG chose a private sector–friendly design instead of borrowing the approach to large-scale targeted fertilizer subsidy schemes pursued by Malawi and Zambia in the early 2000s. The private sector–friendly design chosen by the GoG was consistent with the fundamental "ideas and beliefs" of a number of key actors. First, as previously noted, Ghana had undergone complete privatization of the fertilizer sector in the 1990s, and thus, returning to a government-led approach would have been a fundamental shift away from such long-standing reforms. Second, the ruling NPP's ideology traditionally had been more supportive of private sector–led development, and Kufuor's tenure in office was known as the "Golden Age of Business."

Third, a large share of the resources for GFSP initially came from the World Bank through its agricultural-sector budget support, known as the Agricultural Development Policy Operation (AgDPO). In turn, the AgDPO intended to support Ghana's agricultural strategy: the Food and Agricultural Sector Development Policy II (FASDEP II). The World Bank had been the largest donor to Ghana's agricultural sector, accounting for half of all total donor spending on agriculture and rural development between 2006 and 2012. The next largest donors were Canada, the European Union, and the United States Agency for International Development (USAID) (Ghins 2014). The first AgDPO originally was intended to provide the GoG with US$15 million. However, once the 2008 crisis hit, AgDPO1 was amended to be increased to US$25 million to cover the costs of additional measures the government proposed, including the fertilizer subsidy policy[8]: "The increased funding was to support the government's strategy of improving access and use of improved inputs by farmers to increase their productivity" (World Bank 2013, 29). Once the World Bank became aware that the GoG/MoFA was planning to use the increased funding to roll out a fertilizer subsidy program, it interacted intensively with MoFA to ensure that the program design would be as private sector–friendly as possible (World Bank 2008).

[8]Interviews with MoFA's Policy, Planning, Monitoring and Evaluation Directorate (PPMED) and the World Bank, March 26, 2015.

From a Voucher System to a Waybill Design

In 2010, MoFA switched its fertilizer subsidy program from a voucher system to a waybill design. Under the waybill design, importers, distributors, and retailers were asked to submit receipts of the delivery of subsidized fertilizer at each stage of the supply chain: from importation to distribution to retail delivery to farmers. The government's role in this scheme changed from doing much of the monitoring of the movement of vouchers to simply approving the receipts presented to it by GFSP private-sector participants. Farmers, in turn, did not receive vouchers distributed via district agricultural extension agents but rather traveled to registered sales agents in their districts to obtain their bags of fertilizer (and seed in those years when it was included in the program).

Several factors led to this design change. First and foremost appears to have been the "cost-benefit calculation" of MoFA. This analysis found that the distribution of vouchers and oversight of their delivery required too much MoFA staff time, especially that of extension agents, who complained of not having time to do their intended jobs because of their role in distributing vouchers and approving their redemption by farmers. The waybill approach thus shifted much of the administrative duty of accounting for the movement of subsidized fertilizer to the private sector.

Another factor in the design change was that the new party in power, the NDC, had new "ideas and beliefs" about the program design and claimed that the voucher scheme was not reaching enough farmers.[9] Even as early as 2009, international grain and fertilizer prices had fallen, and thus, the problem of domestic grain availability was no longer a "pressing problem" but rather a "chosen problem." The program had already helped focus attention on the challenges of soil fertility in Ghana and underinvestment in the input sector. At the same time, GFSP was no different than most subsidy programs, which create their own political momentum and become very difficult to reverse once in place. Indeed, the late President Mills announced in the annual State of the Nation Address in 2010 that GFSP that year would be available to *all* farmers[10]: small, medium, and large (Table 3.2).[11]

At the same time, the MoFA minister, Hon. Kwesi Ahwoi, felt that a change in the program was needed, creating space for engagement with the donor and research communities.[12] The donor Agricultural Sector Working Group (ASWG) was particularly influential via the World Bank. When a delayed disbursement of Ghana's second AgDPO resulted in delayed payments to importers in 2009, the World Bank recognized that it had a good deal of leverage to influence thinking on revisions to the program design.[13]

[9]Interview with the World Bank, March 25, 2015.

[10]Although the GoG publically claimed that GFSP fertilizer would be available for "all" farmers, this did not mean that GFSP shifted from being a targeted subsidy program to a universal subsidy, because the quantities of subsidized fertilizer were still limited. Rather, there was no longer any official "targeting" criteria for receiving GFSP fertilizer except for the implicit targeting of food crops. GFSP provided subsidies only for fertilizers such as diammonium phosphate (DAP), nitrogen–phosphorous–potassium (NPK), and urea, which are used primarily on food crops and are not ideal for Ghana's biggest cash crop, cocoa.

[11]See "State of the Nation Address 2010: Partners in Vision," February 10, 2010. http://www.ghanaweb.com/GhanaHomePage/NewsArchive/artikel.php?ID=177446.

[12]Personal communication with Shashi Kolavalli, Ghana Strategy Support Program, IFPRI, May 2015.

[13]Interview with the World Bank, March 25, 2015.

Table 3.2 Overview of eligibility for Ghana's Fertilizer Subsidy Programme, 2008–2015

Year	Eligibility criteria
2008	Smallholder food crop farmers
2009	Smallholder food crop farmers
2010	All categories of food crop farmers: small, medium, and large
2011	All categories of food crop farmers: small, medium, and large
2012	All categories of food crop farmers: small, medium, and large
2013	• Smallholders cultivating maize, rice, sorghum, or millet, with priority given to the savanna area • Farmers registered in outgrower schemes with nucleus farms or companies • Women
2014	Program hiatus
2015	• Smallholders cultivating maize, rice, sorghum, or millet • Cotton farmers involved in nucleus farms in the north • Women

Source: Banful (2009); Benin et al. (2013); MoFA (2011, 2013, 2015).

New information about program performance from the research and civil society communities provided some empirical support to make the case for changing from vouchers to waybills (and from targeting the poor to having no targeting criteria). Two reports by IFPRI and the Peasant Farmers Association of Ghana (PFAG) (Banful 2009; Ghartey Associates 2009), both based on primary data collection, found evidence of inferior implementation of the intended targeting criteria for vouchers. That is, vouchers were not being received and/or used primarily by farmers who met the intended criteria of being small-scale and/or relatively poor. Another report by the International Fertilizer Development Center (IFDC) and IFPRI (2009) based on an agricultural-input dealer survey revealed that a large proportion of the *costs* associated with delivering fertilizer to rural areas was linked to transport, wholesaling, and retailing. These findings prompted the idea of having a subsidy that focused on covering these costs (that is, a waybill system). These reports were highly influential among members of the MoFA and the ASWG.[14]

Minor Changes to the Initial Waybill Design

Since 2010, GFSP has continued with the waybill design, but the rationale given for continuing the subsidy has not always been consistent from year to year, or even among different government actors in a given year. Some minor changes have been made to the waybill design, such as the addition of a farmer passbook distributed to farmers by extension agents. The passbook is intended to reduce the likelihood of smuggling by allowing only registered farmers to purchase subsidized fertilizer. However, according to some key informants, smuggling of GFSP fertilizer to neighboring countries has remained a problem even after the switch to the waybill and passbook system.[15] Another change was the addition in 2012 of subsidized maize, rice, and soybean seeds to

[14]Interview with the World Bank, March 25, 2015.

[15]Although the passbook was intended to reduce smuggling, various key informants reported that, in practice, smuggling is still a problem with the waybill and passbook system. For example, waybill receipts at any stage in the chain can be forged, and whether a farmer receives a voucher or presents a passbook, the farmer may physically acquire the fertilizer, sign a piece of paper indicating receipt, and yet turn around and sell that fertilizer to a trader who then smuggles it. As various informants noted, the underlying

GFSP. This change partially reflected the "ideas and beliefs" of the World Bank, which as part of the disbursement criteria for the AgDPO3, successfully advocated for this addition (Figure 3.1).

Another key addition to the subsidy program was the piloting of an electronic voucher scheme in 2013 to alleviate the burden of dealing with so much paperwork involved in the waybill scheme and to better track the movement of subsidized fertilizer from the port to farmers' hands. With the help of the West Africa Fertilizer Program, an attempt was made in 2013 to launch a Web-based system, but this was not particularly successful since the transmission of data required Internet access, which is not readily available in more remote areas of the country in the north.16 For the 2015 season, there were further attempts to launch such a system, known as Imagad, but with greater reliance on SMS technology, borrowing from the diffusion of ideas from Nigeria's fertilizer subsidy program.17 While many stakeholders who were interviewed support the addition of an electronic system to reduce the administrative costs of the program, it is not clear yet how well it would work if scaled up.

GFSP Adoption: The Power of the Presidency

How policies are adopted often depends not only on the nature of the policy but also on the underlying political and institutional context. The KM aims to streamline all these potential contextual factors into three key elements that appear to drive policy adoption. These include "veto players" (that is, political actors with the leverage to block or push through policy and whose assent is necessary for change to occur), "relative power of proponents versus opponents" vis-à-vis the veto players, and "propitious timing," which shapes when policies are adopted.

In Ghana, development policies, including Ghana's Shared Growth and Development Agenda (GSGDA) and agricultural policies such as FASDEP II, typically require solely executive approval from cabinet members. However, donor funding for agriculture is first approved by the cabinet and then needs to be voted on by parliament, especially the latter's finance and agricultural committees. As the agricultural policy mapping figure illustrates (Figure 3.2), the annual budget process, based on a January–December fiscal year, is also an interactive process among executive ministries, departments, and agencies (MDAs) and parliament.18 An exception to this process is COCOBOD, which operates on an October–September budget calendar (Kolavalli et al. 2010).

economic incentive for smuggling is the same whether the GFSP uses vouchers or waybills and passbooks. That is, the price of subsidized fertilizer in Ghana is far enough below commercial fertilizer prices in surrounding countries that traders are able to buy subsidized GFSP fertilizer from farmers, pay for the cost of shipping the fertilizer to and across the border, and still make a profit. That said, there are no verifiable measures or estimates of the amount of fertilizer smuggled in any given year in Ghana, only anecdotal evidence from supply-chain participants that this has occurred under both the voucher and waybill and passbook systems. The lack of evidence of how much subsidized fertilizer is actually received and used by farmers in large part results from the lack of representative survey data on Ghanaian farm households at a regional or national level. Through such data, estimates of "leakage" or "diversion" of subsidized fertilizer away from intended recipients and to third parties (other farmers, traders, exporters) could be calculated in the same way as has been done in Malawi (Holden and Lunduka 2012) and Zambia (Mason and Jayne 2013).

[16]Mason and Jayne 2013

[17]Interview with African Fertilizer and Agribusiness Partnership (AFAP), March 24, 2015.

[18]Interviews with MoFA's PPMED, March 26, 2015, and members of the parliamentary agricultural committee, March 26–27, 2015.

Figure 3.2 General agricultural policy process in Ghana

National development framework
Agricultural framework
Agricultural investment plan

Ghana Shared Growth and Development Agenda II (2014-2017)
Food and Agriculture Development Policy II (FASDEP II)(2009-2015)
Medium Term Ag Sector Investment Plan (METASIP, 2011-2015)

GENERAL ACTIVITIES			KEY DONORS	KEY GOVERNMENT ACTORS													
Activity	**Steps**	**Action *(month, if applicable)***	**ASWG Donors**	**Executive *(corresponding agricultural-related mandates)***								**Legislative**			Auditor	Attorney
				Office of the President	Cabinet	MST	MOTI	MLNR	MLGRD	MoFA	MoFEP	Full Parliament	Finance Committee	Ag Committee	General	General
						(CSIR & NARS)	*(Selected export crops)*	*(Forestry)*	*(District agricultural activities)*	*(Non-cocoa crops, livestock, fisheries, **FSP**)*						
Annual Budget Process	1	Initiate macroeconomic review *(Jan-Mar)*									X					
	2	Development of strategic plans *(Apr-May)*				X	X	X	X	X						
	3	Policy hearings *(Aug)*				X	X	X	X	X	X					
	4	Submission of draft budget to MoF *(Sept)*				X	X	X	X	X						
	5	Submission of appropriation bill to Parliament *(Oct)*									X					
	6	Hearings between MDAs and Parliamentary committees *(Nov.)*				X	X	X	X	X			X	X		
	7	Submit final budget to MoF *(Nov/Dec.)*				X	X	X	X	X						
	8	Presentation of budget to Parliament for a vote *(Nov./Dec)*									X					
	9	Parliament votes *(Nov/Dec)*										X				
	10	President accedes *(Dec)*		X												
Donor loans	1	Negotiations over loan	X							X						
	2	Executive approval over the terms			X											
	3	Review by relevant committees											X	X		
	4	Voted in Parliament										X				
	5	Report presented to Parliament 6 months after end of fiscal year on use of public accounts monies (including donor funding); triggers next round of donor disbursements													X	
	6	Option to prosecute financial transgressions in audit reports														X

Financial Framework

Medium Term Expenditure Framework (MTTEF)

Source: Adapted from Kolavalli et al. (2010) and fieldwork interviews.
Note: COCOBOD's budget cycle differs from all the MDAs and runs from October to September each year (Kolavalli et al. 2010). COCOBOD = Ghana Cocoa Board; CSIR = council for scientific and industrial research**;** FASDEP II = Food and Agricultural Sector Development Policy II; FSP = Fertilizer Subsidy Programme; MDAs = ministries, departments, and agencies; METASIP = Medium Term Agriculture Sector Investment Plan; MLGRD = Ministry of Local Government and Rural Development; MoFA = Ministry of Food and Agriculture; MoFEP = Ministry of Finance, Economics and Planning; MOTI = Ministry of Trade and Industry; NARS = National Agricultural Research System.

A number of institutional features shape the degree of power and responsibility accorded to Ghanaian policy makers. First, the 1992 Constitution accords members of parliament (MPs) only oversight powers to scrutinize public expenditures and to give their input into amending and approving the national budget each year. Second, with respect to the budget in particular, Article 108 claims that parliament can only decrease or ask MoFEP to redistribute funds across sectors rather than propose increased public spending (Stapenhurst and Alandu 2009); therefore, it cannot really challenge the executive branch's policy priorities (McKie and van de Walle 2010).[19] Third, as in much of Africa, the presidency in Ghana has proactive rather than reactive powers, meaning that he or she has the authority to take unilateral action without legislative permission to change policy. As observed by Asare and Prempeh (2010, 196): "Notably, every single piece of proposed legislation *introduced* in, or enacted into law by, the Parliament of the Fourth Republic (that is, since 1993) has been introduced by and on behalf of *His Excellency* the President" (emphasis in original). Since the onset of multiparty democracy in 1992, the president's party, whether the NPP or NDC, has always had a majority in parliament, further reducing the likelihood of dissent from the legislative branch. Fourth, since cabinet members are often (but not always) selected from among MPs, the latter face a challenge of dual accountability: On the one hand, they have a responsibility to their constituents and of being a check on the executive branch; on the other hand, they are key players within that executive branch.

These details help explain why GFSP was initially adopted in 2008. Because parliament cannot overturn policies but only provide oversight regarding their implementation, MPs lacked veto power. As already noted, President Kufuor was not only a proponent of GFSP but also the main "veto player," since the office of the presidency in Ghana has extensive policy-making powers. As one interviewee noted, "Our democracy is such that if the President says we want to invest in more roads (for instance), that becomes a policy imperative that year."[20] The short lag between adoption and implementation—approximately three months after former MoFA minister Ernest Debrah launched the program—indicates how strong the presidential role was.

The short time between when GFSP was announced and quickly rolled out hindered the ability of opponents to mobilize in any concerted way, ensuring that the relative financial or political "power of proponents versus opponents" was weighted heavily toward the former. Even though an opposition coalition known as the Committee for Joint Action called the policy "a badly conceived public relations gimmick which is bound to fail" (IRIN 2008), their words had little resonance among a population that was suffering from a crisis. Although ministries of finance typically oppose unplanned spending, the crisis situation and the AgDPO1 from the World Bank meant that little significant resistance emerged from this quarter at the time. As an informed observer from the World Bank noted, "I think they [MoFEP] were supportive initially, especially given the crisis at the time. And also, they were the ones negotiating the DPO [development policy operation] with us and knew that some of that money would be used for FSP [the fertilizer subsidy program]."[21]

A key proponent of fertilizer subsidies was the PFAG. Established in 2005 and with a membership of approximately 38,000 individuals as of 2015, PFAG has long lobbied for the reintroduction of subsidies to improve the livelihoods of farmers in the wake of structural

[19]This was confirmed in interviews with the chair of the agricultural parliamentary committee, March 27, 2015.
[20]Interview with Ministry of Finance and Planning, March 27, 2015.
[21]Phone interview with World Bank representative, May 9, 2015.

adjustment policies.[22] As a representative of rural smallholders, who still constitute the majority of voters in Ghana, such proponents are electorally important.

In addition, the timing of the policy announcement was "propitious" for a few reasons, highlighted in the policy chronology (Figure 3.1). First, only a few weeks before the announcement in May 2008, the World Bank submitted to its board a first round of AgDPOs, which ultimately proved a critical source of resources for GFSP. Second, as noted earlier, the GFSP announcement was made only seven months before the 2008 presidential elections, which enabled the ruling NPP to show it was taking visible action to tackle the crisis. Third, the finalization of FASDEP II in mid-2007 and cabinet approval for it in July 2008, when Minister Debrah announced the details of the program, helped routinize fertilizer subsidies within the annual budget process. This provided some institutional legitimacy since two of the six pillars of FASDEP II are "Increased Growth in Incomes" and "Science and Technology Applied in Food and Agriculture Development" (MoFA 2007).

In the subsequently drafted Medium Term Agriculture Sector Investment Plan (METASIP), which is the investment plan for FASDEP II, "targeted grants and subsidies on inputs to poor farmers" are mentioned as a means of increasing farm-level production (MoFA 2010, 27). Around the same time, Ghana's main poverty reduction and development strategy, the GSGDA, was drafted that indicated one option for agricultural modernization to include "Provide selective subsidies for the procurement of improved technologies for poor peasant farmers and women" (NDPC 2010, 144). As the policy chronology highlights (Figure 3.1), GFSP is thereafter mentioned regularly in yearly budget statements presented to, and passed by, parliament. Members of the agricultural parliamentary committee confirmed that all agricultural programs, including input subsidies, are part of the national budget that parliament is asked to approve. [23]

The Ebbs and Flows of GFSP Implementation: Follow the Money

Only a subset of policies that are adopted are ever subsequently implemented, and the gap between intended and actual implementation can often be large. The KM suggests that implementation requires a combination of "institutional capacity," "requisite budgetary allocations," and continued "commitment of policy champions." When any of these factors is insufficient, policy implementation can fall far short of expectations.

As noted earlier, the initial year of GFSP (2008) saw its relatively quick implementation after emerging on the policy agenda, and therefore the "commitment of policy champions" remained high. This commitment was reinforced by the fact that the international price of fertilizer did not start falling until October 2008, a few months after GFSP had already started (Bumb et al. 2011).

This commitment was certainly reinforced by the availability of "requisite budgetary allocations" at the onset of the program. Only two donors, the World Bank and Canada, have provided agricultural budget support to Ghana in recent years.[24] This was long the preferred modality of MoFA: helping to consolidate disparate donor agricultural projects while providing a policy matrix with clear goals to guide disbursements.[25] Consequently, the resources that were

[22]Interview with PFAG, March 27, 2015.

[23]Interviews with Honorable Dr. Owusu Afriyie Akoto, Honorable Gabriel Essilfie, and Honorable William Agyapong Quaittoo, March 26–27, 2015.

[24]Eleven donors have been involved in Multi-Donor Budget Support (MDBS), but this general budget support has been on hold since 2013, when the IMF claimed certain macroeconomic criteria had not been met.

[25]Interviews with International Fund for Agricultural Development (IFAD), World Bank, and MoFA's PPMED, March 25–26,

committed in June 2008 by the World Bank through the AgDPO1, and that were disbursed two months later through the AgDPO1, proved critical to GFSP. Likewise, Canada's second tranche of agricultural budget support, known as Food and Agricultural Budget Support (FABS), became operational in 2009.[26] By 2010, sectoral budget support constituted approximately half of all the aid disbursements for agriculture (Benin et al. 2014). According to Ghins (2014), 70 and 80 percent of expenditures on GFSP were funded by agricultural-sector budget support in 2011 and 2012, respectively.

Although this funding was a necessary condition, the "institutional capacity" of government was also instrumental in facilitating implementation and facing the types of challenges that emerged with that implementation. Ghana's relatively developed decentralization process allowed for quick implementation of the initial voucher design through Regional Agricultural Development Units (RADUs), District Agricultural Development Units (DADUs), and District Agricultural Extension Agents (DAEAs). Yet as has been well documented elsewhere, the quick rollout hampered clear transfer of information to these implementing actors on how the vouchers were supposed to be distributed. The dearth of adequate DAEAs relative to the farm household population they were serving, their distance from farmers exacerbated by insufficient transport, and the lack of oversight and accountability among implementing actors were also problematic. Besides transferring the vouchers from headquarters in Accra to the DAEAs, the DAEAs and DADUs had to sign and validate vouchers, and retailers had to scramble to redeem the vouchers' value from importers, who in turn had to redeem their value from MoFA. These challenges and the cumbersome level of paperwork all hindered the efficacy of the program, prompting the switch to the waybill system in 2010 (Banful 2009; Benin et al. 2013; Bumb et al. 2011; Ghartey and Associates 2009; Wanzala-Mlobela et al. 2013).

The implementation of the waybill system from 2010 onward has been described in detail elsewhere (Benin et al. 2013; Wanzala-Mlobela et al. 2013). The main contours of implementation are depicted in the policy mapping flow chart presented in Figure 3.3. For instance, once the program is announced each year by the cabinet, which is presided over by the president, authority for implementing it is given to MoFA. Since 2012, the Crops Directorate has been in charge of GFSP.[27] It is responsible for announcing the tender process in the newspaper, establishing an evaluation committee to review the importing companies that apply, awarding contracts to the selected companies, negotiating the subsidy prices, and determining the regional quotas allocated to the importers.[28] The national coordinator of GFSP within the directorate also has the task of ensuring that every district has the correct waybill forms and farmers' passbooks.[29]

As described in the section "From a Voucher System to a Waybill Design" above, after the selected companies import the fertilizer and clear the ports, they deliver it to their distributors in the regions who pass it on to the retailers. Food crop farmers can then go and purchase fertilizer (and seed) during the main production season from a retailer, using their passbook for identification. The system is intended (at least in theory) to ensure that the beneficiaries of the program are legitimate farmers and to reduce the potential for cross-border smuggling of subsidized fertilizer.

2015.

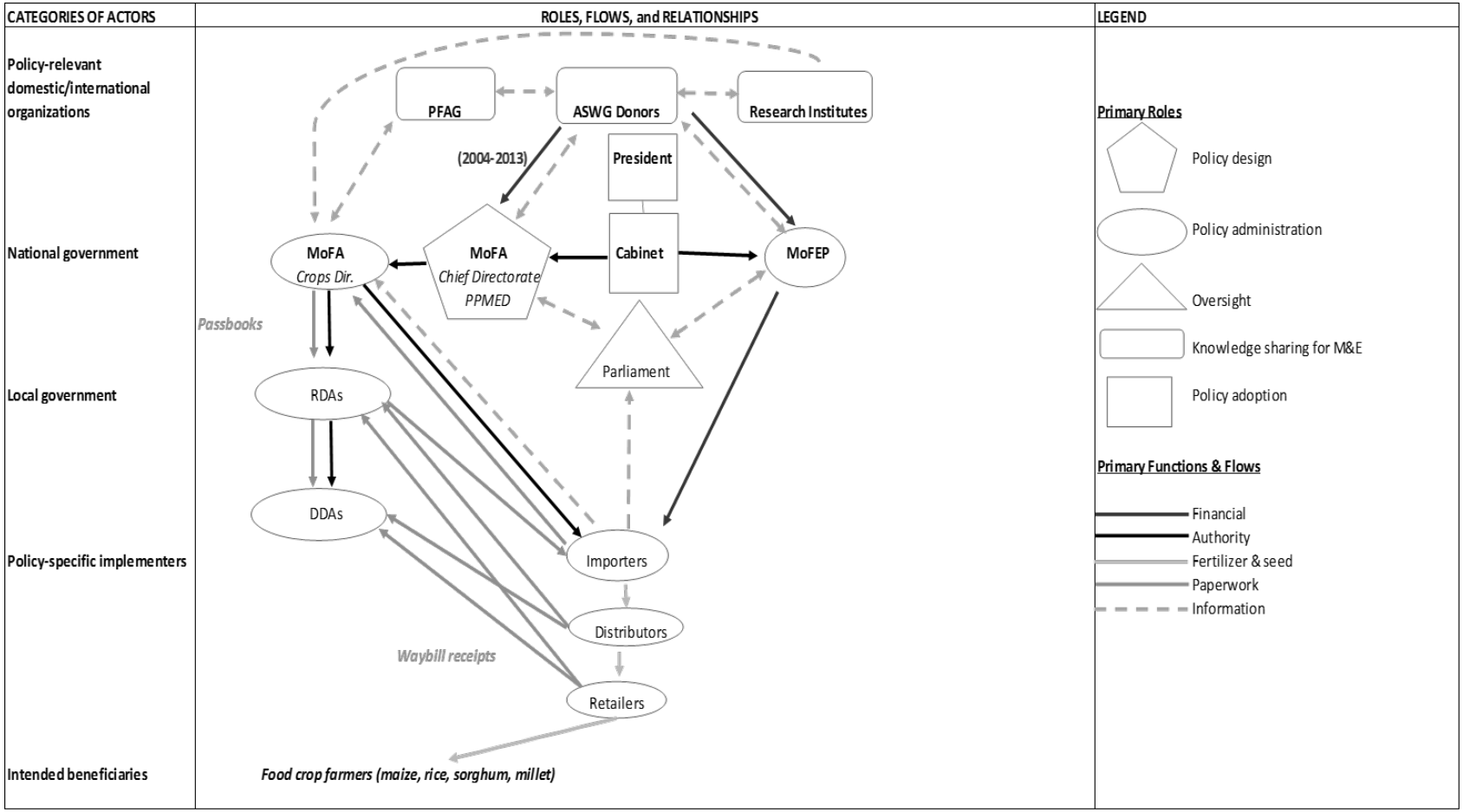
[26]Canada provided CAD 85 million between 2004 and 2008 in budget support. The 2009–2013 FABS amounted to CAD 110 million (interviews with CIDA food security officers, March 23, 2015).

[27]Prior to 2012, the Extension Directorate was responsible.

[28]Interview with GFSP National Desk Officer, MoFA, March 24, 2015.

[29]Interview with GFSP National Desk Officer, MoFA, March 24, 2015.

Figure 3.3 Policy mapping of Ghana's Fertilizer Subsidy Programme (under the waybill system)



Source: Authors' compilation based on fieldwork interviews

Note: ASWG = Agricultural Sector Working Group; Crops Dir. = Crops Directorate; DDAs = district directors of agriculture; M&E = monitoring and evaluation; MoFA = Ministry of Food and Agriculture; MoFEP = Ministry of Finance, Economics and Planning; PFAG = Peasant Farmers Association of Ghana; PPMED = Policy, Planning, Monitoring and Evaluation Directorate; RDAs = regional directors of agriculture.

Myriad paperwork is needed to reconcile fertilizer deliveries and payments, as detailed in Benin et al. (2013) and Wanzala-Mlobela et al (2013). Briefly, four main forms (A, B, C, and D) must be completed in order for subsidy payments to be received. These are filled out by all the distributors and retailers who sold to farmers and countersigned by the DADUs and the RADUs. These sales returns are then aggregated by the importers at the regional level each month and sent to the Crops Directorate for review. Thereafter, MoFA has an internal audit and gives authority to MoFEP to release payment to the importers. Companies can make claims only on the fertilizer that was sold, not on the total amount of fertilizer that was imported.[30] During the 2008–2012 period, MoFEP utilized predominantly agricultural budget support to pay the importers.

A key observation from Figure 3.3 is the direction of information flows in the process. Distributors and retailers are largely excluded from providing views on the subsidy rate (and other design aspects) with MoFA in any given year prior to MoFA making those decisions. Thus, information flows from importers to MoFA but not from distributors/retailers. At the same time, while MPs have noted being approached by importing companies who shared information with them regarding the lateness of GoG payments to the importers, the overwhelming consensus is that the ASWG does not engage closely with the food and agricultural committee in Parliament.[31] Furthermore, while both donors and importers have long been important actors in this policy, they each appear to pursue bilateral engagement with MoFA rather than engaging with each other. Although Figure 3.3 illustrates that the parliamentary agricultural committee plays only an oversight role in this process, after receiving letters from constituents, its members pushed MoFA to explain why the 2014 program was not being implemented. They subsequently requested more information from MoFA and MoFEP regarding whether or not the 2015 program would be subsidized.[32]

There are a few oft-repeated problems with the annual implementation of GFSP. One is the late announcement of the program and, by extension, the late delivery of subsidized fertilizer (and seed) to farmers, which is a problem mentioned in almost every evaluation of the program (for example, Banful 2009; Benin et al. 2013; Ghartey and Associates 2009) and even by Ghana's Audit Office (Missah et al. 2013). To MoFA's credit, since 2008, the length of time between the announcement and the beginning of the farming season in February has gradually increased (Figure 3.1), but at no time has the program ever preceded the start of the planting season. Many interviewees noted that they were unaware when the 2015 GFSP would be announced, or whether the 2015 program would even happen.

Even more problematic is the volatility in the announcement time each year, which hinders the ability of importers to procure fertilizer for both the subsidized and commercial markets in a cost-minimizing way. All fertilizer in Ghana is imported, and the earlier that importers are able to determine likely fertilizer demand for the upcoming season, the easier it is for them to coordinate their international shipping orders in a way that minimizes their cost per MT.

Because importers are not told their quota for subsidized fertilizer under GFSP until approximately six weeks before the onset of the planting season, this delay sometimes forces them to pay higher shipping costs per MT in order to get the fertilizer to port in enough time to ship it inland in time for the planting period.[33] And, because some of the importers currently operating in Ghana are not large scale, they may need to wait to discover how much fertilizer MoFA will allow

[30]Interview with GFSP National Desk Officer, MoFA, March 24, 2015.
[31]Interview with World Bank and Honorable William Agyapong Quaittoo, March 26, 2015.
[32]Interview with Honorable William Agyapong Quaittoo, March 26, 2015.
[33]Interviews with two major fertilizer importers in Ghana, March 25 and 26, 2015.

them to sell at a subsidized rate before they place an order for commercial fertilizer. This means that their commercial fertilizer may also be imported at a higher shipping cost per MT than would have been the case if they knew their subsidized quota several more months in advance of planting season. In fact, some smaller importers may need to bundle their orders for fertilizer they intend to sell to both the subsidized and commercial end markets in Ghana into one shipment, and perhaps even coordinate such a shipment with other importers, in order to minimize their shipping costs per MT.

The late announcement of key program information leads to not only late importation of GFSP fertilizer, but late delivery of GFSP inputs to recipient farmers, which can result in significant yield losses for them. For example, the late announcement of the program results in late delivery of subsidized fertilizer, and given the relatively large share of GFSP fertilizer in total fertilizer use for maize or rice, any such delay for maize/rice production can result in distortions of smallholder fertilizer purchasing behavior, potential reduction in their commercial fertilizer demand, and delay in their application of either subsidized or commercial fertilizer. Together, these events inevitably result in lower yields than could have been achieved if subsidized fertilizer were delivered on time, that is, several weeks before main season planting.[34] It follows that if a large enough group of smallholders in a given region are waiting for subsidized fertilizer to arrive to see whether or not they can obtain some of this (before potentially buying fertilizer at the commercial price), this might have negative consequences for distributor and retail sales of fertilizer for use on maize and rice.

On a related theme, there is a perceived lack of transparency regarding MoFA's determination of key elements of the program, such as the pan-territorial price of a given type of fertilizer or seed and quotas of fertilizer or seed assigned to specific importers and regions. For example, the pan-territorial subsidy is based on three components: (1) the lowest price quoted by importers bidding for GFSP fertilizer quotas for their cost of importing a given type of program fertilizer and paying all domestic port charges; (2) the cost of transporting program fertilizer from importer warehouses at the port to wholesaler (distributor) warehouses in regional capitals; and (3) the storage and other costs of distributors as well as retailers, who are expected to deliver subsidized fertilizer to areas cultivated by farmers with vouchers or passbooks (Benin et al. 2013; MoFA 2011).

Only rarely have the price bids by each company (for importation) as well as expected transport costs to regional capitals been published in the GFSP implementation bulletin.[35] As indicated in the flow of information illustrated in Figure 3.3, the process of determining the price components of subsidized fertilizer involves only MoFA and importers, which implies that distributors and retailers are not included in negotiating the margin that they will receive for covering their financial costs of providing wholesale and retail services.[36] Subsequently, distributors claim that this margin is not sufficient for them to cover both their wholesaling costs and the cost of hiring a retail agent to deliver subsidized fertilizer (at the fixed subsidy price) to smaller towns close to where farmers are known to have passbooks. In fact, a representative from the distributor/retailer

[34]For farmers who would apply fertilizer to their maize or rice only if they managed to obtain subsidized fertilizer, the longer the delay between their maize/rice planting and application of fertilizer, the lower their grain-to-fertilizer response rate, and thus the lower their yields. For farmers who are capable of and willing to purchase commercial fertilizer for use on maize or rice, a delay in subsidized fertilizer delivery to their region can also be detrimental to their yields, as they may wait to see whether they are able to obtain subsidized fertilizer before purchasing commercial fertilizer. Thus, if subsidized fertilizer is delivered after planting has started, whether or not these farmers end up receiving subsidized fertilizer, it may well result in them applying fertilizer later than required to get optimal response from fertilizer application.

[35]For instance, MoFA (2011) is an exception and provided the different price bids of the various importers.

[36]Noted by Benin et al. (2013) and confirmed in our interview with GAIDA. For example, the most recent subsidy price includes a margin for distributors/retailers of only GHC 2 per bag, which distributors/retailers claim is insufficient for them to cover the cost of delivering subsidized fertilizer to villages.

Ghana Agri-Input Dealers Association (GAIDA) claimed that while GFSP has succeeded in raising smallholder demand for fertilizer use on maize and rice (especially in the north), at this point, distributors/retailers would prefer no program to the current one. Because the margin they receive for participating is not large enough for them to pay retailers to deliver fertilizer at the subsidized price to villages, they believe that in the absence of a subsidy, they believe their sales and profits would be higher because there would be more demand at the village level for commercial fertilizer.[37]

This lack of transparency has negative consequences for all members of the fertilizer supply chain, calling into question the government's intention of promoting market-led development.[38] Since distributors sell subsidized fertilizer only from their warehouses, farmers bear the costs of transport to and from these warehouses (which may be substantial, as it is a less efficient system than if retailers brought fertilizer to villages) and of searching for a warehouse that has subsidized fertilizer in stock. Furthermore, the process by which MoFA determines the quota allocations of GFSP fertilizer and seed for each importer to each region appears completely opaque. Importers who were interviewed do not appear to know how the allocations are made and have suggested that the very existence of regional quotas undermines incentives to create private-sector competition.[39]

Finally, the GoG has been increasingly slow to reimburse importers after the latter submit their paperwork. Timely payment to importers began to slip dramatically with the 2012 program and continues into the present. In fact, it was not until December 2014 that the GoG was able to repay importers GHC 46 million, out of a total GHC 64 million, in debt from the 2012 and 2013 seasons (Vinorkor 2014).

These ongoing challenges both reflect and influence the "requisite budgetary allocations," "institutional capacity," and "commitment of policy champions" illustrated in the KM. As a result of the 2014 hiatus in GFSP caused by the problem of arrears to the importers, it is clear once again that sufficient budgetary allocations are a necessary condition for implementing the program. The policy chronology in Figure 3.1 indicates that the last AgDPO was disbursed in September 2012. Thereafter, MoFEP communicated to the relevant donors that it preferred to receive only general budget support because sectoral budget support distorted MoFEP's hold on resources.[40] The planned AgDPO5 was therefore canceled. Just as GFSP's start coincided with an increase in agricultural budget support, the delay in payments to importers at the end of the 2012 season and continuing into 2013 was undoubtedly tied to the end of this support, especially from the World Bank (World Bank 2013).[41]

Even in years when there were sufficient budgetary resources for the program, "institutional capacity" has contributed to some of GFSP's implementation challenges. Overall, the

[37]GAIDA also noted that retailers who are not affiliated with an importer are not allowed to participate in the program; thus, a large number of retailers feel that the program gives an unfair market advantage to "participating retailers." On the other hand, importers may have good reason not to sell their product through some retail agents if they feel that they are not trustworthy.

[38]First, if farmers must have access to transport and invest time searching for subsidized fertilizer, this implies that resource-poor farmers are at a disadvantage in terms of accessing subsidized fertilizer (yet those are the farmers who have been the intended recipients in the early and later years of the program). Second, this disrupts and/or distorts retailer behavior because if some villages have minimal demand for fertilizer and willingness to pay commercial rates, it may not be cost-effective for them to take any fertilizer (subsidized or commercial) from a distributor's warehouse to some villages. If this negative effect on retailer presence in villages is widespread, this undermines the very rationale of the program: to provide a learning experience for smallholders who are not accustomed to using fertilizer or improved seed in maize/rice production.

[39]Interviews with two major fertilizer importers in Ghana, March 25 and 26, 2015. See also Wienco's position at http://www.ghananewsagency.org/economics/wienco-calls-for-review-of-fertilizer-subsidy-78671.

[40]Interview with World Bank in Ghana, March 26, 2015.

[41]Canada's Food and Agricultural Budget Support was not budget support in the traditional sense because it was often earmarked (World Bank representative, May 8, 2015).

discontinuation of sectoral budget support revealed deeper issues underlying inter-ministerial relationships. For instance, one problem has been the relationship between MoFEP and MoFA. In its report describing the discontinuation of its AgDPOs, the World Bank observed: "In other words, stronger engagement of MoFEP and better coordination between the latter and MoFA on agricultural sector policy could possibly have improved the quality of the [agricultural sector] policy reforms and may have influenced the decision making process that led to the discontinuation of AgDPO5" (World Bank 2013, 23). According to the Audit Office, MoFA also partly blamed the annual late distribution of fertilizer to the poor condition of feeder roads, which are under the mandate of the Department for Feeder Roads within the Ministry of Roads and Highways (Missah et al. 2013).

In addition, the complexities of the program place a large administrative burden on MoFA staff at both the central and local levels. Part of the annual delay in the implementation of the program is also simply due to the range of responsibilities placed on the ministry, including the process of bidding and setting prices, establishing quotas, providing companies time to import their quotas, and drafting yearly implementation guidelines. Soon after the program launches, the Crops Directorate needs to begin the waybill-receipt consolidation process (Missah et al. 2013).42 If the responsibilities for launching GFSP and monitoring disbursements and payments were divided between two directorates, this might possibly improve GFSP's efficiency.

Prospects for Reform: Declining Financial Resources but Mixed Support for GFSP

Given some of the challenges detailed above, what are the prospects for reforming GFSP? The KM emphasizes two overarching factors that stimulate evaluation and reform of agricultural and food security policies: a shift in "available resources relative to costs" and the "changing beliefs of veto players and policy champions."

The "available resources relative to costs" have certainly changed for MoFA, owing to the end of agricultural-sector budget support and the country's deteriorating macroeconomic performance in recent years. The GoG's recent agreement with the International Monetary Fund (IMF) to address these macroeconomic challenges did not require a reduction in agricultural input subsidies, which the IMF classified as a social protection program. Instead, the agreement focused on reducing more expensive expenditure outlays, particularly petroleum and fuel subsidies and the public wage bill (IMF 2015). However, the combination of the program hiatus in 2014 plus general uncertainty over the country's poor fiscal situation in 2015 fueled doubt as to whether or not GFSP would return in 2015. While the program was officially launched in late March 2015, a report by SEND-Ghana (commissioned by PFAG) revealed that only half of the promised 180,000 MT of fertilizer was ever imported that year.43 In a parliamentary hearing, the MoFA minister claimed the shortfall was caused by the inability to pay suppliers.[44] Nevertheless, the MoFA minister launched the program again on April 1, 2016, noting that the government would subsidize fertilizer at an average of 26 percent (GHC 85 per 50 kg bag of compound fertilizer and GHC 80 per 50 kg bag of urea).[45] The perceived political costs of abandoning GFSP at the moment have also become higher

[42]See also interview with Crops Directorate, March 24, 2015.

[43]See "Northern Ghana CSOS Platform Survey Report." http://myjoyonline.com/docs/38118csos%20platform%20survey%20report%20final%2011122015%20gbs.pdf.

[44]See GoG. "Gov't to Pay All Fertilizer Subsidies by Dec. 2015—Minister." http://www.ghana.gov.gh/index.php/media-center/news/1565-gov-t-to-pay-all-fertilizer-subsidies-by-dec-2015-minister.

[45]See "Government Announces Fertilizer Subsidies." *Ghana Business News*, March 23, 2016. https://www.ghanabusinessnews.com/2016/03/23/government-announces-fertilizer-subsidies/.

as the December 2016 general elections draw closer, though transparency about the source of funding for the program remains low.

The costs of the program relative to available resources have played a role in "changing beliefs of veto players and champions" at two different levels. At one level, these costs have affected overall support for a continued subsidy. Most dramatically, in 2014, a necessary champion for the program, the importing companies, refused to participate until they were reimbursed a sizable portion of their arrears. Moreover, gradually some companies have dropped out of the program. A representative from one importing company noted that they were initially very keen to get involved in GFSP as a supplier but then lost too much money in 2012 to continue participating.[46] One of the biggest importers in the program, Yara, decided in mid-2015 that it would not be participating in the scheme that year, even after the program's resumption had been announced.[47] As already noted, retailers and the main distributor association, GAIDA, have been the least enthusiastic about the subsidy program. As one GAIDA representative noted, "For us, we prefer the free market when you can go anywhere, sell anywhere."[48]

Even so, other major policy champions have continued to push for the subsidies. In particular, organizations such as PFAG claimed that they had asked MoFA to maintain the subsidy back in 2011, when there were discussions about ending it.[49] They were extremely disappointed with the halt in the program in 2014. The president of PFAG (who is also a smallholder farmer) noted, "It was painful not to have the GFSP in 2014. The government kept saying that it was going to implement the program but then we found out it wasn't happening in June/July. The problem is that farmers can't prepare themselves and can't get a loan in time."[50] Along with SEND-West Africa, PFAG organized a workshop in late 2014 to enable civil society organizations to analyze the proposed national budget for 2015 and to push for continued implementation of GFSP.[51] However, the country's main think tank, IMANI, has criticized the government's penchant for subsidies, which it believes pushes out investments in other sectors.

In the political sphere, politicians remain committed to the program. Even as the political landscape shifted since the initiation of GFSP, with the executive branch moving from the NPP to the NDC, the Office of the President has remained a major supporter of the policy. By 2010, President Atta Mills had announced in the State of the Nation Address that GFSP would be extended to all crop farmers. Likewise, his successor, President John Dramani Mahama, has emphasized the program in three consecutive State of the Nation Addresses, from 2013 to 2015. By contrast, ministers of agriculture have wavered at least four times during the life of GFSP, with varying support from different ministers for the subsidies. For instance, Clement Humado, who was MoFA minister from 2013 until mid-2014, attempted to remove GFSP from the 2013 MoFA budget, but the Office of the President put it back in.[52] Opponents within the two main political parties have also become more muted since the policy has now been in effect under both administrations. In fact, the 2012 election manifestos indicated that both parties rhetorically

[46]Interview with major fertilizer importer, March 26, 2015.

[47]See S. D. Ablordeppey, "Yara Pulls Out of Government Fertilizer Subsidy." *Graphic Online,* June 1, 2015. http://graphic.com.gh/business/business-news/43910-yara-pulls-out-of-govt-fertiliser-subsidy.html.

[48]Interview with GAIDA representative, March 27, 2015.

[49]Interview with Victoria Adongo, Program Coordinator, PFAG, March 27, 2015.

[50]Interview with Mr. Abdul Rahman Mohammed, PFAG, March 27, 2015.

[51]See "CSOs Takes on Govt Over Fertilizer Subsidy for Small Scale Farmers." *Graphic Online,* December 19, 2014. http://graphic.com.gh/news/general-news/35720-csos-takes-on-govt-over-fertilizer-subsidy-for-small-scale-farmers.html.

[52]Interview with ASWG donor representative, March 25, 2015.

Table 3.3 Stakeholder inventory: Ghana's Fertilizer Subsidy Programme, 2015

Stakeholder category	Stakeholder group/institution	Support the general concept of a fertilizer subsidy in Ghana?	Desired changes to GFSP design	Desired changes to GFSP implementation
Veto players	Presidency	Yes: opportunity to improve soil fertility and food production	—	Fine-tuning to make more effective at increasing production
Policy administrators, formulators, and legislators	Ministry of Agriculture	Depends on ability to contribute to FASDEP II and improve food production	—	Better integration of SMS/ICT technologies; gradual exit strategy; improve fertilizer markets and education about fertilizer use
	Ministry of Finance	Depends on fiscal costs and contribution to GSGDA	—	Gradual exit strategy
	Parliament	Yes: necessary for helping the poor and for food security	—	Announce prices earlier in the season; payment of arrears
Policy champions	Farmers' organizations	Yes: necessary for helping the poor and for food security	Higher subsidy rates for farmers; more targeted approach to the poor	Announce prices earlier in the season; reduce uncertainty about whether program will be implemented from year to year
	Ruling party	Yes: necessary for helping the poor and for food security	Ensure less leakage	Provide concurrent support to agricultural extension officers
	Opposition parties	Yes: necessary for helping the poor and for food security	Higher subsidy rate, better targeting to the poor, and more mechanisms to prevent smuggling	Provide concurrent support to agricultural extension officers
	Nongovernment organizations (such as SEND West Africa)	Yes: necessary for helping the poor and for food security	Higher subsidy rates for farmers; more targeted approach to the poor	Announce prices earlier in the season; reduce uncertainty about whether program will be implemented from year to year
	Fertilizer distributors	Depends on their ability to negotiate the subsidy price	Higher subsidy rate to cover distributors' costs	Engage distributors in the discussion about subsidy prices early on
Policy opponents	Domestic policy think tanks (such as IMANI)	No: nonpoor are the main beneficiaries; this creates a culture of dependency, and Ghana cannot afford it	—	—

Table 3.3 Continued

Stakeholder category	Stakeholder group/institution	Support the general concept of a fertilizer subsidy in Ghana?	Desired changes to GFSP design	Desired changes to GFSP implementation
Policy neutral	Research community	Depends on the design and inclusion of exit strategy	More options for different soils; gradual reduction in the subsidy rate to exit the program	Concurrent investments in infrastructure and agriculture extension
	Donors	Depends on the design and inclusion of exit strategy	Better targeting to the poor; gradual reduction in the subsidy rate to exit the program	Better transparency in the process of deciding the price of the subsidy
	Fertilizer importers	Depends on the level of the subsidy and the quotas	Change the cumbersome waybill system; expand range of options of subsidized fertilizers; engage in soil testing	Announce prices earlier in the season; take into account importers' logistical challenges; pay importers on time

Source: Compiled by authors based on fieldwork interviews and secondary sources.
Note: FASDEP II = Food and Agricultural Sector Development Policy II; GSGDA = Ghana's Shared Growth and Development Agenda; ICT = information and communications technology; SMS = Short Message Service.

supported continuing GFSP (NDC 2012; NPP 2012). Interviews with NPP and NDC politicians similarly revealed bipartisan support for GFSP.[53]

At a second level, many key actors have specific beliefs about the size of the subsidy. Figure 3.4 draws on Table 3.3 and aligns stakeholders with respect to their positions on the size of the subsidy. This "circle-of-influence" graphic takes into account their degree of policy influence and the closeness of their relationships with those who do have policy influence. Actors in the shaded gray circle correspond to the same actors who have policy formulation, administration, or oversight roles in Figure 3.3.

Figure 3.4 emphasizes that PFAG, GAIDA, and the importers believe the subsidy rate is too low, albeit for different reasons. For PFAG, a 21 percent subsidy fails to provide substantial cushioning for smallholder incomes, while for distributors represented by GAIDA, it does not sufficiently cover their distribution costs.[54] Given the devaluation of the Ghanaian cedi in recent years and the fact that the larger importers typically have to commit to their importation price considerably further in advance than when the GFSP subsidy price is announced, importers have reportedly built in a "risk buffer" to their price bids delivered to MoFA.[55] That said, it is important to note that the risks of devaluation, inflation, and late repayment by the GoG result in real financial costs for importers. This is yet another example of how the uncertainty and unpredictability of GFSP program announcements (and repayments) combine to reduce the efficiency by which GoG expenditures on GFSP fertilizer increase smallholder exposure to fertilizer for use on maize/rice and their actual fertilizer use on those crops. In addition, the presence of a "risk buffer" built into importers' price bids implies that if the subsidy rate is too low, this can result in an effective "subsidy price" that is not much lower than the commercial market price. This price differential in turn means lower benefits for recipient farmers and a lower incentive for importers to participate (given the administrative burdens of the waybill system, the uncertainty of when they will be repaid.). However, not lowering the subsidy rate would contradict the viewpoint of donors and MoFEP that an exit strategy is needed for the subsidy, based on reducing its level over time (World Bank 2013).

Some stakeholders have coupled their beliefs about the subsidy rate with a strong emphasis on the need for the program to be more technically sound with respect to addressing soil fertility issues. The most vocal actors on this topic include the ASWG donors, the research community, MoFA, and even the importers. During interviews, these actors emphasized that the subsidized fertilizer should not be limited to just four types but rather be targeted to the agroecological conditions and soil fertility needs of different areas of the country.[56] Such actors further recognize the advantages of a subsidy for making fertilizer more affordable, contributing to food security, and illustrating to farmers the benefits of fertilizer use. But they also worry about the sustainability of a subsidy and its implications for more long-term private-sector development and other public investments in agriculture.

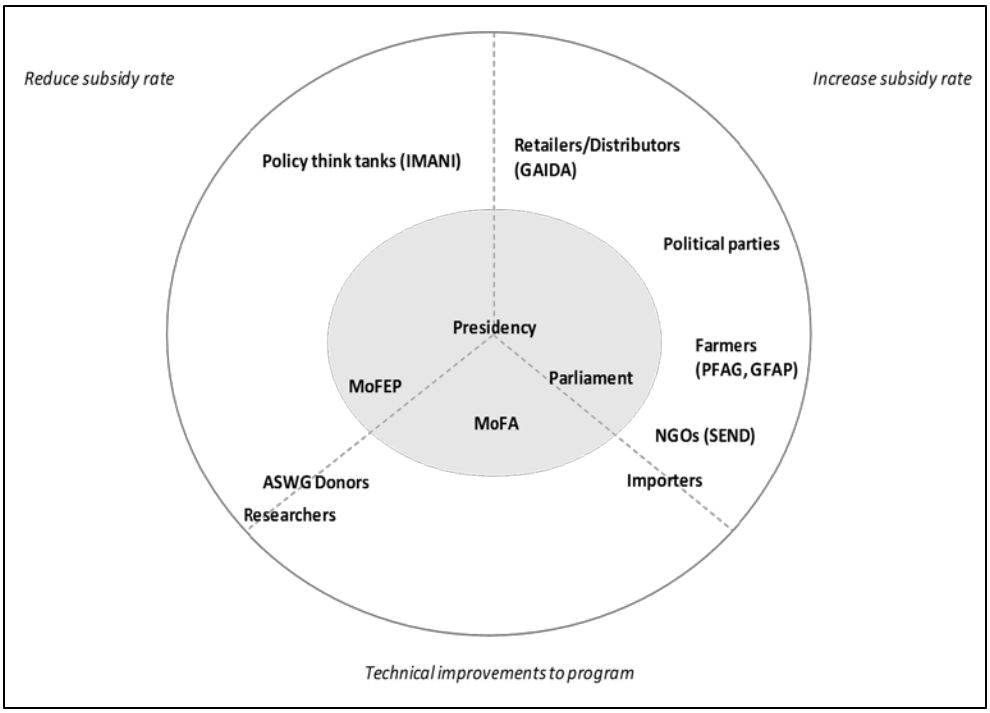
[53]Interviews with the Honorable Dr. Owusu Afiyie Akoto, Honorable Gabriel Essilfie, and Honorable William Agyapong Quaittoo, March 26–27, 2015.

[54]Interviews with PFAG and GAIDA representatives, March 27, 2015.

[55]Interview with key importer, March 26, 2015.

[56]See IFPRI et al. 2015. "Toward a Holistic Agricultural Productivity Growth Strategy for Ghana." Presentation, Accra, Ghana, February 2, 2015, see *fsg.afre.msu.edu/fsp/Final_team*_presentation_*Feb*_2_2015.*pdf*. Interviews with World Bank, IFAD, MoFA, and key importers, March 24–27, 2015.

Figure 3.4 Circle of influence: stakeholder positions on aspects of fertilizer subsidy in Ghana, 2015



Source: Compiled by authors.
Note: ASWG = Agricultural Sector Working Group; GAIDA = Ghana Agri-Input Dealers Association; GFAP = Ghana Federation of Agriculture Producers; MoFA = Ministry of Food and Agriculture; MoFEP = Ministry of Finance and Planning; NGO = nongovernmental organization.

A few factors appear to influence the different beliefs of these stakeholders. First, the research community has not engaged in much in-depth evaluation of GFSP under its current waybill structure.[57] The few studies that do exist did not find uniformly negative impacts. For instance, Benin et al. (2013) found that, between 2008/2009 and 2010/2011 and across 16 sampled districts, GFSP indeed succeeded in encouraging farmers to use higher levels of fertilizer per unit area and resulted in large gains in maize yields and outputs. Based on a 2013 survey of 820 rice-producing households in the northern region of Ghana, Wiredu, Zellerm, and Diagne (2015) found that while GFSP reduced labor productivity, it increased land productivity. The World Bank (2012) noted that GFSP had helped improve agricultural production and productivity in Ghana's most food-insecure regions: Northern, Upper East, and Upper West. Beyond these studies, the general tenor of research underscores the need for concurrent investments in inputs aside from just inorganic fertilizer to improve productivity.

Second and relatedly, the goals and achievements of the subsidy have changed over time, so the metric for gauging success keeps changing. Some of the initial goals of the program were to improve application rates of fertilizer on maize/rice, increase maize/rice yields and production, and enhance private-sector development (Benin et al. 2013). In order for receipt of subsidized fertilizer to increase fertilizer application rates (on maize/rice) significantly, it needs to be successfully targeted to farmers who previously were using little or no fertilizer on maize or rice. For example, switching the targeting criteria from "resource-poor and smallholders" in 2008 and 2009 to "all"

[57]See Banful (2008), Ghartey Associates (2009), and Yawson et al. (2010) for evaluations of GFSP under the voucher system.

maize/rice growers in 2010 could have dramatically reduced the effect of each kilogram of subsidized fertilizer on the total amount of fertilizer applied to maize and rice. If a farmer who was previously using fertilizer on maize/rice received subsidized fertilizer, he or she may not have actually increased fertilizer use relative to previous levels (Xu et al. 2009; Ricker-Gilbert, Jayne, and Chirwa 2011; Mason and Jayne 2013, 2015).

The goal of the program appears to have changed yet again in 2010, given the change in targeting criteria already noted in that year. The 2010 budget statement even claimed that GFSP had improved the nutrition of the poor (MoFEP 2009). Then in 2012, the GoG classified GFSP as a poverty reduction program in the same category as the provision of basic education, health, and rural electrification (MoFEP 2011).[58] The volatility in terms of determining the program's beneficiaries reflects its shifting aims (Table 3.2). One major fertilizer importer participating in GFSP admitted that it was unclear about the goals of the program: "Is it being done as a safety net for subsistence farmers or is it part of a longer-term agricultural development strategy? We have no idea."[59]

Third, many assume that the program is inherently driven by political considerations. Therefore, even if the financial costs are large and the selected fertilizers are inappropriate for given soil characteristics, there are few prospects for reform. This view was articulated by a broad range of stakeholders, including MoFA, donors, importers, and parliamentarians. A representative sample of responses included, "It's a very politicized program," "There is a political logic to the subsidy," "The subsidy is a 'political hotcake,'" and "All parties play politics with fertilizer."[60] This theoretically makes sense given that Ghana is a competitive two-party democracy and it would be a gamble for either the NDC or NPP to eliminate the subsidy. However, there has been no empirical research on whether the current GFSP really benefits parties politically.[61] Moreover, regional voting patterns in Ghana are relatively stable across elections, with major shifts in party affiliation occurring in urban areas (especially Accra) rather than in rural ones (Arthur 2009; Weghorst and Lindberg 2013). The biggest beneficiary region of GFSP in absolute terms, the northern region, has consistently supported the NDC in every election since 1992 regardless of whether a subsidy program was in place. In addition, why smallholders would make voting decisions based only on one policy is theoretically questionable and appears highly country-specific, as findings by Dionne and Horowitz (2015) and Mason, Jayne, and van de Walle (2013) showed for Malawi and Zambia, respectively. However, in the absence of more empirical evidence on the political benefits of the program, political elites may continue to resist reforming it.

Thus, while the beliefs of some veto players and champions have changed since the inception of the program, this has occurred on two different levels. On one level, there is a growing belief among GFSP stakeholders that the transparency and inclusivity of the process of designing and administering the subsidy each year must improve. On another level, there is a growing belief that this kind of subsidy is not sustainable in the long run and could be much more effective if it were coupled with additional investments and program design changes. There is less consensus among stakeholders on how to proceed with the latter aspect than with the former.

[58]The extent to which GFSP has been able to reduce poverty is inherently a function of whether "poor" farmers were able to access subsidized fertilizer.

[59]Interview with GFSP fertilizer importer, March 25, 2015.

[60]Interviews with ASWG donors, fertilizer importers, MPs on the agricultural parliamentary committee, and the Agricultural Policy Support Project (APSP), March 25–27, 2015.

[61]The only real political economy work on GFSP, by Banful (2010), focused on the 2008 scheme's targeting rather than its impact on voting behavior.

4. RECOMMENDATIONS AND CONCLUSIONS

This paper applied the kaleidoscope model to the case of GFSP. In doing so, it highlighted how the various tools underlying the KM can be applied to a particular policy arena and country context to explain the subset of factors that contributes to progress (or lack thereof) of a specific policy modality through different stages of the policy process. Given the findings, this section concludes with a few recommendations. These are limited to addressing challenges with respect to the policy process rather than analyzing the technical nature of the program.

Advanced Engagement with Importers

Given Ghana's current macroeconomic context, MoFA should engage with importers for the next season at the time the budget is being drafted for parliamentary approval at the end of the previous year (October). In this way, importers would be able to better estimate their import costs and how much a program would feasibly cost them for the next year. Doing so would increase the prospects that the budget adequately anticipated the expenditures required for the program, determine how many MTs of fertilizer could be subsidized, and perhaps help the program onset to better coincide with the start of the farming season in February. At the same time, importers' earlier engagement with MoFA about quota allocations would enable them to plan further in advance and thereby secure lower costs for shipping both subsidized and commercial fertilizer from overseas.

Time Line for Exit

Importers and smallholders identified annual uncertainty about the existence and timing of GFSP as one of the biggest challenges hindering the effectiveness of the program and their ability to plan their fertilizer imports each season in a way that minimizes their costs. If the GoG's aim is to ultimately abolish GFSP, then outlining a clear time line for this would give private-sector fertilizer importers, wholesalers, and retailers the market information they need to engage in sound financial planning from year to year. It would do so at least with respect to the extent to which GFSP quantities and prices of subsidized fertilizer affect their perception of overall domestic fertilizer market demand over time. In addition, such a time line would benefit MoFA in terms of determining the cost-benefit ratios of subsidizing a greater variety of fertilizers, seeds, and other inputs and investing in a more effective electronic distribution system as opposed to allocating scarce resources to such efforts as farmer extension programs, soil testing, and organic fertilizer options.

Realistically Weigh Trade-offs Between Gradual Subsidy Reductions and Actual Program Efficiency

Since GFSP does not allow importers to be reimbursed for months after importing fertilizer, they typically build in a degree of risk into their price estimates to account for late repayments and depreciating currency. A relatively low subsidy (21 percent in 2015) on these inflated costs means that commercial fertilizer is increasingly at least as affordable, if not more so, than subsidized inputs.

Improve Transparency with Respect to Choice of Importers, Subsidy Rate, Determination of Quotas for Importers, and Annual Program Start

Though transparency is an oft-repeated recommendation, it still remains inadequate when it comes to the key aspects of implementing GFSP. Key aspects of the program are outlined in MoFA's subsidy program implementation guideline booklets, but these are not easily accessible to much of the public. There should also be a clear date when GFSP will be announced each year. Thus far, the program may be announced in both the budget and State of the Nation Address, or in

either, or the word "subsidized" may not be used with respect to the program, inviting confusion and speculation among stakeholders. Most stakeholders simply learn of the program's inception when the MoFA minister decides to give an ad hoc press statement. It is difficult to discern whether program opacity is simply the result of poor organization and low capacity or whether it is intentional.

Include Distributors and Retailers in the Policy Process When the Subsidy Rate Is Decided

Fertilizer costs should not only take into account the cost to importers of clearing ports and transporting to distributors, but also be realistic about the actual margins required for both warehouse storage/handling costs and further transport by retailers to villages. The most recent subsidy price covers only about GHC 2 per 50 kg bag of fertilizer as the total margin for distributors and retailers. One option for reform would be to hold an annual postseason GFSP stakeholder forum in which stakeholders could meet to voice their opinions on how the current program design and implementation are meeting program goals. This forum would at least give stakeholders more opportunity to voice their ideas for program design changes to MoFA in time for MoFA to take them into consideration for the following season while learning more about the trade-offs of alternative reforms to the program.

Parliamentary Capacity Training

MPs in Ghana appear to be largely excluded from any active role in the agricultural policy process. They typically lack sufficient capacity and time to engage in adequate oversight of MoFA (and other MDA) programs and projects. In fact, the parliamentary agricultural committee has only one researcher with a PhD to help MPs scrutinize agricultural-sector budget plans and identify misallocated resources.[62] Strengthening the parliamentary research service would benefit legislative oversight over agriculture in particular, and other sector policy making and implementation in general. In addition, the donor ASWG should more actively engage with parliamentary committees so that the latter are both better informed and better able to provide inputs into the policy process.

Conclusions

Overall, the KM helps uncover key bottlenecks in the policy process of the GFSP. These bottlenecks undermine its effectiveness and result in stakeholders being almost unanimously opposed to the current program design and yet differ significantly on the details of what kinds of program reforms they would support. More importantly, the KM reveals that influencing policy change in favor of poor constituents often requires attention to institutional and political economy elements that extend well beyond the technical specifics of a particular policy.

[62]Interview with Ghanaian MP, March 26, 2015.

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