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The Making of Public Investments

Champions, Coordination, and Characteristics of
Nutrition Interventions

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ABSTRACT

To better support allocations of public investment—especially where needs are high and resources scarce—it is first instructive to have an in-depth understanding of what drives realized public investment behavior. The study applies a process-tracing approach to test and build theories around models that center on the characteristics of investments and the role of agents. In the context of public investment in nutrition in a low-resource economy, the analysis finds that public decisionmakers strongly favor highly visible nutrition investments with a short lag between spending incurred and outcomes achieved. Coordination among agents that allocate funds to nutrition takes mostly a spatial nature, resulting in greater geographic equity of public investment. Champions as change agents have an influential role in attracting more funding to nutrition and improving its allocation, but their influence is fleeting and difficult to sustain.

Keywords: public investments, nutrition, Mozambique, coordination, champions

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1. INTRODUCTION

Much effort has been expended to identify what types of public expenditures are most needed in low-income economies to raise the well-being of such populations, especially of the poor among them (Paternostro, Rajaram, and Tiongson 2007; Devarajan, Swaroop, and Zou 1996; Fan 2008; Mogues, Fan, and Benin 2015). Understanding how best to allocate scarce resources is a significant concern in any context, but it is a particularly pressing one in developing economies, where limited public budgets are matched only by the ubiquity of wants. Despite the resource scarcity in such economies, and even where research points to clear priorities for public investment, there are ample examples of inefficient public spending patterns—such as, for example, underinvestment in high-impact activities taking place side by side with overinvestment in areas that are not yielding results (McMahon 1991; Liu 2013).

The existence of widespread misallocation of funds should not only lead research to reexamine the returns to alternative uses of funds but guide it to shed light on why public expenditure portfolios—for example, across sectors, within sectors, across geographic areas—deviate from portfolios designed to maximize the economic development of poor countries. More specifically, it is instructive to understand why governments and other public entities, such as international development agencies, spend money the way that they spend money. Insights on this question will help guide efforts to steer investments in developing economies in the right direction, likely at least as effectively as insights on what types of resource allocations yield the greatest impacts on economic development and growth.

Authors have advanced a number of theories to attempt to explain possible factors that influence public spending decisions. Those include theories on public spending determinants such as corruption (de la Croix and Delavallade 2009), politics in an intergenerational framework (Song, Storesletten, and Zilibotti 2012), and the interplay between politicians and bureaucrats (Ting 2012). Much of the available empirical evidence consists of cross-country econometric analysis of determinants of public spending (for example, Ghafoor, Weiss, and Jalilian 2000 on the effect of donors on government expenditures); such analysis has to be sufficiently generic and broad that pertinent data are available across a multitude of countries. The few country-specific empirical inquiries are often in the context of developed economies (for example, Tridimas 1999 on the determinants of public consumption expenditures in the United Kingdom), which differ from poor economies in several structural features, and therefore lessons learned are less pertinent to understanding the drivers of resource allocation decisions in low-income economies.

This study provides an important contribution to the field by undertaking a country-level empirical examination of the drivers of public resource allocation in a poor-country context, with the empirics underpinned by careful identification of pertinent theories for the context at hand. By identifying and testing causal pathways between influencing factors and the outcome of public allocations, future efforts to increase public funding for a given sector can be better targeted to effectively influence public administrators. We use a case study approach to test theories that can be grouped into *investment-centric* and *agent-centric* frameworks to explain what drives the quantity and composition of public resource flows.

Theory is empirically applied to nutrition in Mozambique. The multisector nature of nutrition offers an opportunity to compare funding decisions in a number of relevant sectors and to examine the functioning of coordination across sectors. In recent years nutrition has gained attention as a priority for social-sector investments in developing countries due in part to definitive findings on the long-term health and human capital implications of malnutrition (Victora et al. 2008), effective interventions to combat malnutrition (Bhutta et al. 2008; Bhutta et al. 2013), and the long-term returns to nutrition investments (Hoddinott et al. 2013). Yet funding for nutrition from donors has not met the estimated required spending for attaining significant gains in malnutrition reduction at the global level (Dangour, Diaz, and Sullivan 2012).

Although this case study focuses on nutrition, the theories on public resource allocation determinants presented and tested here are intended to apply to a range of areas that rely on public financing for the provision of public goods and services. In the next section we review existing theory on

nutrition governance generally and present a framework for determinants of public spending that we use as the foundation for the empirical investigation. The second half of the paper focuses on nutrition in Mozambique; the empirical findings from the study are discussed, looking first at investment characteristics and then at the role of actors in influencing investment decisions. We conclude with a discussion of the broader policy implications of the findings and identify remaining gaps in research on the drivers of public investment decisions.

2. THEORETICAL BASIS

Recent research on nutrition has highlighted the importance of governance factors in improving nutrition outcomes (Nisbett et al. 2014) and the need for building an understanding of the political economy aspects of nutrition (Reich and Balarajan 2014). Sunguya et al. (2014) analyze nutrition governance systems and policies in low- and middle-income countries, and Gillespie et al. (2013) outline a framework for how enabling environments can be cultivated and sustained to improve nutrition outcomes.

This study considers theories from a number of disciplines including public administration, economics, political science, public finance, and organizational science in an endeavor to identify drivers of public investment in nutrition. Mogues (2015) reviews such theories and offers a broad framework of factors influencing investment decisions in the agricultural sector. In this paper, we isolate key elements from that framework critical to understanding public resource allocation decisions in an area like nutrition, and we expand on the theoretical thinking on those selected elements.

Specifically, we consider investment-centric and agent-centric theories of public resource allocation decisionmaking. We define *investment-centric* theories as those that explicate how characteristics of the investments themselves—or of the outputs resulting from them—affect the likelihood that public decisionmakers and bureaucrats regard such investments as attractive propositions. Therefore, such characteristics drive whether the investments will in fact be made. The study identifies *visibility* and *lag* as primary characteristics of public investment in this regard and discusses them theoretically and empirically. *Agent-centric* theories, in contrast, focus on the features, incentives, and constraints of key agents and actors as determining factors of public resource allocation. Herein, the analysis focuses on *coordination* among actors and on the role of *champions* in driving public resource allocation.

Investment-centric Factor: Visibility

One of the main ways policymakers can secure political credit for an investment they make is by ensuring that the investment is sufficiently visible to those from whom they seek recognition. The constituencies so targeted may be political supporters policymakers seek to retain (Cox 2009) or swing voters and opposition-supporting groups that need to be won over (Weghorst and Lindberg 2013). However, rather than first identifying optimal investments, by some economic or social calculus, and then ensuring that those investments get noticed, it is more often the case that the choice of how to spend budgetary resources is driven by what is most likely to get noticed (Keefer and Khemani 2005). In other words, the degree of visibility of alternative outputs from resource use itself can be a strong determining factor of public resource allocation decisions. The concept of visibility can take different shapes and can make itself felt in different ways. One manifestation of it is literal: certain types of public spending can lead to outputs—services, facilities, and so on—that are more visible to the citizen's eye than others. For example, spending funds on transportation or building infrastructure, such as roads or school facilities, results in “hardware” that is hard to miss by residents in the localities where such investments were made (Veiga and Veiga 2013). In contrast, an investment in improving the quality of service provider staff, such as through better training for civil engineers or teachers, is not directly visible and citizens are perhaps less likely to take it into account when considering the performance of public decisionmakers (Veiga and Veiga 2007).

But visibility can also manifest itself in ways pertaining to the proximity of the spending to the citizen. Cash transfers to citizens—for example, to select groups such as the poor or elderly, or contingent upon recipients' behavior and actions such as sending their children to school or adopting particular farming practices or inputs—are the most direct way that public resources reach people (Labonne 2013). This type of expenditure may stand out in degree of visibility compared with the earlier example of building infrastructure, not because the latter is not easily visually discernable, but because of the proximity of the former to the citizen. Rogoff (1990) presents a more abstracted version of this phenomenon in his theory of political budget cycles, with more visible government consumption

contrasted with less visible public investment. The citizen is even less likely to be mistaken about whether the government has spent money when that money directly reaches his or her bank account or pocket than if the government constructs facilities that citizens can use for their benefit. (Schuknecht [2000], on the other hand, argues that the unwieldiness of current expenditures, such as cash transfers, and the difficulty in discontinuing them when their political usefulness has ceased as compared to doing the same with capital expenditures make cash transfers a less attractive short-term political tool for public officials.) Of course, the same logic may result in visible transfers being avoided in favor of invisible transfers, such as through price controls or trade taxes (Winters et al. 1998), if making transfers salient may carry political costs, when the transfers in question are redistributive, that is, from one economic group or sector to another.

The reason that the influence of visibility on resource allocation ultimately matters is what is more versus less visible may correlate with what are more versus less useful ways to allocate budgets. In particular, it can be a concern when the correlation is negative, that is, when the expenditures that are more visible contribute less to desirable economic outcomes. In developing countries, a common misallocation persists in sectors central to development and human welfare such as health and education. The construction of health centers can be announced with fanfare and attract attention, but the clinics fail to have the most rudimentary equipment and basic medical supplies, or schools are set up but lack necessary textbooks. In this kind of example, reallocating funds from capital expenditure on buildings to operational expenditure on supplies can leave communities better off (Collier, Dercon, and MacKinnon 2002; Keefer and Khemani 2005).

Investment-centric Factor: Lag

Another factor that can affect political recognition for public investment choices is lag—the time it takes for intermediate outputs or final outcomes to materialize from the investment choices. Incentives for politicians to undertake types of public spending that have a long lag can be dampened given that a long lag can increase the probability that they are no longer in office by the time the returns from the expenditures materialize, and thus no longer in a position to accumulate credit for them. A fairly large body of work on political budget cycles engages a related albeit not identical idea: politicians increase expenditures—and make other strategic decisions concerning the composition of expenditures—in the period shortly before elections in order to increase the chance of gaining or retaining political office (Rogoff 1990).

Political-budget-cycle theories interface with the notion that the duration from spending to outcome affects spending behavior, as follows: political-budget-cycle theory models voters' beliefs that a politician's competence is partially persistent over time: it can evolve over time between two electoral periods but does so slowly, such that competence right before an election is fairly equal to competence immediately following the election. Given the difficulty for voters to perfectly observe actual competence, they interpret the quantity of public goods provided as a signal of competence. Politicians then react to that belief by increasing pre-election spending in order to maximize votes in the ensuing election. Evidence points to public-budget-cycle effects being higher in the cases of younger democracies, newer parties, and developing countries (Brender and Drazen 2005; Shi and Svensson 2006; Hanusch and Keefer 2014).¹

However, while political-budget-cycle theory considers the time dimension of public spending by identifying *when* spending occurs, the lag dimension articulated above concerns what type of spending will be undertaken based on the time it takes for the expenditure to come to fruition in the form of delivery of services, infrastructure, or other benefits to citizens. There is scarce literature that speaks directly to this phenomenon. Theoretical work proposes that another disincentive to investing in public goods with delayed outcomes is that even if the average returns to such investments are higher, there is

¹ In contrast, private investment tends to decline prior to elections, given the uncertainty for the private sector over political shifts that affect the private-sector business environment (Julio and Yook 2012).

greater uncertainty on the part of citizens about the size of those returns, when compared with short-term investments (Garri 2010). This can lead even well-intentioned politicians to invest in the goods with faster albeit on average lower returns, in order to avoid sending the signal of being corrupt to citizens, as the absence of outputs from spending may be perceived as funds having been diverted to personal use. Expenditures are also biased toward short-term government consumption and against very-long-term public investment that may only benefit subsequent generations, given that the latter do not yet exist or are not of voting age and thus cannot influence the political process (Drometer 2012). The insulation of the bureaucracy from political influence can mitigate this effect due to bureaucrats counteracting the political bias toward maximizing spending (Niskanen 1971).

Agent-centric Element: Coordination

In any public-sector system, only a few public services are exclusively planned and provided by a single agency. Even if the extent of concentration in the distribution of responsibilities and budgets across multiple public institutions may vary depending on the service or sector concerned, some distribution of activities is present in nearly every case. In such a context, the nature and type of coordination across responsible agencies can drive how, and how much, resources are allocated and services are provided within a given sector. A permanent tension exists between, on the one hand, stronger decentralization and autonomous action on the part of individual organizations in order to tap into the productivity gains from agencies optimizing their actions given their respective expertise and, on the other hand, stronger coordination across agencies to have more efficient and less fragmented, duplicative programming across agencies (Peters and Savoie 1996).

Coordination is essential for any arrangement that lies between fully autonomous decisionmaking by individual agencies and fully centralized decisionmaking through a central agency to which the other agencies are fully subordinate. But it is fraught with a range of challenges, including the barriers to coordinating given heterogeneous specialized missions and professional orientations across agencies, the constraints under a coordinated approach on fully acting on individual agencies' localized or subject-matter experiences, and the well-known logistical, financial, and other forms of coordination costs, not least the early theory developed by Coase and expanded by others to the public-sector context (for example, Bouckaert, Peters, and Verhoest 2010; Provan and Milward 2001).

Agent-centric Element: Champions

Despite longstanding academic evidence as well as practitioners' experience that strong institutions are the underpinning of any effective or even just functional public service delivery, it is undeniable that strong, driven individual leadership in the public sector can have a powerful influence on how well public funds are allocated to achieve service goals. This is not strictly meant in the way that neo-managerialism elevates the role of administrative leader as "public entrepreneur" (Terry 1998). Rather, the notion of champion here need not be associated with formal leadership or position. Rather, champions can be thought of as *change agents* (Caldwell 2003)—not the internal or external "consultant" from early traditions of organizational development, but rather in the sense of charismatic and visionary individuals who can articulate the purpose that should drive action in the public agency, can inspire others to pursue such action, and can thus catalyze change. Champions, while intrinsically driven and projecting that drive externally, are also deeply practical, and their day-to-day actions are informed by the desire to "make things happen" to meet the purpose at hand (Bolman and Deal 1991).

While such champions may appear "born, not made," some evidence suggests that modest increases in self-perception as a change agent can be achieved through leadership development support in the public sector (Wallace et al. 2011). In publicly held companies (Taylor, Cocklin, and Brown 2012) and even in the private sector (Swaffield and Bell 2012), schemes exist to effectively create champions within companies on issues with strong public-good and externality characteristics, such as the effect of a company's operations on the environment and climate, in the latter case again with modest albeit concrete success.

3. NUTRITION INVESTMENTS IN MOZAMBIQUE

Mozambique offers a context for the study of public resource allocation relevant to other developing countries in recovery from conflict and natural disaster and with persistent poverty. The 1990s saw a rapid increase in the share of resources allocated to sectors identified as priorities in the country's national poverty reduction strategy, as well as in resources allocated to sectoral strategies such as the agricultural development strategy ProAgri (Mogues and do Rosario 2015). Although it is difficult to track spending for nutrition given that activities fall into different sectoral budgets, nutrition has gained prominence in recent policy formulation. The main policy framework for nutrition was introduced in the national cross-cutting strategy of the Food and Nutrition Security Strategy 2008–2015, which promotes integration of nutrition into the sectoral strategic frameworks. The Multisectoral Action Plan for Chronic Malnutrition Reduction in Mozambique (Mozambique Ministry of Health 2010) is the common results framework for nutrition, which sets targets for reducing chronic malnutrition and offers a package of evidence-based interventions to prevent chronic malnutrition. The Technical Secretariat for Food and Nutrition Security (SETSAN) is the institutional body responsible for coordinating and promoting nutrition in the government. Mozambique demonstrated a national commitment to improving nutrition by joining the global Scaling Up Nutrition movement in 2011.

Yet even with the recent policy attention on nutrition, persistent undernutrition remains a serious problem in Mozambique. More than 40 percent of children under five years have stunted growth (height-for-age Z-score ≤ -2) and 6 percent are wasted (weight-for-height Z-score ≤ -2) (MISAU/INE/ICFI 2011). This case study endeavors to identify public spending decisions on nutrition investment at national and subnational levels and to evaluate the factors that have influenced spending on nutrition programs in recent years both by government and donor partners.

4. METHODOLOGY AND DATA

We use process tracing as the primary analytical method to make within-case inferences of the presence of the theorized causal mechanisms between explanatory political economy factors and funding outcomes (Beach and Pedersen 2013). We employ the theory-testing variant of process tracing in the analysis of the investment-centric element of the framework, to deduce the presence of the theorized causal mechanism. The theory-building variant is used to explore the agent-centric element of the framework as an inductive approach to propose a causal mechanism between the suggested explanatory factors and funding outcomes.

In the hypothesized model the characteristics of visibility and lag time share a causal pathway in how each factor influences public allocations. Both characteristics are suggested to play a role in how well an allocation can be attributed to the decisionmaker. Keefer and Khemani (2005) maintain that the incentive structure of decisionmakers depends on the functioning of political markets. Such incentive structures are a key to attribution as a causal mechanism for the characteristics of visibility and lag in determining allocations. In a well-functioning political market, decisionmakers seeking political credit, namely politicians, would be motivated to make investments with greater visibility and shorter lag due to the attribution aspect. Strong accountability encourages politicians to uphold commitments to pro-poor spending such as nutrition (Nisbett et al. 2014). This causal pathway may be less appropriate when considering government bureaucrats as decisionmakers as evidence suggests that elite bureaucrats in a position to make funding decisions are less likely than the public to favor increases in spending (Dolan 2002). Civil society can play a role in raising the visibility of issues and lobbying for politicians' attention, although Fassin (2009) also considers detrimental effects of nongovernmental organizations (NGOs) striving for high visibility of the causes they espouse.

Fifty-seven key informants were interviewed from August to October of 2013. Respondents included national-, provincial-, and district-level stakeholders involved in nutrition planning, funding, and service provision (Table 4.1). We selected Tete, Nampula, and Sofala as focus provinces for the study because those provinces have recently been targeted for nutrition programs. In each of the study provinces, we identified a district that had received a relatively high level of investment in nutrition and a district with relatively low levels of investment based on the assessment of national- and provincial-level informants.

Table 4.1 Interview respondents by stakeholder category and geographic level

Stakeholder category	Geographic level			
	National	Provincial	District	Total
Government	9	12	12	33
Nongovernmental organization	6	9		15
Donor	5	1		6
United Nations organization	2			2
Research organization	1			1
Total	23	22	12	57

Source: Authors' own compilation.

The structured interviews lasted approximately one hour and allowed for open-ended responses to a directed line of questioning on the framework elements explored in the study. Interviews were conducted in English or Portuguese depending on the member of the research team leading the interview and the language preference of the respondent, with the majority of national-level interviews conducted in English and most provincial- and district-level interviews conducted in Portuguese. Each interview was recorded and fully transcribed. Transcriptions were coded using NVivo according to the themes established in the framework and with attention to the identification of emerging themes. All of the Portuguese material was translated into English after coding.

5. EMPIRICAL RESULTS

Issue characteristics are considered a key determinant of political prioritization for health initiatives at the global level (Shiffman and Smith 2007). Haddad (2013) identifies the invisibility of nutrition as one specific characteristic that poses a major challenge for building political support, and Gillespie et al. (2013) describe the difficulty in generating near-term political will for investments in maternal and early childhood nutrition that build human capital with long-term benefits to the labor market. Considering resource allocation as the ultimate sign of political priority, the study examines investment characteristics including visibility and the temporal aspects of nutrition allocations, testing attributability as the causal mechanism leading to spending decisions.

Actors play a critical role in agenda setting, policy formulation, and implementation of nutrition policies (Pelletier et al. 2012). Although their importance in the nutrition policy process is recognized, the mechanisms by which actors influence public spending on nutrition are not yet well defined. This study looks closely at coordination among actors and the role of champions in an effort to identify causal mechanisms that lead to funding decisions for nutrition.

Visibility of Nutrition Investments and Nutrition Outcomes

The investigation of the characteristic of visibility considers both the discernibility of malnutrition itself and the discernibility of investments intended to treat or prevent malnutrition. Visibility of malnutrition depends, in part, on the type of nutrition malady. Extreme calorie deficiency characterized by wasting is easy to detect by observation alone. Images of starving children have long been used in compelling appeals for humanitarian assistance during times of disaster and famine. The visibility of famine, and therefore action to control it, often manifests itself through sudden and mass migration of the afflicted (de Waal 2006). It has also been argued that Amartya Sen's well-known thesis that famines do not occur in democracies (Sen 1999) applied to democratic India, while the same cannot be said about India's ability to prevent mass deaths from malnutrition, because of the visibility of deaths due to famine and the invisibility of deaths due to malnutrition (Devereux 2007). Chronic malnutrition, characterized by stunted growth and vitamin deficiency, also called hidden hunger, is not as noticeable except in extreme cases.

Mozambique's tumultuous civil war and recurrent climatic shocks have resulted in decades of reliance on emergency food aid (WFP 2015). Yet until recently, little attention has been given to the prevention of pervasive chronic malnutrition resulting from long-term food insecurity and poor diet quality, suggesting that more visible forms of malnutrition attract greater support. One respondent from a donor organization commented, "In the past because of *kwashiorkor* and people dying because of famine—acute malnutrition, people talk about it because they see it. They don't see a short stature as a problem necessarily."²

The empirical case study finds that an intervention's visibility depends on whether the intervention delivers tangible goods or services and is positively correlated with the size of the beneficiary group. The initiatives that were the most well-funded were those characterized by widespread distribution of easily identifiable goods. The most prominent among well-funded initiatives include vitamin A and deworming treatments funded by UNICEF and implemented through the National Health Week program, the distribution of food in response to acute malnutrition during disaster, and the distribution of orange sweet potato vines to combat vitamin A deficiency among farming households (see also Hotz et al. 2011). Although widespread distribution is costly, the results have a high level of visibility to beneficiaries who receive free or subsidized goods intended to prevent or treat nutrition deficiencies. For example, the biannual National Health Week costs between US\$2 million and US\$3 million per round. This initiative hoped to reach 100 percent of the population, although actual estimates of coverage for vitamin A supplementation are only 72 percent (MISAU/INE/ICFI 2011).

² *Kwashiorkor* is a form of severe protein deficiency characterized by swelling, loss of muscle mass, irritability, and failure to gain weight.

Advocacy to raise the visibility of malnutrition, as well as the visibility of the impact of nutrition interventions, depends on the availability of consistent, high-quality data. The Food and Agriculture Organization of the United Nations identifies data as a key element for effective nutrition governance (FAO 2013), and that was echoed at the country level among case study respondents. Political support is more readily available for issues that are easily measured (Shiffman and Smith 2007). Data on nutritional status in Mozambique is limited. The most representative data at the population level are based on anthropometric measurements of children taken in the Demographic and Health Survey. Those data have elucidated the high prevalence of stunting and the slow progress toward reduction in stunting between the 2003 and 2011 survey rounds.

One government official highlights the importance of those data in making the value of nutrition public investments visible and salient:

From the time we started doing the IDS³ with regularity to [get] information on indicators of children's health, we see the seriousness of the issues. . . . [Since] one of the priorities of the Government is poverty reduction, when there's information on these indicators of poverty and its relationship with other indicators (nutrition, health, and basic conditions), then there is evidence in terms of the need to address the issue and [for nutrition to] take priority.

The ability of data to shed light on malnutrition conditions is manifested in its concrete effects on investment. For example, population estimates of stunting disaggregated to the provincial level have exposed geographic disparities in malnutrition, which resulted in greater nutrition investments in provinces with more prevalent stunting. For example, US\$37 million in additional financing for nutrition was added to the World Bank–supported Health Services Delivery Project to fund community-based nutrition efforts over a three-year period in three provinces (Nampula, Cabo Delgado, and Niassa) that have stunting rates above the national average. The latter two in fact have the highest rates in the country.

Beyond population-level statistics, data at the intervention or project level can raise visibility and thus improve attributability to the implementation agencies for the nutrition projects and programs. Well-designed monitoring and evaluation systems generate data that provide accountability to funders in terms of the impact of investments. Respondents representing implementing organizations highlighted the importance of demonstrating measurable impacts to attain donor support for continued programing. In turn, data on key nutrition indicators enable the funding organization to demonstrate to the political bodies in the country of the donor agency their contribution to national and international goals, such as the United Nation's Millennium Development Goals. Yet monitoring and evaluation is generally perceived as weak for nutrition interventions in Mozambique, especially for government programs. Further, it was noted that unrealistic indicators, such as reducing stunting rates during a two-year project, are not appropriate and set a project up for failure in meeting targets, and thus for failure to raise funds for subsequent interventions.

Temporal Aspects: The Decision-to-Allocation Lag and Delivery-to-Impact Lag

The temporal dimension of interest concerns the lag time at two points in the public investment process: first, the lag between the time when an investment decision is made and when funds are allocated; and second, the lag between the time goods or services are delivered and nutrition status is improved. As with the characteristic of visibility, a marked distinction is observed in the temporal aspects between interventions addressing acute malnutrition and those addressing chronic malnutrition, and that distinction leads to differential public investment attention to these different types of intervention.

The decision-to-allocation lag appears to be influenced, in part, by urgency. During times of widespread food shortages due to conflict or disaster, reserve funding can be accessed quickly to prevent and treat acute malnutrition. Organizations with a mandate to provide humanitarian assistance can spend outside of program budgets using central disaster reserves. For example, the United Nations Central

³ *Inquérito Demográfico e de Saúde* (IDS) is the Portuguese translation of Demographic and Health Survey.

Emergency Response Fund (CERF) provides grants for immediate use at the onset of emergencies. Food is the largest area of spending for CERF funds, representing more than 25 percent of grants from 2006 to 2015. Other sectors related to nutrition, including health, water and sanitation, supplemental feeding, and agriculture, also figure prominently, representing another 43 percent of CERF grants (CERF 2015). In comparison, accessing funds to address chronic malnutrition is generally a lengthy process that must follow the planning and budgeting procedure for donors and government alike.

The delivery-to-impact lag depends on whether an intervention is reactive or preventive. Addressing acute malnutrition is *reactive* in the sense that interventions generally focus on treatment through therapeutic feeding, which can result in marked improvements in nutrition status within weeks, depending on the severity of malnutrition and the method of therapeutic feeding (Chang et al. 2012). Even certain vitamin deficiencies can show rapid improvement after delivery of the treatment. Chronic malnutrition, by definition, develops as a result of prolonged nutrient deficiency, and its effects are irreversible. Therefore, programs effectively addressing this nutrition malady have to take a *preventive* approach (Bergeron and Castleman 2012). Because of this, returns to public investments in chronic malnutrition reduction are realized only over the long-term. Interventions focused on behavior change, such as breastfeeding practices, or those that attempt to address misinformed views, like the local belief in Northern Mozambique that a woman will give birth to a bald baby if she eats eggs during pregnancy, can take years if not generations to realize results. One donor explained, referring to the donor community:

They want to see a quick result, they want to have a number from one year to another. You don't take away stunting [in] a year. . . . It's a long process, and I think one barrier is that you don't have a tomorrow result and stunting is a twenty year [process], and the donors come in and they say we are here for five years, we want to do good things for the country. Then they have to think [forward] twenty years.

Taken together, it becomes apparent that the characteristics of visibility and lag time of investments are variable depending on the aim of the intervention to address acute or chronic malnutrition (Table 5.1).

Table 5.1 Summary of characteristics by nutrition malady

			Acute malnutrition	Chronic malnutrition
Investment-centric elements	Visibility	Visibility of malady	High	Low
		Visibility of intervention	High	Depends
	Lag time	Decision-allocation lag	Short	Long
		Funding-impact lag	Short	Long
Causal mechanism	Attribution	Common intervention focus	Treatment	Prevention
		Common intervention delivery	Single sector	Multisector
		Common intervention approach	Goods	Services

Source: Authors' own compilation.

Coordination and the Volume and Spatial Allocation of Nutrition Investments

Interagency coordination results in potentially high sector-performance returns. Jennings and Ewalt (1998), for example, analyze the policy performance impacts from improved interorganizational coordination, as well as from consolidation efforts across agencies, in the context of public services for employment and training, and find that both coordination and consolidation improve performance in service delivery, albeit on different parameters of such service provision. Given the complex nature of malnutrition, prevention and treatment efforts require a coordinated multipronged approach to address

infection and disease that lead to malnutrition, improve food production and access to nutritious foods, and build knowledge around recommended nutrition practices. Ministries of health, agriculture, education, women and social action, commerce and industry, and public works and housing all have a role in this effort.

Yet a political economy analysis finds that the fact that nutrition commonly lacks a “home” in government structures results in fragmentation and poor coordination (Reich and Balarajan 2014). Recent research on the nutrition policy process has highlighted the need for improved horizontal coordination to overcome competing agendas between agencies and enhanced vertical coordination to ensure that centralized planning translates to local-level action (Benson 2007; Gillespie et al. 2013). This case study uncovers varying degrees of success in coordination by stakeholder groups and examines the resulting implications for public investments intended to improve nutrition.

The donor community in Mozambique appears to have achieved a relatively high level of coordination by forming a Nutrition Partners’ Forum that meets monthly to plan activities and share information. Each province has been “adopted” by a different donor to fund chronic malnutrition reduction activities in alignment with the “multisectoral action plan for chronic malnutrition reduction in Mozambique.”

This approach of donor agencies coordinating to each focus on a different geographic area follows an earlier period, during the civil war and humanitarian emergencies, during which each international development agency followed its own respective approach, ideology, and policy aims in allocating public resources in Mozambique, resulting in uneven and uncoordinated donor investments throughout the country (Manning and Malbrough 2010). In that earlier period, nutrition funding was no exception and some provinces received a highly disproportionate share of donor funds.

Although the subsequent existence of the Partners’ Forum suggests successful coordination among the donors to avoid duplication of efforts, the geographically disparate nature of donor allocations has also meant that donors have pursued different modalities in the types of interventions and the planning process in different locations, which is a common issue in the nutrition policy process (Pelletier et al. 2011). For example, USAID programs in the provinces of Nampula and Zambezia have focused on funding NGO implementing partners, while DANIDA’s support in the provinces of Tete and Gaza has focused on a facilitative approach providing technical backstopping in the planning process and direct budget support at the provincial level.

While the existing geographically fragmented system encourages more foreign spending on nutrition by accommodating a number of donor entities with distinct agendas, it is not without its tradeoffs. In particular, this approach makes implementation of a unified national strategy more challenging. A government official described the challenges associated with implementing donor-funded initiatives:

We are still mainly dependent on the [international] development partners to continue the efforts and implement the multisectoral action plan [for the reduction of chronic malnutrition]. This means that you end up implementing and trying to coordinate different projects. If I compare the interest of partners that are working with us on nutrition currently with five years ago the difference is tremendous. Now I have more resources available; however, they are coming mainly through projects with different timelines, with different approaches, with different geographic areas of coverage. This brings different challenges in terms of coordination and management of these available resources.

In contrast with the dynamics of coordination among donors, cross-sector coordination for nutrition within the government has achieved only limited success. SETSAN was given authority in 2010 to coordinate nutrition activities across sectors, represented by government ministries or agencies, at the national level. Each relevant sector ministry/agency has a nutrition focal person who attends planning meetings and promotes nutrition-sensitive programs within his or her own ministry. However, the point person is not usually senior enough to exert influence over sector budgeting in his or her ministry. Thus,

cross-sector coordination at the national level is mainly only functional in planning, and not in implementation. This finding in Mozambique is consistent with the nature of coordinating bodies for nutrition in other developing countries (Benson 2007). One sector government official commented on the state of governmental cross-sector coordination:

You can have good representativeness from different sectors in a technical working group, but this does not necessarily mean that these professionals are really committed to address the issue and to influence changes into the strategies and actions within their own sectors. Sometimes you have the technical team committed, but if the high level officials, such as ministers, are not aware of the importance of the cause and are really able to push for the nutrition cause within their own sector, we don't see any big changes.

Several respondents also commented on the lack of influence of the coordinating body SETSAN, given its seat in one of the sector ministries—the ministry of agriculture—and they pointed out the need for greater concrete accountability to the coordinating body. This stirs up a debate on the appropriate place for a nutrition coordinator within the government structure (Benson 2007). There is concern that if SETSAN remains within the ministry of agriculture, the coordinator will never have sufficient influence within other ministries such as health or education. Several stakeholders feel that nutrition should be coordinated from a more central place, such as the planning ministry, or even the prime minister's office, as a respondent from an international organization suggests:

The big missing piece is the senior level coordinator or that kind of person for accountability purposes. . . . [M]ost of us think it should be the prime minister or his office because SETSAN is coordinating a body of technical people so it's all the relevant ministries. But if somebody is not doing their work SETSAN cannot say, "listen, you have to work, schools, education, you know you've to get your act together." That accountability is missing. Nobody is saying, hey "you promised to do this work, why is it not happening, what are your goals, what are your targets?" So that is missing.

Related to the issue of accountability, the difficulty of identifying appropriate incentives for cross-sector collaboration was palpable. One respondent from a donor organization touched on the issue of incentives and discussed the roles of donors and government in improving incentive structures for better cross-sector management:

If people are held accountable against results maybe that would change. . . . In my view we should align organizational incentives to respond to problems that we see in a given community. This is also true in [donor organization] because the way we work gives incentives for you to work in silos. You are rewarded if a project is well managed, not necessarily when you think more about results. . . . The new types of projects we have in [donor organization] are results based finance and actually the incentive is more on collaboration and clear results. But I also think that the government has a role. . . . It is the government who should tell everyone who comes to say "look, we have our program and this is our problem, so let's make sure that you know you support this program in an integrated manner."

In general, NGO and government stakeholders at the national level had little awareness of one another's initiatives, suggesting that currently little coordination exists between these actors. However, the previous director of nutrition in the Ministry of Health was recognized for her efforts in drawing donors and NGOs into the national dialogue on nutrition. She believed that government could learn from the implementers' experiences. In her position of influence she managed to bring partners together by facilitating workshops and also directed NGO activities to improve more even (that is, less concentrated) coverage.

In terms of coordination, influence is closely associated with power. Within the national nutrition coordination system, several respondents observed that without the power to allocate funds, sectoral point persons have little influence over their respective sector budgets. There is greater coordination success among actor groups with the power to influence spending. This is illustrated by the relatively well-functioning coordination of the donor community, a group with direct influence over a substantial budget, in comparison to the relatively poor coordination among NGOs, which have little influence over spending decisions as they primarily implement projects based on already-decided-upon funding allocations. Thus, power emerges as the causal mechanism linking coordination to spending outcomes.

Champions: Formal Power versus Intrinsic Motivation

Hendy and Barlow (2012) provide evidence that champions can be highly effective in driving policy agendas, leading to positive changes in service provision modality, although they are less effective in later stages of change implementation. The absence of champions can be a significant hindrance in bringing about change of a public institutional nature (Stenberg 2011). In countries that have seen recent success in reducing malnutrition, nutrition leaders had played a vital role in forging alliances to support policy and action (Gillespie et al. 2013). Such champions help push the nutrition agenda forward, influence the allocation of public spending on different nutrition activities, and attract donor funding (Pelletier et al. 2012).

In the case of Mozambique, nutrition leaders indeed exist but are extremely few in number. The vast majority of respondents identified the same few individuals as nutrition champions at the national level, indicating that those people clearly stand out as leaders in the field. However, beyond a handful of strong champions, the technical capacity for nutrition is perceived as thin in Mozambique. This dynamic can inhibit the confidence of donors in allocating resources, as the influence of champions can be difficult to sustain given the mobility and unreliability of funding flows. An NGO representative commented,

I think what encourages more investments are those champions and their ability to guide the investments of these donors. Without those champions you choose different sectors to work in because you don't have that [government] counterpart. What makes the donors nervous is the level of capacity beyond the champions. If they [the champions] are failing to implement or push forward because they don't have anyone to rely on, then they [the donors] become worried [about making] further investments.

One prominent nutritionist working in the government who was frequently named as a champion had recently left her posting to pursue an educational opportunity. While many respondents spoke highly of her, commending her dedication and recognizing her contribution to advancing the national nutrition agenda, they were also concerned that her absence would leave a vacuum and the effectiveness of the government office would suffer. An NGO representative described her as “truly switched on,” going on to explain,

The way she works gives nutrition a lot of attraction. She has a very dynamic way of engaging with us donors or partners in nutrition. . . . She will be dearly missed because she is a very different kind of head of nutrition compared to others that I have met in other countries in the region. She is very dynamic and progressive. She is the opposite of like old school traditional nutritionists, which makes her very refreshing to work with and we are all sad in this community here—the donors and implementing partners in nutrition—because she is leaving.

Champions play different roles and have varying degrees of influence according to their position and motivation. Civil servant nutrition leaders, most commonly named as champions by respondents, hold positions that require advocacy in guiding donor funding and coordinating government efforts. Others identified nutrition champions who appeared to hold the title in name only. For example, the then-president of Mozambique was recognized as the official country representative for the Scaling Up Nutrition movement, but his engagement on nutrition issues was seen as lacking by several respondents.

The people identified as true champions in the case study have all demonstrated a degree of significant influence in advocating for nutrition. Yet their influence does not appear to depend on formal power as a causal mechanism to funding outcomes in the same way as influence does in the case of coordination. Instead, it is a factor of their personal attributes—most notably expertise and passion. With a dearth of trained nutrition professionals in Mozambique, the few experts in the field are sought out and thus their expertise in the field grants them influence to shape agendas and spending priorities for nutrition. Champions are found to fight to support a cause rather than just waiting to give advice—in contrast with the early models of champions as expert-consultants (Caldwell 2003). When asked what motivates these individuals to advocate for nutrition, respondents overwhelmingly identified an *intrinsic desire* to improve the lives of poor Mozambicans.

6. CONCLUSION

This study analyzes the determinants of functional and spatial public resource allocation within the context of an area as pressingly important as it is complex—namely, nutrition in a poor country with severe malnutrition problems and substantial resource constraints. It tackles this by considering and empirically testing theories centered on characteristics of the investments themselves, and theories focusing on the role and interplay of actors.

The hypothesized causal pathway for investment-centric factors, in particular the characteristics of both visibility and lag time, suggests that the ease with which nutrition investments and improvement in nutrition outcomes can be attributed to public decisionmakers motivates the latter to allocate funds to a specific intervention. In nutrition, these are interventions characterized by high visibility, such as large-scale food distribution in response to acute malnutrition at times of disasters, and by a short lag time from expenditures incurred to intermediate outputs or final nutrition outcomes, such as vitamin A supplementation.

Policymakers are attracted to funding issues they believe can be addressed effectively and at low cost (Shiffman and Smith 2007). Interventions targeting acute malnutrition are generally implemented through the health sector alone. In contrast, a multisectoral approach is recommended to effectively address the multitude of factors that drive chronic malnutrition (Ruel and Alderman 2013; FANTA 2010). As a result, the prescribed interventions are not as well defined as those of acute malnutrition programs, and that can make it more difficult to monitor and ensure quality implementation (Bergeron and Castleman 2012). Nutrition-sensitive interventions implemented through other ministries such as education, industry, or agriculture do not garner the same level of political credit for addressing malnutrition. Thus, there is less motivation for agencies focused on sectors outside of the health sector to invest in nutrition interventions without mechanisms in place for ensuring proper attribution. Attribution is also linked to the aim of the intervention: investments to address acute malnutrition are more easily attributable than those addressing chronic malnutrition, and the empirical evidence has shown attributability to be a causal mechanism linking the characteristics of investments to the outcome of funding allocations.

Agent-centric factors, such as the level and quality of coordination among agents and the prevalence and nature of champions as change agents, are powerful in directing agenda setting and budget allocations. In the case study of nutrition investments in Mozambique, functional coordination among donor agencies has led to an evened-out spatial distribution of international development spending on nutrition in the country, which is a clear improvement over past foreign aid to nutrition in the country, which was characterized by large flows to few provinces. On the other hand, since this coordination has primarily been of a spatial nature, it has not prevented donors from each pursuing their own preferred and widely varying spending modalities, such as allocation of funds through NGOs versus budget support to provincial governments. Thus, there are strong variations in how nutrition support prevails across provinces, which is a challenge for pursuing a countrywide unified strategy. Coordination across government agencies has been less successful than across donor agencies: the embedding of the primary coordinating body into one of several sector ministries responsible for nutrition spending—as opposed to locating it in a central government agency—has checked the accountability of other sector ministries to this unit. For the most part, we see partially effective coordination of the nutrition activities of government in the planning stage, but it is mostly absent in actual spending and implementation.

Based on the observations in this case study of the role that agents play in coordinating and championing nutrition, we propose distinct causal mechanisms for how each of the hypothesized determinants among agent-centric factors influence the outcome of funding allocations. Coordination relies on power—either the power of the purse or formal higher authority—as the influencing agent to drive spending decisions. Champions' influence over funding to nutrition, in contrast, does not originate from formal administrative or fiscal power. Instead, it stems ultimately from the champions' intrinsic motivation combined with intense and sustained orientation toward achieving the intermediate goal of

increasing and improving public spending to nutrition, and the further-reaching goal of reducing malnutrition. In turn, these personal attributes of champions have assured other influential agents—such as international aid providers and, to a lesser extent, senior government officials—that placing funds into systems that are in the broad sphere of champions will have better results than putting funds into other channels. The case study, however, also demonstrates the fleeting nature of champions’ positive influence on investments. So much is staked on individuals’ presence that, if for any reason those people leave the scene—in this case, the nutrition community based in Mozambique—the financial support to nutrition may ebb as a result.

Even though the endeavor of this study to take on and test distinct theories to understand how resource allocation decisions are made has proven fruitful for the enterprise at hand, it is worth noting that these theories are of course not silos of explanatory factors. In fact, to some extent they seem to contradict each other: whereas, for example, the investment-centric models fundamentally understand that public decisionmakers need tangible incentives that speak to their own economic or political ambitions to undertake public investments, the model of the role and influence of champions on resource allocation implies a strong intrinsic motivation on the part of the champion in his or her advocacy for increased public investments for socially beneficial activities. And yet the empirical case study shows that it is a careful analysis of the interplay between instrumentally and intrinsically motivated actors that can best help explain how investments are made. Nonetheless, the linking of the empirical case examined in this paper to models that may appear distinct from or even contradictory to each other is helpful not only for the soundness of this inquiry but also for gaining useful insights applicable to areas besides nutrition and other geographic contexts.

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