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**Understanding the Role of Research in the Evolution of
Fertilizer Policies in Malawi**

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ABSTRACT

This study examines the role of research in agricultural policy making in Malawi at a time when the Africa Union and the New Partnership for Africa's Development have been seeking to promote greater evidenced-based decision making in agriculture. Drawing on both theory and actual past experiences documented in the literature, results are intended to improve our understanding of the extent to which research has played any role in influencing policy change in Malawi. This is done in the context of the evolution of the country's fertilizer subsidy policies. Results point to some general lessons. First, strengthening the Ministry of Agriculture's capacity for policy analysis and becoming more proactive in the policy process proved critical in the earlier years of Malawi's long history of fertilizer subsidies. Second, the government's experience of bargaining with donors may have actually strengthened its own ability to position and assert its legitimacy in shaping policies. Third, while research may have played a historically marginal role, researchers have been able to influence policy choices whenever a window of opportunity arose for technical input—such as at times of crisis. However, researchers would also benefit from engaging more with the policy debates and policymaking process. Finally, while the paper draws on existing theoretical frameworks to understand the role of research in the policy process more generally, a better framework still needs to be developed in describing the standard experiences and realities of the African agricultural policy landscape.

Keywords: policy process, policy landscape, research-to-policy links, Malawi fertilizer policy

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1. INTRODUCTION

A major rationale for conducting policy research is the goal to contribute to better policies. Over the years, funders of international policy research have placed increasing emphasis on ensuring that the research they fund influences policymaking, challenging research organizations to document the impacts of their research (for example, the Science Council of the Consultative Group on International Agricultural Research has made policy impact one of its performance criteria). Research tells us that getting a good handle on a country's policy process, no matter its shortcomings, is an important first step toward understanding the role evidence can play in policymaking (Sabatier 2007; Philips and Seck 2004; Juma and Clark 1995). However, the aim should not simply be to improve the transfer of research into policy, but to understand the policy process itself.

Against this background, a team of International Food Policy Research Institute (IFPRI) researchers and consultants carried out a study to determine the extent to which research has sufficient room to maneuver in influencing agricultural policies in Africa in general, and Malawi in particular. To accomplish this, the study chose to focus attention on Malawi's fertilizer subsidy policies and use a combination of narratives in the literature (this paper) and a participatory Net-Map tool (see Aberman et al. 2012). Both papers are intended to be complementary in improving our understanding of the overall agricultural policy landscape in Malawi and the role research can potentially play in it, if at all.

The case of fertilizer subsidy policies in Malawi was selected for two primary reasons. First, in early 2009 IFPRI opened a Malawi Strategy and Support Program (MaSSP) within the Malawian Ministry of Agriculture. MaSSP was created to meet the Malawian government's research needs in identifying constraints among the smallholder sector, designing policies to address those constraints, and efficiently allocating resources toward those policies. It is also expected to build the long-term capacity of the government to support smallholders in the future by bringing credible research into the process of designing programs and policies. Hence, understanding the agricultural policy landscape will directly affect how well MaSSP and others in the research community can influence policies and impact in the future. Second, the selection of fertilizer subsidy policies was to help focus attention on a specific policy, especially one that is prominent in the agricultural policy landscape in Malawi, and for which a sufficient stock of knowledge exists regarding its evolution over time.

Policy debates on fertilizer subsidies have often taken center stage in Malawian politics, including whether the subsidy is of appropriate scope and scale for economic efficiency, whether the government can afford to fund it and has the capacity to manage it efficiently, and whether it displaces the private sector or stifles diversification of local diets. Therefore, understanding how research has (or has not) entered the fertilizer policy debates in the past and today can help guide research efforts targeted at influencing future policy changes. In the current paper we focus attention on the historical record of how the fertilizer policy landscape in Malawi has been shaped and influenced over time by events, actors, and experiences. As a background paper, it complements a second paper, that of Aberman et al. (2012), which uses Net-Map analysis to examine the contemporary policy landscape.

The paper is organized as follows. First, we review the literature on the link of research with policy processes. This is intended to provide a theoretical foundation as we next review historical accounts in the literature on the evolution of fertilizer policies in Malawi and the role (if any) that research has played in it. Key findings from the review are then discussed and summarized in the conclusion.

2. THEORIES ON THE ROLE OF RESEARCH IN THE POLICY PROCESS

Understanding how research enters the policy arena requires a good understanding of policy processes, which by nature are complex and dynamic, involve multiple actors (individuals and organizations), and are defined by local political, social (cultural and belief systems), and institutional (bureaucratic structures and capacities) realities. Because policy processes are rooted in people, vested interests, corruption, and external influence often play a distinct role in their outcomes, as they still do in many African countries (Juma and Clark 1995; Philips and Seck 2004). Such complexities, especially in the African context, have resulted in what some have referred to as a “chaos of purposes and accidents” in describing how research enters the policy process (Clay and Schaffer 1984). Power relations and ideas (based on both tacit and explicit knowledge) are therefore particularly important in policy processes, with scientific knowledge playing only a marginal role (Sabatier 2007).

Review of the Overall Literature

The general literature on how research enters the policy process organizes the theories into three distinct families: (1) linear and logical approaches; (2) iterative, muddling through, and incremental approaches; and (3) approaches centered more on discourse.¹ Linear and logical approaches assume policy decisions follow a simple linear process of planning, implementation, and evaluation. Here research is assumed to be purely objective and unaffected by political and value system beliefs, and it is assumed that policymakers are easily persuaded by the results of research. This approach has been widely dismissed as unrealistic. In reality, proponents of the second perspective argue, policymakers muddle through the decisionmaking process in a pragmatic fashion to expand their *policy space*, or range of feasible policy options (Thomas and Grindle 1990). This involves compromising on policies under competing demands and in an iterative, incremental, and complex process of policy formation and implementation. Information from researchers plays a minimal role in these approaches and then only in the context of a policymaker’s own agenda (Garrett and Islam 1998). This viewpoint is broadly shared across a number of theoretical frameworks, such as the “bounded rationality,” “satisficing,” “iterative,” “incrementalist,” “muddling through,” and “policy paradigm” models (see Lindblom 1980; Stone 2002; Omamo 2004).

Within both the linear and iterative models, the question of how to get research into policy is primarily one of understanding the conditions under which links between the two can be made more effective—the political context, bureaucratic structures and institutions, active interest groups, varieties of interactions and influences, and value systems. An underlying recognition of two distinct communities exists—the suppliers of research (the scientists) and the users of knowledge (the policymakers)—hence the common reference to a research-to-policy divide. From a research or knowledge supply viewpoint, the primary goal is to understand how best to promote greater use of research in policymaking. Some notable examples of frameworks created within the developing-country context to achieve this are the RAPID framework of the Overseas Development Institute (ODI) (Young 2005) and the Knowledge Systems concept at Harvard (Cash et al. 2003).

The ODI group identifies four key elements that they argue best explain how research can enter the policymaking process: external influence, political context, evidence, and links (Court and Young 2003; Young 2005). The interface between research and policy occurs when all elements intersect and effective links are established between all actors involved (researchers, civil society, media, and policymakers). The Knowledge Systems concept takes a similar perspective, arguing that research enters into policy when it can establish close links between the actors involved (individuals and organizations on both the supply and demand sides) and the products of research (Cash et al. 2003). So long as the knowledge generated under these conditions is relevant and credible, it is more likely to influence policy.

¹ A number of authors review this literature extensively; see Sabatier (2007), Omamo (2004), Stone (2002), Neilson (2001), and Keeley and Scoones (1999).

Therefore, to ensure that research outcomes are considered in policy, practical solutions for establishing closer links between the two are often recommended. These include improving communications and outreach, as well as examining a number of institutional and network arrangements that serve important “intermediary boundary” or “brokerage” functions in bridging the divide (Cash et al. 2003; Guston 2001). Alternatively, other suggestions include looking more broadly at organizational structures of innovation or *innovation diffusion* and how they affect the way in which ideas for research and knowledge can be acted on by both researchers and policymakers (Crewe and Young 2002).

In recognition of the multifaceted, rather imperfect, and indirect utilization of research outcomes in policymaking, other authors take a more enlightened perspective in which research feeds into the policy process over time, through discourse, learning, and social interactions. This third perspective includes theoretical frameworks such as the “knowledge utilization” and “enlightenment” models and the “policy narratives” and “social network” models (Weiss 1978; Stone, Maxwell and Keating 2001; Lindquist 2001). Here knowledge is considered cumulative, involving a dynamic learning or enlightenment process wherein research has only an indirect policy impact, and then only over time and through the influence of many actors (such as the media, interest groups, research community, and government). In other words, research findings only gain importance and alter the perspectives of policymakers as the demand for change in the political arena increases with more knowledge about what works. The emphasis in these models is on the power of ideas—based on tacit or explicit knowledge, or both—and the deals that are struck among different and diverse actors within a constantly changing environment (Keeley and Scoones 1999; Sabatier and Jenkins-Smith 1993; de Vibe, Hovland, and Young 2002).

The enlightenment perspective views the research-to-practice transition as occurring through the engagement in the policy process of many actors, of whom researchers are only a subset. This is in contrast to the first two perspectives, which typically view researchers as actors who supply the knowledge and policymakers as those who use it. The recognition that many more actors are involved has led to an increasing focus on political science and social network approaches. In the general literature, these include concepts of “advocacy coalitions”, “discourse”, and “epistemic communities” (Stone 2002; Sabatier 2007). However, whether these models fit the developing-country context is often in question, as they are typically based on the greater participatory and democratic processes found in Western countries (Neilson 2001). Differences in the implementation of policy are wider in the developing world, as implementation depends on the capacities of the states, institutions, and actors involved, as well as the scope of policy activities, configuration of policy issues, and their content (Horowitz 1989).

The *advocacy coalition* framework, or ACF, argues that the type of research that is eventually undertaken and utilized in policy processes is primarily influenced by the ideas of competing coalitions of individuals and organizations (Sabatier and Jenkins-Smith 1993). These coalitions represent a broad array of actors who share similar views and core beliefs—including interest groups, think tanks, and the media—and play an especially important role in influencing the policy process and policy change. In the ACF, each coalition has its own view of the policy problem at hand and of the instruments needed to address it—research plays only a minimal role. The concept of advocacy coalitions is far broader than that of epistemic communities, which bring together experts who share common beliefs and disciplines, forming a type of knowledge elite as they seek to influence a particular policy debate (Stone 2002). The ACF also draws on other concepts in the research-to-policy literature, including “policy entrepreneurs” and “policy windows”. *Policy entrepreneurs* are individual actors who work actively on behalf of their views in a policy debate, blocking or promoting particular viewpoints in the policy process, as in the case of policy champions. *Policy windows* offer opportunities for certain coalitions to dominate and influence policy change.

Generally, social network theories focus on how both individuals and organizations develop networks, and how their development influences the research generated within policy debates and its influence on policy outcomes. They highlight the complex patterns of both formal and informal interactions among actors in the policy process. Taking an actor-network perspective is particularly useful when working to understand and influence policy processes, because network theory attempts to examine

and explain patterns of communication and exchanges of information, concepts not easily measured but critical to achieving influence (Keck and Sikkink 1998). Viewing the policy landscape as a network also allows one to explicitly examine the formal and informal interactions between individuals and organizations. These interactions—including exchanges of information or funds, ties of friendship, or links of hierarchy—are not distinct from the local context of social, political, and bureaucratic realities. Critical aspects of this context are power relations (among people) and ideas (based on both tacit and explicit knowledge).

In the African context, one must consider the continent's history of political patronage and the involvement of donors, international finance institutions, and foreign expertise. The kinds of linkages, both formal and informal, that have emerged under these conditions have led to the strong influence of external policy paradigms and practices, and yet the ACF does not account for international actors in domestic policy subsystems (Ainuson 2009). Furthermore, the ACF has been applied only a handful of times in Africa (Tewari 2001; Beverwijk, Goedegebuure, and Huisman 2008; Ainuson 2009), and there are genuine concerns about the framework's applicability beyond the Western context in which it was developed. For example, Beverwijk, Goedegebuure, and Huisman (2008) found that the ACF was not predictive in young policy subsystems with high volatility, such as higher education in Mozambique in the 1990s. Thus, we adapt the ACF using insights from other work in Africa in order that it better account for the African context in which we apply it.

Research and Policy Links in the African Context

The literature on how scientific knowledge enters policymaking processes in Africa is mostly limited to case study narratives that do little to develop a generalized theoretical framework for research and testing. As pointed out earlier, there are exceptions in the work of ODI (Crewe and Young 2002; Court and Young 2003; Young 2005; Jones, Datta, and Jones 2009) and the Harvard group on Knowledge Systems (Cash et al. 2003), and other notable examples include Keeley and Scoones (1999, 2003) and Garret and Islam (1998). The efforts of the International Development Research Center (Lindquist 2001; Marouani and Ayuk 2007; Carden 2009) and Philips and Seck (2004) have mostly been limited to case study narratives but do offer useful surveys of, and insights into, the African policy landscape. Each of these frameworks acknowledges the many factors that influence the transmission of research into policy, among them local power relations, vested interests, political capital, policy narratives, and discourse. Yet there remains an insufficient understanding of how these various elements coalesce to influence the knowledge-policy interface in developing countries, and in Africa in particular (Young 2005; Jones 2009). Elements of the literature on African political economy and policy change (see Birner and Resnick 2010) offer some useful insights.

Explanations of African policy change in the political economy literature typically focus on two dominant perspectives—society centered and state centered (Grindle and Thomas 1991). The society-centered perspective investigates the role of interest groups and collective action, whereas the state-centered perspective regards policy decisions as mostly top-down processes, as in autocratic regimes. Consequently, society-centered approaches commonly attribute the overtaxation of agriculture and urban bias in the early years of African independence, for example, to the inability of rural smallholder farmers to organize themselves into political interest groups and to exercise political influence (Birner and Resnick 2010). The state-centered perspective, on the other hand, describes prevailing environments in which national-level decisionmakers and government agencies exercise more power over policy decisions. For example, the widely used reference to *neo-patrimonial* regimes to describe the modern systems of government that emerged soon after independence in Africa reflects this viewpoint (van de Walle 2001). In a neo-patrimonial regime, political power and influence is primarily based on the ability of state elites to grant public resources and favors. Because the focus is more on patronage than on the implementation of policies, it has been used to explain the poor record of policy implementation in Africa (Cromwell and Chintedza 2005) and the susceptibility to greater external influence (van de Walle 2001). Donors and international organizations, for example, have been shown to have played a particularly

strong role in influencing policy changes on the continent. They have exerted pressure on state elites through aid and technical assistance, even as global paradigms and policy narratives shifted over time (Krueger, Schiff, and Valdés 1991; Delgado 1995).

The political economy perspective is especially important in the African context because it explains not only the influence of shifting development paradigms and policy narratives as new knowledge becomes available, but also how knowledge can easily become subservient to political interests (Sabatier 2007). So long as government can exercise sufficient autonomy with little resistance from society, knowledge may enter the policy process only if it helps to support a particular policy or its implementation success. Otherwise, it can just as easily be left off the agenda. After all, deciding on what knowledge to include and who should be informed involves acts of power (Leach and Mearns 1996).

Nevertheless, even if a state seeks to meet its social obligations, it may fail to shape and implement effective policies simply because of inadequate technical capacities—a common problem in agriculture considering its heavy reliance on scientific and technical expertise. Especially problematic are the weak state of database systems and statistics (Scott 2005), poor capacities for policy analysis, and inefficient technical bureaucracies (Juma and Clark 1995). Some have also argued that the traditional tendency of policy research in Africa to avoid *how* questions and focus on *what* questions contributes to its lack of practical relevance among technical ministries seeking to design and implement policies. Nowhere is this more evident than in the agricultural policy landscape of most African countries (Cromwell and Chintedza 2005; Scoones 2005; and Omamo 2003). As a result, agricultural ministries are accustomed to spending significant time and resources in shaping well-articulated strategies and policies (as evidenced by the number of sector policy and strategy documents generated every year in many African countries), with little, if any, effort put into determining how they can be realistically implemented.

The generally weak capacity for policy research in Africa has often meant that governments and donors rely on foreign expertise to fill the gap. However, among other difficulties, foreign expertise incorporates external ideas and practices from global actor networks (or epistemic communities) that may not always be relevant to local conditions and needs. For example, Keeley and Scoones (2003) find that international actor networks exert a very strong influence over technocratic managerial practices, choice of policy instruments, and implementation approaches. They cite the example of the Soil Fertility Initiative (SFI) launched in the late 1990s to emphasize soil fertility constraints as the single most important issue to overcome in African agriculture. As the discourse over the SFI shifted to implementation and more actors became involved at the local level, the effort required much more negotiation on key policy positions and even faced outright resistance in some communities. Very quickly, the SFI's initial strength dissipated as new narratives emerged in response to these experiences and the large number of actors. A key lesson emerging from this example is that getting policymakers interested in a policy issue and narrative does not easily transform into policy implementation (Thomas and Grindle 1990).

The process of translating policies into action introduces additional complexities involving the institutional and organizational capacity of technocratic agencies in sector ministries to implement policies. Typically, many such ministries and associated agencies have inherited an interventionist, even paternalistic, approach to managing development initiatives in the post-independence era. As a result they face difficult challenges of translating top-down (and sometimes externally derived) policy instruments into ones that are relevant to local cultural norms and socioeconomic realities. At the same time, because they work in an environment that involves both internal constituencies in government and external ones among donors, this often leads to multiple, even contradictory, policy instruments (Cabral and Scoones 2006). For example, policy documents often emphasize a free-market narrative to maintain favor with donors, while still maintaining top-down interventionist policies important to their internal constituencies.

Ultimately, the nature of policy processes and change in Africa is complex and multidimensional. This reality is confirmed by a combination of complementary perspectives in the literature including theories of political economy, institutions, social networks, and discourse (Keeley and Scoones 1999, 2003; Jones 2009). Unfortunately, few empirical studies have attempted to integrate these theories into a

framework explaining the agricultural policy process and how knowledge plays a role in it. We need to know more about the political, social, and human interactions that affect how these links are established over time, and how power and influence are exercised in translating policy into action. This demands a multidisciplinary approach involving local belief systems and cultural norms, actor networks, discourse, bureaucratic structures, and technical capacities; it also involves understanding how each of these elements interacts with changing socioeconomic and political circumstances to affect the form and implementation of policies. To fill this gap, we propose a broad theoretical framework that seeks to incorporate some of these perspectives in order to apply it to the example of Malawi's current fertilizer subsidy policy.

The Search for a Theoretical Framework in the Africa Context

In searching for an appropriate theoretical framework to apply in the African context, we found the work of Keeley and Scoones (1999, 2003), Jones (2009), Jones, Datta, and Jones (2009), Sabatier (1991, 2007), and more recently Birner and Resnick (2010) especially useful. First, we believe Keeley and Scoones, and more recently Jones, distill a comprehensive cross-discipline review of the literature into a few broad, but relevant, concepts for the developing-country context. Sabatier offers a practical framework (the ACF) that can be adapted further to incorporate important elements contained in Keeley and Scoones and Jones. The work by Birner and Resnick (2010) proposes such an adaptation, suggesting the inclusion of other political economy concepts into the ACF approach.

Keeley and Scoones's extensive survey of the literature helps to break down the many perspectives and concepts into three dominant but complementary viewpoints, which they define broadly as political interest, actor network, and discourse (reviewed in the previous section). Political interest is primarily associated with political economy explanations that involve both institutional rational choice models and policy interest networks. Actor network refers to the social relations and micro-level interactions that occur among actors. Discourse matters as it is the primary source for the formation of ideas and policy narratives or paradigms. We believe this breakdown to be particularly suitable for our purposes.

Sabatier's ACF approach offers a simple framework to work with, especially since it encompasses many of the same concepts as reviewed by Keeley and Scoones and has been tested in numerous other case studies.² Additionally, the ACF is based on four premises that should be important in the Malawian case study: (1) that understanding the process of policy change and the role of research requires a time dimension; (2) that focusing on a specific policy issue or *policy subsystems* helps to get a clearer perspective on the type of interactions and shared beliefs among a diverse group of actors seeking to influence the policy process; (3) that subsystems must involve all levels of government; and (4) that policies reflect core belief systems underlying the causal assumptions for realizing a policy outcome (Sabatier 2007).

However, because the traditional ACF approach does not consider some of the caveats found in the context of the African policy landscape, we adapt the approach as suggested by Birner and Resnick (2010) by introducing two other concepts.³ The first is the concept of political capital, which has been used in political science to combine state-centered, society-centered, and political conflict theories in explaining policy choices (Hicks and Misra 1993; Ilchman and Uphoff 1998). A number of empirical case studies have applied the concept of political capital to the political economy of agricultural and natural resource policies in Indonesia and Thailand (Birner and Wittmer 2003; Rosyadi, Birner, and Zeller 2005). The second concept is technocratic and external influence, which has been shown to be uniquely important in explaining the knowledge–development interface and policy change in Africa (Jones, Datta,

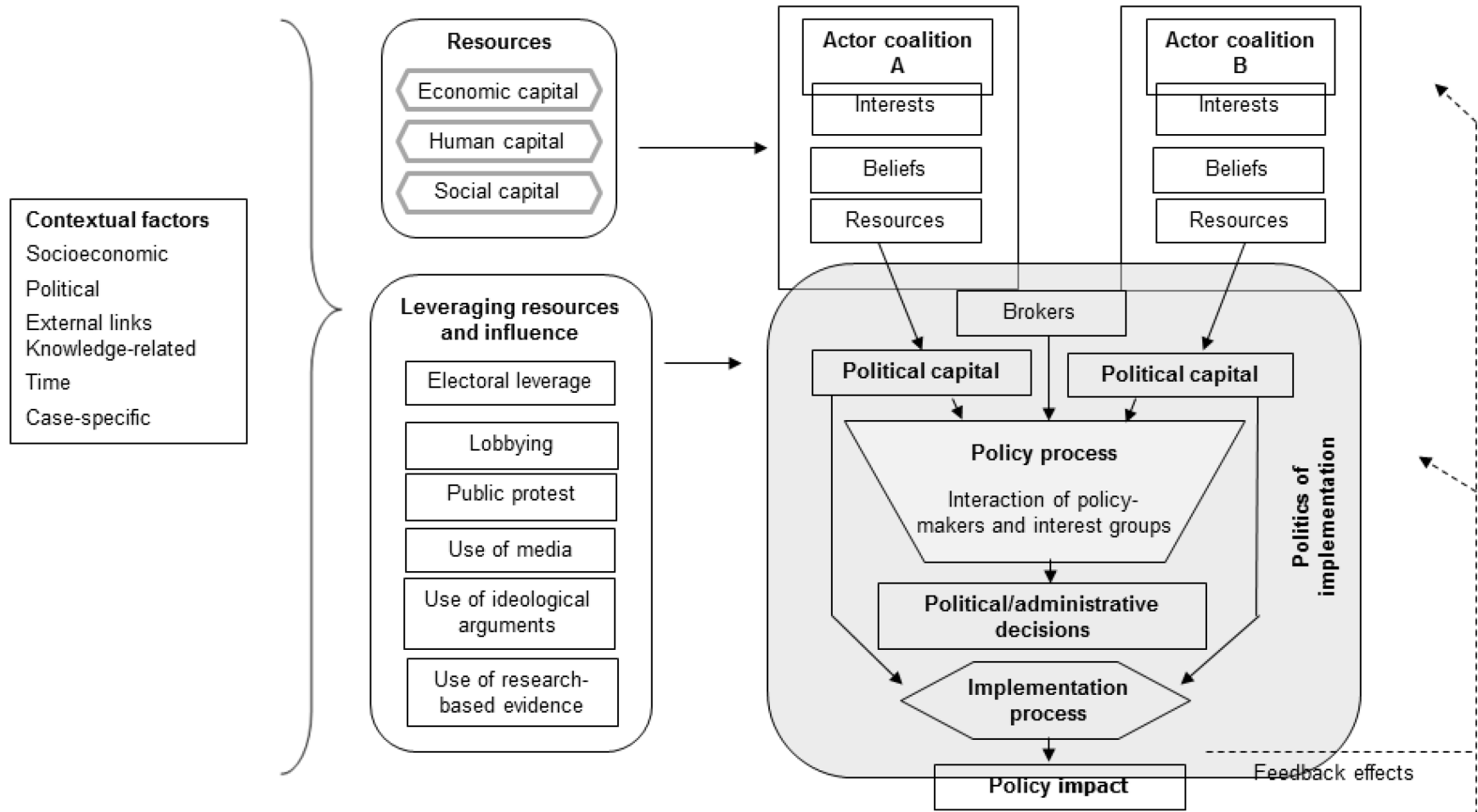
² Weible, Sabatier, and McQueen (2009) review the current stock of applications in the literature using the ACF approach to draw out lessons.

³ Birner and Resnick (2010) actually only introduce the concept of political capital to the ACF. Here we add yet another dimension to this, the concept of the knowledge–development interface as it relates to institutional (or bureaucratic and technocratic) capacities.

and Jones 2009; Keeley and Scoones 2003). Several case studies have emphasized the issues of capacity, efficiencies, and influence of external actors and associated policy narratives as particularly important in explaining how research ultimately influences policy change in the African context (Keeley and Scoones 2003; Young 2005; and Jones, Datta, and Jones 2009).

Figure 2.1 illustrates how we adapt these various concepts into Sabatier's ACF approach (Sabatier 2007). As can be seen in the figure, the framework distinguishes different *actor coalitions*, which are networks or groups of political actors that share common interests as well as common beliefs with regard to agricultural policies. One can often observe the formation of coalitions around two or three competing policy options (Sabatier and Jenkins-Smith 1999). As highlighted by the ACF, such coalitions may include not only economic interest groups but also members of the bureaucracy, legislators, civil society groups, applied researchers, and journalists. Using the concept of actor coalitions makes it possible to identify how various individual and organizational actors influence policies. In the case of agricultural policies, one often observes a coalition in favor of interventions such as price supports and input subsidies and a coalition that is against such policies and favors liberalization. With regard to African agriculture, the key question is whether a coalition emerges in support of policies that actually reach and support the majority smallholder sector. This is important in Malawi because of the number of smallholders and their potential contribution to the health of the economy, food security, and poverty, each of which has important political ramifications in the long run.

Figure 2.1—Advocacy coalition framework for analyzing role of knowledge in agricultural policy processes



Source: Adapted from Sabatier and Jenkins-Smith (1999) and Birner and Wittmer (2003).

The influence of an actor coalition on the policy process and outcomes depends on the coalition's interests, beliefs, and resources, all of which are shaped by a number of contextual factors. The concept of interests is largely self-explanatory. Sabatier and Jenkins-Smith (1993) distinguish three types of beliefs: core beliefs, policy beliefs, and secondary beliefs. Core beliefs relate to fundamental values, such as the role of equity as compared with other goals. Like religious beliefs, core beliefs rarely change. Policy beliefs are related to the policy solutions that actors consider appropriate to realize their values. As the above review shows, important policy beliefs with regard to agricultural policies may refer to the relative importance of subsidies, the private sector in promoting agricultural development, or food self-sufficiency. Secondary beliefs focus on the way in which a particular policy is implemented; an example is differing views on the appropriate strategy for targeting subsidies to smallholders. Secondary beliefs are more likely to change than core or policy beliefs.

Resources determining actor coalitions' strength include economic, social, and human capital (Figure 2.1). Economic capital refers to financial resources and social capital to the capacity of interest groups to act collectively, an important factor highlighted in the interest group literature. Human capital, on the other hand, can describe the combined stock of knowledge and skills among members of the interest group. This may be determined by their general levels of education and experience as well as access to a broader network of local and international experts (individuals or organizations) who share similar viewpoints.

Strategies to create political capital include the two mechanisms highlighted in the political economy models reviewed above: electoral leverage and lobbying. In addition, the framework captures a range of other tactics that interest coalitions may employ. For example, they may also use public protest and stage demonstrations to pursue their political demands. They may use a broker with influence within both spheres—the policy space and the interest coalition. Choosing the most appropriate political-capital-creating strategy depends on the types of resources that coalitions can mobilize and on political frame conditions. Voting obviously can only be used in a functioning democracy. Lobbying works well if coalition members have the financial resources or social capital in the form of membership in social groups that grants them access to political circles, or both. Brokering may be more efficient when an individual (or organization) within the coalition already possesses a high degree of political capital, is trusted and well regarded among policymakers, and is therefore in a good position to help champion a particular cause. Public protest, in contrast, requires social capital in the form of membership networks that can be mobilized for public action (Birner and Wittmer 2003).

Interest coalitions can also use ideological arguments in the public discourse, which is another strategy to create political capital. For example, interest coalitions in favor of smallholders may appeal to egalitarian ideologies, while using the media to generate public support. In the same context, external actors (donors and expatriates) may form their own coalition, or become engaged with local coalitions through individuals or institutions with sympathetic views. In this regard, global policy narratives can have strong influences in shaping local policies (Keeley and Scoones 2003; Young 2005). Attempting to change prevailing paradigms is also an important strategy: interest coalitions in favor of smallholder-oriented policies in Africa, for example, may still need to change a prevailing paradigm among policy elites that smallholders typically resist modernization. The use of scientific evidence can be a helpful strategy in this respect. However, research evidence, as obvious from the history of fertilizer policy in Malawi, is typically not a valued commodity in policy debates. Sabatier and Jenkins-Smith (1993) developed a set of hypotheses regarding the factors that influence the use of evidence in the policy process—these included, for example, the level of conflict in core beliefs between different coalitions and the analytical tractability of the problem at stake.

To understand how different interest coalitions can influence the policy process, the proposed framework uses the concept of political capital (mentioned above), which can be defined as the resources that actor coalitions use to realize outcomes that are in their interest and correspond to their beliefs (see Birner and Wittmer 2003). This concept draws on different political resource theories in economics and political science, including the work of Ilchman and Uphoff (1998), and resource mobilization theory. It

deals with the emergence, dynamics, and tactics of social movement organizations and examines the critical role that the mobilization of resources—for example, discretionary time and money of potential supporters—plays in their success (McCarthy and Zald 1977).

Coalitions of actor networks, employing the political capital they've been able to accrue, ultimately influence the policy process—that is, the interactions of policymakers with each other and with interest coalitions and voters. However, underlying the nature of the policy process itself, as among the actor coalitions, is the country context (similar in some respects to the ODI framework as described in Court and Young [2003]): the *socioeconomic context*—the state of agricultural and economic development, types of commodities, and sector dynamics (for example, their role in affecting general welfare and development), as well as local belief systems, practices, and colonial legacies that influence politics and knowledge generation and use; the *political context*—the characteristics of the political regime (that is, position in the spectrum between democratic versus authoritarian; parliamentary versus presidential, one-party versus multiparty, federal versus unitary, centralized versus decentralized), the scope for participatory policymaking (the extent to which different groups in society have voice in the policymaking process), political ideologies and paradigms, and the role of the media; *external links*—the scope for regional and international, particularly donor, influence; *knowledge-related context*—human and institutional capacities, including research capabilities, education, and technocratic capacities; *time-sensitive context*—economic or political crises, electoral cycles, food crises, shifts in development paradigms, and so on; and *case-specific context*—relating to the history of a specific policy.

As indicated in Figure 2.1, the framework captures both the politics of decisionmaking and the politics of implementation. Including an analysis of the political economy of policy implementation is important because policies often fail in the implementation stage (Thomas and Grindle 1990), and interest coalitions that lost out in the policy process can often undermine implementation. The debate on the implementation of structural adjustment policies reviewed earlier in Section 2 (“Research and Policy Links in the African Context”) underlines the need for study of the politics of implementing agricultural policies. Studying implementation is also important because agricultural policies typically require considerable state capacity for their effective implementation, and there is often a mismatch between policy choice and implementation capacity. Furthermore, institutional capacity (and the bureaucratic efficiency of government agencies tasked with implementing a particular policy) becomes an important influencing factor, one that generally affects the success of any policy changes, especially among African countries, as the case studies by Keeley and Scoones (2003) illustrate.

The feedback arrows in Figure 2.1 indicate that the framework is intended to be applied dynamically. The impact of a policy can influence future policy choices in various ways—for example, by altering the resources available to actors, generating new evidence, or shifting or adjusting policy beliefs.

3. TRACING THE EVOLUTION OF FERTILIZER POLICIES AND THE ROLE OF RESEARCH

For more than half a century, the agricultural policy landscape in Malawi has been dominated by the dual goals of promoting export-led agricultural growth and achieving self-sufficiency in white maize production, the preferred food staple in Malawi and a primary source of income for millions of smallholder farmers. The importance of white maize is captured well in the Malawian proverb *Chimanga ndi moyo*, or “Maize is life” (Smale 1995). Although agricultural policies have shifted over time in response to changing political, environmental, and socioeconomic factors (including domestic and external shocks), they have rarely strayed from the pursuit of these two essential goals. Among the key factors influencing achievement, increasing population pressure has undoubtedly brought to center stage policies targeted at improving maize productivity through the distribution of improved seeds and fertilizers. Evidence of this can be seen in the range of fertilizer policy interventions introduced over time in Malawi (see Table 3.1).

Using the fertilizer policy example as a unit of analysis, the review examines how fertilizer policies changed over time due to changing political and socioeconomic conditions (especially those surrounding key exogenous events) and the role (if any) that knowledge may have played in the process. It is organized around some of the key exogenous events that influenced major policy shifts, including the transition from colony to independent nation, the onset of structural adjustment programs (SAPs), high population growth and drought years, and regime change. How certain actors and coalitions have come to dominate the contemporary fertilizer policy landscape and the degree to which policy space or room to maneuver exists for research to influence future policies is explained. Additionally, the stable aspect of the political and socioeconomic context is distinguished from the more unstable (or those that change frequently). Overall, the review is intended to capture a number of core belief systems; contextual factors of political economy, external influence, and discourse; key socioeconomic events and crises; and key actor coalitions that influence the form of fertilizer policy responses over time.

Table 3.1—Highlights of fertilizer interventions in Malawi, 1964 to 1990

Phases	Program and duration	Components	Funding	Shocks/crises/event	Role of research/evidence
1964–1979	Marketing Board (ADMARC), 1964–1980.	Procurement and provision of seeds and fertilizer; pan-territorial pricing (including subsidized inputs).	ADMARC / Gov. of Malawi (GoM), from smallholder export crop revenues (prices well below export parity).	World oil and debt crises in mid-to-late 1970s lead to macroeconomic imbalances and structural adjustment programs by 1981.	Minor role, technical expertise mostly through external advisers funded by donors.
1979–1998	Under ADMARC, Smallholder Fertilizer Revolving Fund (SFRF) and Fertilizer Subsidy Removal Program (FSRP), 1981–1986.	Procurement and provision of fertilizer, while slowly reducing subsidies over time.	ADMARC/GoM, from smallholder export crop revenues.	Dependency on World Bank and Int. Monetary Fund (IMF) loans force GoM to introduce structural adjustment and stabilization policies.	Minor role, technical expertise mostly via World Bank and IMF advisers (influence of Washington Consensus on market liberalization and reforms).
	Under ADMARC, SFRF becomes a trust fund. FSRP is suspended, 1987–1993.	Procurement and provision of fertilizer, and subsidies reintroduced. Liberalization of output markets for all crops (except cotton and tobacco).	ADMARC/GoM, from smallholder export crop revenues, and donors (following food crisis of 1986/87).	Major drought in 1986/87 season forces GoM to reintervene in agricultural markets (input and outputs). Donors begin to pay attention to maize hybrids.	
	ADMARC, resumption of FSRP, 1993–1996.	Subsidy eliminated under FSRP by 1995/96, private-sector participation is permitted for seed and fertilizer.		New structural adjustment and stabilization programs, liberalization of maize seed production and marketing. Multiparty elections in 1994 end Banda's era, and Muluzi takes over. Influx of refugees from Mozambique.	
	Agricultural Productivity Investment Program, 1997/98.	Fertilizer and seed on credit to creditworthy farmers.	GoM with EU funds.		
1999–2004	Starter Pack Program (I and II), 1998/99 and 2000/1.	Free distribution of fertilizer and other inputs to 2.86 million beneficiaries.	GoM and donors (Dept. for Int. Development [DFID], EU, World Bank, and others).	Earlier droughts (1992, 1994, and looming 1998), in addition to war in Mozambique. GoM forms a Food Security Task Force.	Major role in development of Starter Pack and recommendations (Levy 2005).
	Targeted Input Program, 2000/1–2004/5.	Scaled down version of Starter Pack.	GoM and donors (DFID, EU, World Bank and others).	IMF restrictions of GoM's contribution, giving more leverage to donors to scale down.	
2005–2010	Agriculture Input Subsidy Program, 2005/6 to now.	Fertilizer and seeds (maize and nonmaize) to identified smallholders through voucher system.	GoM, donors supported the program.	Elections and new leadership.	Minor role, mostly for impact assessment study, funded by donors (Dorward et al. 2008).
	Inputs for Assets Program. Fertilizer Subsidy Program, 2005/06–current.		Various donors. GoM, DFID.		

Sources: Compiled from various sources, including Kumwenda and Phiri (2010), Harrigan (2003, 2008), Kherallah and Govindan (1999), Minot et al. (2000), Malawi, Ministry of Agriculture (2007).

Adapting from Booth et al. (2006) and others, the evolution of fertilizer policy in Malawi can be broken into five distinct periods. The first is the pre-independence or colonial era, which laid the groundwork for the dualistic agricultural policy environment that followed. Second is the early post-independence period, 1964–1979, in which a top-down and relatively stable policy environment that focused on an estate-led agricultural growth strategy prevailed. Third is the period 1980–1998, an era of structural adjustment in which agricultural policies experienced U-turns and full circles as disagreements occurred often between the Government of Malawi (GoM) and donors with shifting priorities (see Harrigan 2003). A fourth phase is the period 1999–2004, in which a breakdown of the state’s capacity to formulate and implement policies to manage the economy and food security crises occurred. During the final period, 2005–present, a stronger presidential influence over the Ministry of Agriculture has emerged.

Late Colonial Era—Origins of a Dualistic Agricultural Sector, 1945–1964

The origins of Malawi’s dualistic agricultural sector—a smallholder sector producing mostly food crops (principally maize) and an export sector composed of large estates—predates independence from British colonial rule in 1964. At that time maize was predominantly a subsistence crop and of little interest to colonial administrators, except for its role in helping to maintain low wages on estate farms. It was common for laborers to rely on their own maize production for consumption. Racial and cultural biases favored the promotion of large-scale commercial plantations managed by white expatriates as the most efficient means of production for export earnings, in comparison to the more primitive African smallholder system. The latter would only become more important for ensuring national food security following the devastating famine of 1949. In the wake of the famine, for the first time in Malawi’s history, fertilizer subsidies were introduced for use by smallholder producers of white maize (Kumwenda and Phiri 2010) and research and development (R&D) was also undertaken. The provision of inputs such as fertilizer, seeds, and credit was handled by a number of colonial marketing boards staffed with well-trained expatriates and primarily servicing the needs of the large estate sector.

The post–World War II period—also referred to in the literature as the late-colonial period—marked a shift in colonial policy from simply extracting revenues from export crops to an expansion in development aid, in which marketing boards and technical services were expanded to food crops (Young 2004). Relying mostly on expatriate expertise on short-term contracts, agricultural policies were predominantly influenced by the scientific thinking and policy debates originating in Great Britain or elsewhere. For example, the common practice of promoting soil conservation methods was influenced in great part by the experience of the North American dustbowl of the 1930s (Leach and Mearns 1996). However, this view on soil conservation methods was also popular for political and economic reasons. It essentially helped to justify infamous policies prohibiting Africans from growing export crops, and in some cases displaced them to make room for the expanding estates. Little research had been undertaken on the ground to validate such ideas—they stemmed instead from beliefs shared among technical experts and policymakers whose own livelihoods depended on maintaining the status quo. On the other hand, African smallholders were less organized and had little power to contribute to the policy debate (Leach and Mearns 1996). Despite the biased perspectives of policy experts, there were some modest successes in R&D, but mostly for economically important export crops such as coffee, tea, and tobacco (Pardey, Roseboom, and Beintema 1997). This system would ultimately shape the development pathways and policy landscape that emerged after independence.⁴

⁴ For further reading on the history of agriculture in Malawi over the past 150 years, see Javdani (2009).

Independence—Heavy State Intervention and Economic Growth, 1964–1979

At the time of independence, the new government of Kamuzu Banda retained the dualistic nature of the agricultural sector inherited from the British, while seeking to reverse the racial bias against African participation in the large estate export sector. Policies to expand white maize production to ensure food self-sufficiency and political legitimacy also became more commonplace during this period—the risk of not promoting production would have been too great. Without a significant global market for white maize, any domestic production shortfalls would have required imports of the less desirable yellow maize variety, an outcome that would have been perceived by the majority of the electorate as a major policy failure (Jayne and Jones 1997). Post-independence politics in Malawi was therefore shaped by the desire to favor the interests of rural producers through subsidized production over the interests of the more affluent urban minority through subsidized food purchases (Tshibaka 1992).

To quickly reverse the inherited colonial biases against African farmers, Banda increased the number of maize-buying stations in areas previously excluded under colonial rule and replaced expatriates with Malawians to manage the large estates. Direct state control over grain supplies and pricing was carried on as before, but with expanded access by smallholders to credit and subsidized inputs. Aside from these changes, there were no other fundamental alterations in the marketing institutions and broader policy framework inherited from the colonial system (Jayne and Jones 1997). Malawian policymakers, like their colonial predecessors, had little faith in the potential contribution of smallholder agriculture to economic growth. As a result, by the 1970s, the estate sector grew to account for 95 percent of export earnings (Lele 1990). This export-led growth strategy was made possible by implicit taxation of smallholder maize output via pan-territorial pricing schemes that were well below prevailing market prices. The revenues collected from these schemes were used to subsidize inputs targeted at the large estate export sector.

The dualism of the Malawian agricultural sector and heavy-handed state intervention worked so long as sufficient rent could be extracted from the smallholder sector and world prices of Malawi's key export crops remained favorable. These conditions prevailed in the two decades following independence, resulting in annual economic growth rates topping 5 percent, led by rapid output growth from the large estates of up to 10 percent per year, compared with only 3 percent for the smallholder subsector (Booth et al. 2006). Conditions would change dramatically in the late 1970s and into the early 1980s, however, following a global oil crisis and rising defaults on public debt in the developing world.

During the first two decades under Kamuzu Banda, research and science were used primarily to reinforce the colonial system that promoted export growth and food self-sufficiency in white maize. Both researchers and technocrats during this period maintained a top-down (even paternalistic) approach to the design and implementation of agricultural policies. Banda himself valued science and technical knowledge and relied often on senior technocrats in shaping policies in agriculture. In fact, the civil service grew to become highly professional and motivated under Banda—civil servants knew that he personally read and commented on all key policy documents and were therefore afraid of substandard performance (Booth et al. 2006). The authoritarian style of Banda, however, meant that he would sometimes overrule technical advice in favor of his own development agenda. In cases where technical advice was perceived as contradicting the president, it was not uncommon for senior officials to be demoted, lose their jobs, or even be imprisoned. Despite Banda's dictatorial tendencies, the high degree of professionalism of the civil service “meant, among other things, that it was much easier than it has now become to manage donor-driven initiatives. There are examples from this period of the government turning down offers of donor funding for projects which the government felt were not viable or did not fit the country's development priorities” (Booth et al. 2006, 24).

Structural Adjustment—Rising Poverty and Food Insecurity, 1980–1998

By the early 1980s, Malawi was facing serious macroeconomic imbalances due to an overvalued exchange rate, rising import and export costs, and the inability to borrow from international banks to pay the interest on debts accumulated during its first two decades of independence. Malawi's acceptance of conditional SAP loans, introduced by the World Bank and the International Monetary Fund to correct prevailing macroeconomic imbalances, fundamentally threatened the government's existence as it began the difficult task of dismantling more than two decades (if we include the late-colonial period) of heavy state intervention in domestic agricultural production and marketing activities.

The acceptance of the SAPs was not a smooth ride. Jane Harrigan's account of the events, policy debates, and actors involved throughout this period points to a number of about-faces as the government struggled to negotiate the terms for dismantling its hold over the economy and food security. For example, following a drought and threats of significant maize production shortfalls in 1987, the GoM reintroduced fertilizer subsidies and distributed hybrid seeds with the encouragement of donors (Smale 1995). The intervention produced a supply response that mimicked Malawi's first green revolution, although it cannot be attributed solely to the fertilizer subsidy and hybrid seeds. An overvaluation of the local currency that made the price of imported fertilizer artificially low, as well as a political climate that essentially encouraged access to credit irrespective of any past defaults, also helped (Whiteside and Carr 1997). The reintroduction of subsidies in the late 1980s was short-lived, however, as donor pressure to proceed with economic liberalization and the elimination of subsidies returned. In the early 1990s, subsidies were finally removed altogether and the Fertilizer Farm Feeds and Remedies Act was repealed to allow for private-sector participation in importation and distribution of fertilizers (Kumwenda and Phiri 2010). Fertilizer prices subsequently soared, with the government only implementing relatively small safety net programs, namely the Drought Recovery Inputs Program in the 1994/95 season and the Supplementary Input Program in the 1995/96 season. Ultimately, the fragile smallholder sector collapsed and, combined with growing pressure for political reform, triggered changes in the political system. After almost 30 years of authoritarian rule under President Kamuzu Banda, Malawi became a multiparty democracy in 1994, according to some marking the end of the postcolonial period in Malawi's history (Young 2004).

The collapse of the smallholder sector can be attributed to its general neglect, first by the colonialists and later by the Banda regime. Although structural adjustment measures for macroeconomic balance were necessary, they did not deal with the underlying structural constraints to improving the welfare of smallholder farmers (Tshibaka, 1992). Land and labor constraints, the lack of appropriate technologies, the lack of access to improved inputs and services, as well as unreliable markets were never sufficiently addressed. Policies that were meant to diversify export crop production and improve food self-sufficiency by achieving higher maize yields had, in fact, the opposite effect.

On the research side, a general deterioration occurred in the technical capacity of the Ministry of Agriculture, other government agencies, and research institutions as structural adjustment reforms were implemented. Budget cuts not only reduced the ministry's influence in the policy process but also progressively drained the ministry's technical expertise and status (Booth et al. 2006). Moreover, greater liberalization brought with it greater institutional confusion and a policy landscape marked by endless shifting and incoherence as government and donors repositioned themselves to maintain power and influence (Peters 2006; Harrigan 2003). Observers of this period noted that the balance of power between donors and the GoM was not entirely one-sided, as the government came to realize that despite strong donor pressure it could violate aid conditionality by reintroducing fertilizer subsidies, especially since donors had been referring to Malawi as a shining example of structural adjustment (Booth et al. 2006, referring to Harrigan 1991 and 2001).

As SAPs replaced government policy, many programs failed because the government simply was not committed to them in practice. But even more important, SAPs were often not well grounded in evidence from research or consultations with local experts. For example, according to Booth et al. (2006), when smallholders were finally allowed to grow tobacco, a reform strategy pushed by the SAPs, the move

initially led to overproduction, because policymakers did not account for the fact that Malawi faced an unofficial tobacco export quota by major buyers in world markets.

Emerging Democracy—Poor State Capacity and Donor Skepticism, 1999–2004

Following the emergence of a multiparty democracy in 1994, fertilizer subsidies grew even more politicized and have since been introduced and reintroduced repeatedly in various forms, depending on the changing relationships and views among donors and the GoM. In the absence of a comprehensive fertilizer policy, the *National Fertilizer Strategy* (Malawi, Ministry of Agriculture and Food Security 2007) from this period stated that the government would periodically intervene in fertilizer markets by issuing directives and guidelines on importation, marketing, and application rates. However, this changed in 1996 in the face of a looming maize shortfall, a series of droughts in the early 1990s, a growing influx of refugees from war-torn Mozambique, and the formation of a Maize Productivity Task Force (MPTF) composed of scientists, economists, and policymakers (Levy 2005; Blackie and Mann 2005). The MPTF was charged by the highest levels in government to establish a set of recommendations to reverse the decline in maize productivity and to ensure sufficient food supplies in the future. The MPTF's activities were funded by both the GoM and donors. The MPTF's greatest contribution was the universal Starter Pack Scheme (SPS), supported by a rigorous and extensive body of research, which recommended that all 2.8 million rural farm households receive a free package of inputs containing 15 kilograms (kg) of fertilizer, 2 kg of improved maize seed, and 1 kg of legume seed (Levy 2005).

From the start, donors strongly opposed the SPS on matters of principle rather than science. Disagreements centered on issues of beneficiary dependency, impact on the private sector, cost-effectiveness, and the general fear that the scheme would only further politicize fertilizer subsidies. Hence, despite a maize production increase to 2.5 million tons⁵ in the 1998/99 season from 1.8 million tons in the previous year, the scheme was eventually reduced to the Targeted Inputs Program, or TIP, by the turn of the century (Stevens, Devereux, and Kennan 2002). Key elements of the change included reduction in the number of beneficiaries (from 2.8 million to 1.5 million), the introduction of open-pollinated maize varieties at the expense of hybrid varieties, and the introduction of a voucher system (Kumwenda and Phiri 2010). The scaling down of the intensity of public support to smallholder production, combined with adverse weather conditions, would eventually lead to severe food crises in the 2002/3 and 2004/5 seasons, despite an expansion of TIP, now called Extended TIP.

The research and technical capacities of the civil service in the post-Banda period, especially under Banda's successor, Bakili Muluzi, deteriorated further. Whereas Banda's civil service had been relatively well paid, disciplined, and professional, by the time of Muluzi's government, it was demoralized, underpaid, and easily corrupted (Booth et al. 2007). Most of the able and technically qualified people in the Ministry of Agriculture left for donor agencies or international NGOs, where their effort was better appreciated and compensated. In practical terms, donors intervened to fill some of the gaps left by a gradually eroding civil service, but with many inconsistencies. The tendency for donors to shift among externally conceived initiatives (as they reported to their own governments) in the search for a magic bullet to fix Malawi's problems only contributed to the problem in ways that did not sustain long-term commitments.

One area of research in which donors invested substantially was in commissioning policy research studies to strengthen support for their viewpoints, or in search of practical solutions to ensure the success of future policies and investments. A number of policy researchers contributing extensively to our understanding of the agricultural and fertilizer policy landscape in Malawi were active during this period, including Malcolm Blackie, Stephen Carr, Anne Conroy, Ephraim Chirwa, Blessings Chinsinga, Jane Harrigan, Paul Heisey, Jonathan Kydd, Melinda Smale, and Alistair Orr (among these, Anne Conroy and Stephen Carr have also served as policy advisers to the Malawian president). However, in spite of the wealth of evidence in agricultural policy research in Malawi, little of it has come to play a serious role in

⁵ All references to tons are to metric tons.

the policymaking arena. In only a few instances has this failure been contradicted, as in the SPS example and in response to the 1987 drought episode, and then only in situations when the government faced a looming food security crisis.

The SPS case is particularly interesting for two main reasons. First, it was the one time when the research community, headed by expatriates, was taken seriously by policymakers despite differences of opinion among donors. Second, the technical knowledge that drove the SPS has lived on, partially influencing the design of the current fertilizer subsidy. The experience is particularly noteworthy for this study, and we therefore return to it later when considering the conditions that allowed sufficient room for research to enter the policy process in Malawi.

Greater Pragmatism and a Green Revolution in the Making? 2005–Current

In the run-up to the elections in 2004, fertilizer subsidies had again taken center stage. The attention on agriculture came in response to the devastating 2004/5 hunger crisis, which prompted the Parliamentary Committee on Agriculture and Natural Resources to commission a critical review of the nation's food security situation, state of agriculture, and possible remedies (Chinsinga 2007a). The study recommended reintroducing a universal fertilizer subsidy for maize and tobacco. The two main political parties held similar but also divergent views on the issue: both supported the idea of universal fertilizer subsidies, but the ruling United Democratic Front (UDF) favored a subsidy for maize farmers only, whereas the Malawi Congress Party advocated for an inclusion of tobacco farmers (Chirwa, Kydd, and Dorward 2006), which would appeal primarily to farmers in their traditional stronghold of the central region.

Bingu wa Mutharika, hand-picked by the former president Muluzi, won the election on the UDF ticket. An economist by training, Mutharika focused his attention on ensuring productive long-term growth, noting the decline in productive sectors such as agriculture. Although the president initially equivocated on the subject of a universal subsidy in an effort to win back donors who had withdrawn their support, he eventually relented under mounting pressure from opposition parties in parliament. In Mutharika's first year, the government instituted the Agriculture Input Subsidy Program (AISP, now FISP) based on a voucher system.

In some respects, research and evidence played a useful role in supporting the initial arguments on both sides of the debate—those who supported a more targeted and less costly subsidy (for example, the president himself) and those who favored a universal subsidy (the opposition in parliament). Among the coalition of actors seeking a universal subsidy, it was argued that it was better to subsidize production rather than consumption. The experience of the 2004/5 hunger crisis provided further support for this group by pointing to the cost of food aid imports (13 billion Malawian kwacha [MK]) in comparison to the proposed bill for a universal subsidy (MK 4.7 billion). According to Chinsinga (2007a), an earlier study by Stambuli (2002) that observed that maize imports constituted the second largest item of the Malawian budget was also referred to in the discourse and debates that ensued. Evidently, Stambuli presented figures showing how the cost of maize imports to feed five families was much higher than the cost to procure enough fertilizer to produce the same amount of maize. In addition, while no new research was carried out to inform the design process of the AISP, elements of the SPS found their way into the program's design.

Although donors initially opposed the subsidy program, they were eventually forced to recognize its success, as its impact on maize yields was significant (Dorward, Hazell, and Poulton 2007). It has also been suggested that the taming of donor resistance was partially an effect of the steadfastness of Malawian policymakers on the subject (see Chinsinga 2007a). Despite its successes, balancing the need to ensure the food security of the population through subsidized fertilizer while encouraging private-sector investment in input markets remains difficult for the government. Some research suggests that smart subsidies implemented through the private sector would be the preferred approach, as it could achieve both goals (Minot and Benson 2009).

Targeting specific beneficiary groups continues to be a challenge, as does ensuring the economic viability and sustainability of long-term fertilizer policy interventions. A study of the 2006/7 fertilizer subsidy found that both female-headed and poor households were less likely to receive vouchers than other households (Dorward and Chirwa 2009), and Chibwana et al. (2011) reached the same conclusions in their study of the 2008/9 FISP. Dorward and Chirwa (2009) also quantified the exploding cost of the subsidy (it more than quadrupled in size in its first four years) and the reliability of spillages in its budget: the first four years of the program saw regular cost overruns of 40 percent or more, with total overruns in the 2008/9 program estimated to equal 5 percent of the national budget.

4. CONCLUSION AND SUMMARY DISCUSSION

Some general lessons can be drawn from this brief overview. First, it is necessary to strengthen the Ministry of Agriculture's capacity for policy analysis to become more proactive in the policy process. This is illustrated in the concluding remarks of a study that reviewed Malawi's experience designing and implementing its Social Protection Policy – an experience that is not too far different from that of shaping agricultural policies:

Donor politics has been rife because of the failure of the government to provide firm leadership and technical guidance to the policy making process. The desire for the government to play a leadership role in the policy process as the basis for commitment and ownership has remained essentially at the level of rhetoric. The agencies entrusted with the leadership role are not only understaffed but are also not very well versed with the nuances of social protection. Most of the key building blocks of the policy have been designed by consultants sourced and paid for by development partners. (Chinsinga 2007b, 28)

Given the manner in which the Ministry of Agriculture has historically operated in Malawi, a big challenge it now faces is to become more responsive to its diverse constituencies, especially as it operates in an increasingly democratic environment (Cabral and Scoones 2006). Because dealing with policy processes is difficult for such a technical line ministry with a staff composed of trained agronomists, veterinarians, soil conservationists, and economists, it often is easier to maintain a top-down, technical approach for advising policymakers. With this observation in mind, Cabral and Scoones argue that “a big challenge for a revitalized, twenty-first century ministry of agriculture is to improve the capacity and competence in convening, managing and understanding policy processes” (2006, 22).

Second, bargaining between donors and government has not always been a negative, as it has strengthened the government's ability to argue its position and assert its legitimacy in making its own policy decisions. In the past three decades, as donors increasingly substituted for government institutions with weak capacity to make and implement policies, agricultural policy processes in Malawi have been characterized by overweening external influence, incoherence, and policymaking with strong ideological leanings. In maneuvering within this environment, the current GoM has shown stronger leadership by relying more on its own legitimate political base—setting forth a clear policy agenda that it is determined to implement at any cost (Chinsinga 2007a). The result has been a reconfiguring of actors, such as the softening of the donor coalition previously opposed to subsidies (for example, the Department for International Development, the U.S. Agency for International Development, and the World Bank); they have since backed down on their anti-subsidy line to focus more attention on efficiency issues (Chinsinga 2007a). Because of the GoM's assertiveness, the question in the fertilizer policy debate is no longer whether Malawi should have a fertilizer subsidy, but rather what form the subsidy should take and how it can be made more efficient over time.

Third, while research in agricultural policymaking has played a historically marginal role, the times when it has influenced policy is whenever researchers were brought into the policy making circle at a time of crisis. While this offered a window of opportunity for policy impact, the researchers involved had earned the trust and credibility of the policy makers who demanded their technical input. To become more relevant in the policy process in the future, researchers therefore have to also learn to become familiar with the political context, including the policy actors and coalitions involved, if they are to have any chance of influencing the policy process in the future. Certainly, the experience of the creation of the 2005/6 fertilizer subsidy underscores the complexity of the policy process; it involved negotiation and bargaining among distinctive coalitions and actors and the political and economic resources available to each (those against a comprehensive fertilizer subsidy and those against). This complexity has multiple implications. Many groups fail to foresee policy failures because they do not understand the intricacies of policy implementation or why particular policies lack local relevance. Future research will require a more

nuanced understanding of local realities, the actors and coalitions involved, and the links among them—as we attempted in the follow-up paper to this literature review (see Aberman et al. 2012).

Finally, while the paper draws on existing theoretical frameworks to understand the role of research in the policy process more generally, a better framework still needs to be developed in describing the standard experiences and realities of the African agricultural policy landscape. This will require further investigations to compare and contrast the Malawian experience with the policy processes inherent in other countries in the region as well.

Although the literature is full of several theoretical models, most have relied on the experience of the Western models of the policy process and been based on multiple disciplines in the political sciences, public policy, and sociology. In Africa, the only models in place are limited to offering a framework that mostly serves as a guide for researchers and development practitioners to have influence in the policy process. More is needed to test frameworks that are more appropriate to understanding the policy process itself.

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