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The political economy of food price policy

A synthesis

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Abstract: This paper identifies eight political economy factors that influenced governments' policy choices during the most recent global food price crisis. To explain the variety of responses and the policy failures, a framework is proposed that locates policies along the twin dimensions of unitary vs. fragmented decision-making processes and social welfare maximizing vs. self-interested policy goals. Policies are favoured that maintain government legitimacy and produce private benefits for the best-connected stakeholders. Policy interventions were frequently ad hoc and delayed because of lack of market information, conflicts among fragmented government agencies in all governments, and extended deliberations among competing stakeholder groups.

Keywords: political economy, food prices, public choice, rent-seeking

JEL classification: D72, D73, Q18

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1 Introduction

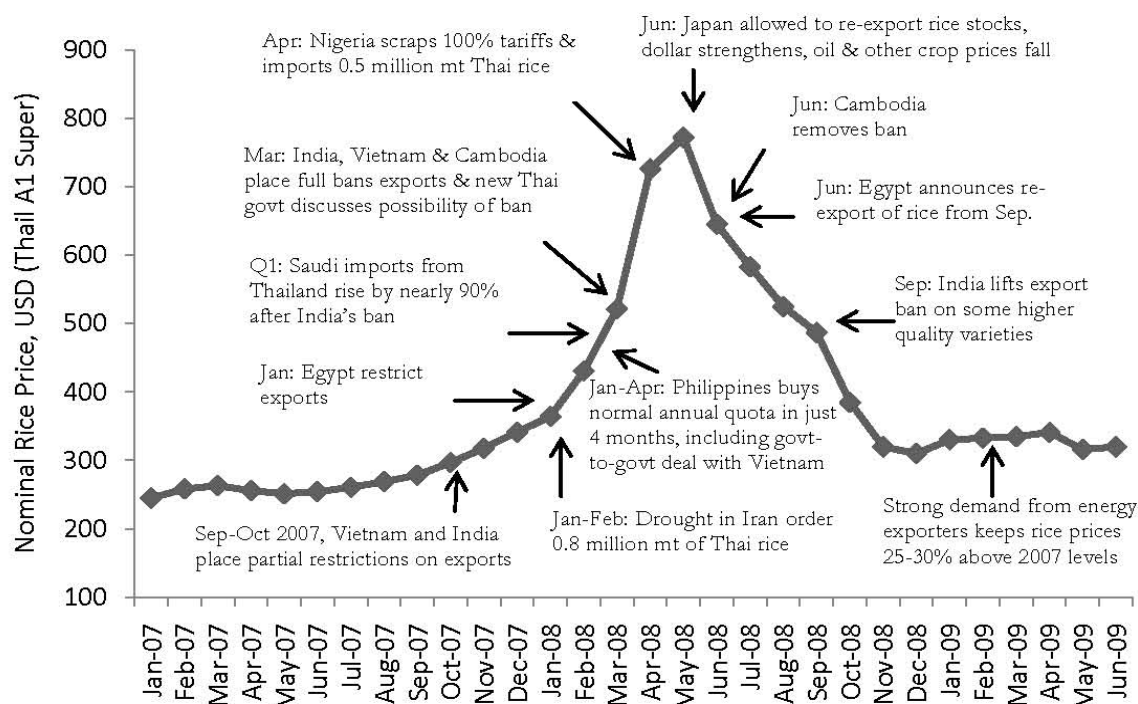
The first half of the twentieth century saw relatively stable real food prices, seldom fluctuating more than 20 per cent from their long-run historical average. During the sudden food price spike in 1973 food prices changed from one year to the next by nearly 70 per cent, with another 11 per cent the next year (see Wenzlau 2013). Significant investments in agricultural productivity—particularly green revolution technologies and transportation and irrigation infrastructure—from the 1960s onward introduced a new, downward trend to food prices that continued for the next 25 years, interrupted briefly in 1979, 1988, and 1996 as particular commodity prices spiked significantly and briefly.

This process appears to have come to an end in the early 2000s. In 2001 real food prices reached their lowest level at less than one-third of their 1900 price level. Food price escalation began in 2001–03 with prices increasing by 10 per cent. Food prices increased by 14 per cent in 2004. Another 10 per cent increase came in 2006, 15 per cent in 2007, and 18 per cent in 2008. Food prices' increases of such size and duration had not been seen in the entire 1900s. Each year's increase was of the same percentage magnitude as the spikes in 1979, 1988, and 1996.

Timmer (2008) argues that countries' destocking during the 1990s had unsustainably lowered prices during the 1990s and that these steady price increases merely represented a return to food prices' long-run average. Other factors include growing demand for meat from China and other countries experiencing economic growth, increased reliance on biofuels using land that otherwise would have grown food, and a decline in the strength of the dollar (Abbott et al. 2008).

Starting in 2008, however, food prices skyrocketed, particularly for staple grains. Wheat and maize doubled while rice prices tripled in a matter of months. These sharp and sudden spikes in food prices are more accurately described as the result of trade-related policies passed by government in response to these gradual food price increases. Consider for example the price of rice, depicted in Figure 1, which had risen by more than 50 per cent from mid-2004 to mid-2007, only to increase more than three-fold as India and Vietnam banned exports and the Philippines offered to purchase large amounts of rice at prices well above market rates. The rapid decline in rice prices over the next six months lines up similarly well with changes in Japanese, Cambodian, Egyptian, and Indian trade policy.

Figure 1: Rice prices, 2004–08



Source: Headey (2010). Reprinted with permission from the International Food Policy Research Institute.

This food price spike created not only a crisis in food prices for many governments, but also a food policy crisis. The case studies on which this paper is based describe policy-making during this crisis as ‘ad hoc’, ‘contradictory’, ‘confused’, ‘unprepared’, and even ‘being in a panic’. In order to understand how and why governments responded to this food price crisis, a team of researchers representing 14 developing countries met under the leadership of UNU-WIDER and Per Pinstrup-Andersen to study the political economy of government responses to the global food price crisis. This paper is a synthesis of political economic insights which can be gleaned from the 14 country studies and six synthesis papers (Pinstrup-Andersen 2015).¹

This paper is organized in three main sections. Section 2 gives an introduction to what was done during the crisis based on Bryan (2015) and what policies have since been enacted in response to ongoing higher average prices and increased volatility. Section 3 looks at the political economy reasons for the action taken during the crisis: 3.1 focuses on decision-making factors that are internal to the government and 3.2 focuses on government interactions with external stakeholders. Section 4 concludes by considering eight of the political economy conclusions or claims that can be drawn from the case studies about the motivations behind these policies and their processes. Additional details and evidence on the eight claims can be found in Watson (2015).

2 What was done: the policies governments chose

Bryan (2015) divides the countries under examination by the task force into three groups based on the number and variety of policies passed in the wake of the food price crisis from 2006–08:

¹ Longer versions of each chapter of this book are also available through UNU-WIDER’s Working Paper series: [https://www.wider.unu.edu/publications?f\[\]=biblio_type:Working+Paper&f\[\]=field_bib_project_name:389](https://www.wider.unu.edu/publications?f[]=biblio_type:Working+Paper&f[]=field_bib_project_name:389)

1) the ‘Interveners’, including China (Huang et al. 2015), Egypt (Ghoneim 2015), Ethiopia (Admassie 2015), India (Ganguly and Gulati 2015), Kenya (Nzuma 2015), Malawi (Chirwa and Chinsinga 2015), Senegal (Resnick 2015), and Zambia (Chapoto 2015); 2) the ‘Observers’, represented by Brazil (Mueller and Mueller 2015) and South Africa (Kirsten (2015); and the ‘Dabblers’ in the middle, among whom are Bangladesh (Raihan 2015), Mozambique (Nhate et al. 2015), Nigeria (Olomola 2015), and Vietnam (Hai and Talbot 2015). The World Bank has in the meantime established a Food Price Crisis Observatory that has catalogued all food policy actions taken by 85 countries since January 2008. In what follows I will augment Bryan’s analysis with the information available through the World Bank (2015).

According to the World Bank observatory data, roughly equal numbers of countries enacted only one policy (25 Observers), two to three policies (33 Dabblers), and four or more policies (27 Interveners) in 2008. While there is a close correlation between the observatory data and the work of the original project, the observatory credits Bangladesh and Brazil with making a significantly larger number of food-related policy decisions in 2008 than they were credited for by the task force. On the other hand, most of Bangladesh’s activity related to multiple, unsuccessful attempts to purchase additional grains to increase its stocks to 400 per cent of their original level. Their failure can be attributed to setting a procurement price below the market price.

Overall, governments focused more attention on consumer and trade issues than on increasing production, enacting in total 50 per cent more policies focusing on consumers and on trade than on output. One-fourth of the Observers lowered taxes on food products and almost that many lowered import tariffs. One-fifth invested in increased production by providing subsidized inputs or, in the case of Tajikistan, expanding credit to farmers. Dabblers focused most heavily on trade policies: 24 out of 33 either lowered import tariffs or impeded exports. Either set of policies will have the same effect both domestically and internationally. More than one-fourth of the countries provided subsidized inputs to farmers, lowered consumption taxes, and changed their stocks policies. In some cases governments were releasing their own stocks, but often governments chose to rebuild their stocks for future use. This latter policy would tend to increase domestic prices, counteracting the effectiveness of the lower taxes and trade policies.

The Interveners, naturally, are more spread out. Lowering imports barriers and erecting export barriers (50 together) are still the most frequently passed policies, followed by input subsidies for producers (22). However, Interveners put much more emphasis on providing consumer food subsidies (22) and expanded safety nets (15) than other governments. They were as likely to change the level of their stocks (11) as they were to change farm procurement prices or provide expanded credit channels to farmers. Interveners were also the group least likely to lower food taxes, doing so only five times compared to six times among the Observers and nine times by Dabblers.

Not only were production policies the least likely to be called upon, very few governments invested in long-term national food self-sufficiency. The input and capital subsidies were intended to be short term, as were production subsidies and increases in procurement prices. The lack of investment in long-term production overall makes sense if governments believed this would only be a temporary price spike. There are a few exceptions. Mozambique’s Food Production Action Plan nearly doubled agricultural investment in multiple agricultural sectors throughout the value chain. Egypt, India, and Malawi are the only countries in the World Bank data to invest in increased farmer storage capacity. Ethiopia established a new Agricultural Transformation Agency, accompanied by increased spending on research and development, extension, and rural infrastructure. While countries like Nigeria and Senegal put forward plans to invest in long-term productive capacity, these plans have not been subsequently enacted.

Interveners are also more likely to be among the countries with the highest scores in the Composite Index of National Capability (CINC) (Singer et al. 1972). Among the countries in the World Bank dataset, the 20 countries with the highest CINC scores in 2007² were much more likely than average to change their procurement price and their import and export rules. Comparing the top 20 countries to the remaining 71, we see that 69 per cent of all procurement price changes were made by countries in the top 20, 45 per cent of all export restrictions were passed by them, and 30 per cent of the reduced import restrictions. Additionally, the 20 countries that have an average score higher than 62 from 2007–09 in Heritage Foundation's (2015) Index of Economic Freedom, enacted more than half of the consumer price changes. By contrast, the various policies appear uncorrelated with the average personal rights or civil liberty indices in 2007–09 developed by Freedom House (2015).

Examining only which policies were chosen rather than their motivations among the country studies leads to two initial conclusions:

Claim 1: The responses to past crises are the best guides to predicting future actions.

Claim 2: Governments prefer policy changes with lower costs, such as changing the level of a currently existing policy rather than introducing a new policy.

The most accurate means of predicting how countries would deal with the food price shock is how other food crises were addressed. Governments that typically intervene little continued to be Observers this time around. Governments that have historically erected export barriers when prices changed did so here as well. Consistently, governments turned to policies they had enacted and removed in the past. Policies favoured the segments of society that had been most favoured historically, be it urban vs. rural consumers or politically important staple crops vs. fruits and vegetables. Nor do governments appear to have changed their long-run policy goals. Even where some significant policy departures can be detected, Bryan (2015) reports that they represent a continuation of the pre-existing domestic trajectory, rather than a new policy direction.

Some examples may be in order. Egypt's devaluation-caused food price spike in 2001–03 prompted a doubling of the bread subsidy, which occurred again during the last food price crisis. Malawi developed its fertilizer subsidy programme because of the series of droughts in 2001–05. Successive Nigerian governments have tended to make grand-sounding plans to address the long-standing neglect of agriculture, but have failed to follow through. Nigeria's policy reactions were described as ad hoc and panicked largely because of this past neglect which has not since been remedied. While very little of the long-run plan was put into effect during the crisis, some steps have been taken since 2012 to increase domestic rice-milling capacity. Bangladesh's food problems were largely caused by a string of natural disasters during the early 2000s. The food price crisis was treated as if it were a natural disaster. This seems a very reasonable interpretation for the caretaker government to make because a cyclone had indeed hit that year, compounding the food price shocks. It may also partially explain why Bangladesh was among Bryan's (2015) Dabblers: this was perceived as a natural disaster for which their policy system was already prepared.

To say that overall countries followed historical precedent is not to deny the existence of any surprises. The checks on executive power Brazil had recently deployed were more effective than would have been expected before the crisis. Ethiopia sold or leased some 3.5 million hectares to

² Bangladesh, Brazil, China, Egypt, EU, India, Indonesia, Iran, Mexico, Myanmar, Nigeria, Pakistan, Russia, Saudi Arabia, South Africa, South Korea, Thailand, Turkey, Ukraine, and Vietnam.

foreign entities. Egypt made use of the opportunity to enlist the help of aid agencies to revamp its bread subsidy and ration card system to reduce leakages and prevent fraud. They further attempted to reduce frictions and improve coordination between ministries by creating a food security advisory board. In most other instances, if a new policy was introduced it was most likely a fertilizer subsidy patterned after the political success enjoyed by Malawi (Watson 2015).

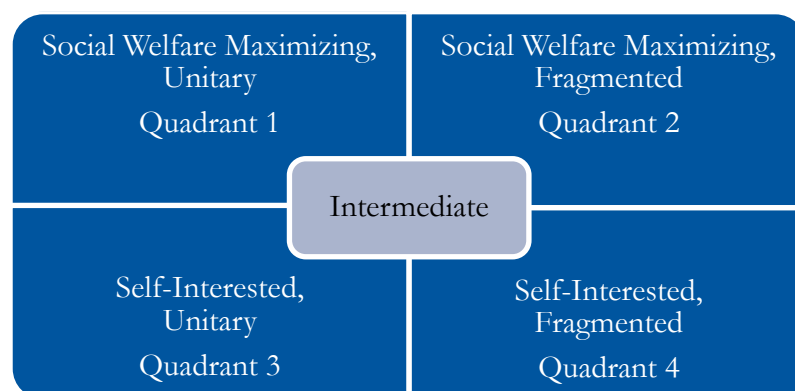
The food price crisis simultaneously exhibited slightly different policy processes than are followed in non-crisis periods and may have created some new processes that will affect future food policy policy-making (Babu 2015). During times of crisis there is little opportunity for consultation with many advisors, particularly in academia, who operate on a much longer time frame. Insiders and advisors close to decision makers will tend to have more immediate influence. On the other hand, there is some evidence that non-government organizations (NGOs) interested in food policy may have formed new connections and coalitions in some cases. Nigerian NGOs banded together to bring the price spike forward to the government's attention, which may strengthen their ability to influence future food policy decision-making. Increased networking between organizations and stakeholder groups could be significant in the future. Additional research will be required in order to demonstrate to what extent these coalitions and networks have stabilized in the post-crisis period and how effective they have been without an immediate and urgent sense of need from government decision makers.

3 The political economy of food price policy

3.1 Internal decision-making processes

To understand why those political processes led to the outcomes they did, consider government decision-making in isolation from the outside influences of citizens and lobbyists. Decision makers, whom I will also term agents, are heterogeneous and may be thought of along two axes. The first is a continuum between completely benign social welfare maximizers on the one hand and the completely self-interested on the other. Self-interested agents may maximize campaign contributions or corruptive rents as in Grossman and Helpman (1994), their probability of remaining in power as in Nordhaus (1975), or their place in history (Galeotti and Breton 1986). The second axis describes whether governments behave as if they had a single, rational decision maker (the 'unitary' model) or if government decision-making is fractured among different, potentially competing, agents. Figure 2 simplifies these axes to give the reader a more intuitive picture to work from. It should be emphasized that this is not an attempt to categorize particular governments or agents as self-seeking, but rather to examine the policy-making processes for particular policies. Each government enacted multiple policies that would be best categorized using different quadrants for each policy. External agents, notably absent from the figure, will be added to the analysis later in the paper.

Figure 2. Decision-making along fragmentation and self-interest axes



Source: Author's illustration.

Models already exist that treat the benevolence axis as a continuum. One example is the Grossman-Helpman (1994) Pay to Play model. In that model, governments maximize the weighted sum of social welfare and their campaign contributions, with the pure benevolence model and the pure self-interest model nested at the extreme weights. Their weighting system acts as a natural measure of benevolence and many papers have done just that using trade policy as a ready case (e.g. Gawande et al. 2009). Other models can readily capture the same idea. On the other hand, the fragmentation axis does not have a natural model already in place. The literature on veto points (e.g. Beck et al. 2001) relies heavily on de jure rules regarding veto authority which are the same for all policies within a country, rather than looking at the full set of political actors relevant for particular policies from presidential down to street-level bureaucrats, or at rival ministries without formal veto power but that can influence policy formation or details. Selectorate theory's winning coalition (Bueno de Mesquita et al. 2003) and ethno-fractionalization measures (Easterly et al. 2006) face the same difficulties. Further research will be needed before this axis can be applied quantitatively.

Claim 3: Much of the common policy response can be explained by a social welfare function maximizing, unitary government.

The benchmark from which most models of governmental decision-making begin is the social welfare maximizing, unitary government, making this quadrant a logical place to start. It is then possible to consider how governments' behaviour deviates from that of a first-best or second-best optimization, to identify what needs to be added to this model of government decision-making. In order to maximize social welfare, governments may have identified other, intermediate goals. I conducted a survey of the country study authors to rank order eight possible goals on the basis of which were most important to their government during the food price crisis (Table 1). The second column shows the average rank given by the study authors. Lower numbers represent a higher priority. The third and fourth columns show the number of authors placing that goal in the top three or in last place, respectively.

Table 1: Policy priorities of the country study governments (n=13)

Goal	Average response (Rank from 1 to 8)	Top 3 priorities (n)	Not important (Rank 8) (n)
Address poor nutrition/ food insecurity	2.5	9	0
Reduce poverty	3.8	8	3
Increase national food self-sufficiency	4.0	8	3
Contain social/political unrest	4.7	5	4
Secure power or rent-seeking	5.1	5	4
Stabilize macroeconomy	5.8	4	7
Ensure a minimum farmer income	6.5	0	7
Maintain international relationships	8.0	0	13

Source: Watson (2015).

It can be seen that the first priority for most governments was reducing hunger and food insecurity. On the consumer side, this meant reducing prices. Lower prices are widely perceived as critical to social welfare as most poor people and even most smallholders are net food buyers. In the Bangladeshi and Kenyan cases, lower food prices do tend to help the poorest farmers. While this view is likely correct in the short run, in many instances it is both incorrect in other situations and misleading in its dynamics. Most farmers are net food sellers who would profit from higher prices in countries like China, Madagascar, and Vietnam (World Bank 2007). Zambia shows that it may depend on what crop is being discussed: most maize is produced by small-scale net food buyers while wheat is grown by large-scale commercial net food sellers. Another complication is presented by the fact that in the long run, even net food buyers may benefit from higher food prices if they translate into higher agricultural investment, increasing their yield growth (Harriss 1979). Barrett (1999) creates a microeconomic model to farmer preferences which demonstrates that political coalitions may form in order to preserve whatever food prices emerge. The Brazilian case study shows that higher food prices may make Brazilian poor better off, assuming full pass through of higher prices to increased wages. If the pass-through rate is 50 per cent instead, the poorest decile is still no worse off and richer deciles still receive higher welfare. Even though food security and nutrition ranked number one, few policies were passed that dealt with nutrition itself; governments targeted the availability basic staples.

Poverty reduction and national food self-sufficiency were also among the three most important goals for most governments. Many cases further indicate the importance of stability, be it macroeconomic, social, or political stability. More than half of the governments ignored farmer welfare completely and all ignored the possible impacts their policies might have on other countries. Because of the policy spillovers seen in this episode, it is essential that international

and national organizations concerned with food should address this negligent ignorance (Pinstrup-Andersen and Watson 2011).

There are good empirical reasons to doubt that the first quadrant can explain the variation between countries or the significant policy failures observed during this period. One is policy failure (Bryan 2015). Government procurement efforts often failed, either because of a lack of domestic supply or because they contributed to further domestic price fluctuations. India's lack of adequate storage led to significant grain waste even though it was able to secure sufficient stocks. Subsidies in many cases ended up funding farmers and consumers in neighbouring countries, whether discussing food, fertilizer, or fuel subsidies. Poor subsidy targeting and corruption also meant that public outlays did not have the desired impacts. Only some of the administrative difficulties can be chalked up to government capacity when most of the policies already had an infrastructure in place to enforce them.

Introductory economics textbooks suggest that governments have an important role to play in intervening in markets to alleviate specific market failures. Such policies enhance economic efficiency. In our case, however, governments did not address classic market failures, such as enhancing market integration and reducing spatial price variability through public goods provision. In the food price crisis, the primary 'market failures' governments discussed were speculative behaviour by the private sector, particularly hoarding and anti-competitive practices. However, very few of the governments enacted policies to address this issue. The three exceptions where a government took decisive action because of these market failures are: Bangladesh, where the government closed off access to warehouses where grain was being hoarded; Malawi, whose government indicated the price bands and trade restrictions they put in place were to address hoarding; and South Africa, whose Competition Commission (which predated the crisis) increased prosecutions and fines for anti-competitive market behaviour. The relationship between governments and the private sector is discussed below.

Policy inefficiency and policy failure make it more difficult to accept the first quadrant as the only correct model. If governments wanted to ensure food security, why did they tend to target urban and middle-class citizens who were less poor? For example, the bags of processed maize meal Kenya subsidized were too large, and therefore too expensive, for poorer families. If governments want to ensure national food self-sufficiency, why were nearly all agricultural interventions short-term only? Mozambique's investments in agricultural production and processing bottlenecks have not successfully increased food production since. Ganguly and Gulati (2015) contend that India's investments in achieving a second green revolution are insufficient to have more than symbolic impacts. These failures were compounded by uncertainty: policies were late in arriving and then announced and suddenly retracted three to six months later, primarily because they were ineffective, corrupt, or both.

Claim 4: One primary cause of policy failure was fragmented government decision-making.

Nearly all of the country studies demonstrate that the simplifying assumption of unitary government decision-making fail to accurately describe many policy decisions, with China being the notable exception. Roubini and Sachs (1989) introduced the concept of fragmented government decision-making considered here in quadrants two and four. The literature since then has demonstrated that fragmentation matters most during periods of crisis, such as the food price crisis. The country studies demonstrate the impacts that lack of coordination and tensions between ministries can have. Particularly when ministries have different goals, target constituencies, and mandates, fragmentation creates inefficiencies and slows policy formation.

Governments become fragmented when it is unclear which agent is responsible for decision-making and what role each agent is supposed to play. Egyptian ministries are unified when dealing with the bread subsidy, but are otherwise uncoordinated; they do not share data and use different policy levers to realize their own ends, creating duplicated efforts and conflicting policies. The Bangladeshi ministry of commerce requires other ministries' support in order to act, despite being held accountable for food policy failures that were more accurately caused by lack of coordination and support. In Mozambique, contention between government agencies over budgetary allocations to agricultural priorities led to similar outcomes. South Africa's finance ministry instructed the agriculture ministry to improve food security and provided 400 million Rand to do so. Agriculture's response was that they were not responsible for food policy, only for increasing food production and funding research. The funding ended up being diverted to social development. This response is particularly exceptional for a bureaucracy offered an increased budget to assume greater importance. In Zambia, conflicts between ministries prevented the government from importing enough grain to deal with the crisis.

Even where there is clarity within the central government, fragmentation may occur as policies move from the centre to state and local governments. Nigeria's federal government announced that it would release grain stocks to representatives of state governments for distribution in the hope this would reduce domestic prices. State governments had a different idea about what to do with the grain. The representatives they sent tended to be the traditional rulers, senators, or religious leaders who were already powerful. They kept the grain for themselves and doled it out as patronage to the favoured few. While this may have eased demand pressures on price, they failed to increase the supply of marketable grain. The plan was so riddled with corruption that it was shut down before most of the grain had been dispersed. The federal structure of the Indian government similarly slowed decision-making processes while leaders at different levels (e.g. federal and state) argued over who carried the accountability for responding to the crisis.

Fragmentation can stop all policy-making as in South Africa:

The fact that the ANC in itself is not monolith and is intensely divided along many divisions it is no wonder that most spheres of government policy making—especially in agriculture, food, land and rural development matters are experiencing 'policy paralysis' or the inability to make important decisions. . . . This 'policy paralysis' can be ascribed to the fact that government (and the party) has succumbed to deep ideological divisions within the ruling alliance, which prevent any agreement on the way forward (Kirsten 2015: 424).

Malawi seems at first an ideal counter-example, where one would expect very unitary decision-making across the board. As a former agriculture ministry, the president understood agricultural policy well and took a personal interest in agricultural policy formation and oversight. The political system further encouraged all government bodies to follow the president's wishes or risk being underfunded. Even in this system, however, street-level bureaucrats (Lipsky 2010) make significant decisions over which policies to enact and how. The price band the president tried to impose failed because of the persistent institutional rivalry between the parastatal boards responsible for marketing and grain reserves. In a case like this, even when the policy was chosen at a unitary level, implementation might rely heavily on how well-coordinated agents' actions, incentives, and information sets are.

Claim 5: Uncertainty and incorrect forecasts magnified policy failure and the effects of fragmentation.

During the crisis, policy makers often did not know what food prices were at that moment, how high prices might go, or when they might come down again (Croushore 2011). Ethiopian leaders

did not know for certain whether the cause of their price increases was domestic monetary policy or international pass through, which delayed its monetary policy response. This effect becomes more pronounced when different ministries have varying targets and varying target constituencies. For example, Zambia's Disaster Management Consultative Forum monitors shocks to food output in order to benefit rural smallholders while the agriculture ministry monitors national food balance sheets to benefit commercial farmers. If there is no change in domestic production, the disaster committee will not perceive a need to respond to international market volatility.

The country study on Vietnam is particularly worth reviewing in this context. A March 2008 report by the Ministry of Agriculture and Rural Development (MARD) expected below average harvests. Because of this, the government restricted exports in order to keep domestic prices lower. In the end, however, the rice crop was larger than ever. The agriculture minister apologized publicly for the errors. It would not be too much of a stretch to conclude that this one mistake in the report caused by uncertainty created part of the global crisis itself since Vietnam's export restrictions increased global grain prices. While MARD is tasked with ensuring consumer welfare, the Ministry of Industry and Trade (MIT) specializes in protecting farmers. MIT, concerned that export restrictions would harm farmers, introduced a high price floor. When combined, these conflicting policies led to wasted rice that was not sold domestically or abroad, increasing prices despite the rice surplus, and lower food access in the midst of high food availability. The government increased publicly held stocks rapidly.

It is clear from these examples and others in the country studies that many policy decisions are in fact made by fragmented processes, featuring agents with different goals, targets, policy levers, and constraints. Because of complex policy interactions (Pinstrup-Andersen and Watson 2011), final outcomes may not resemble the goals of any individual actor and government actions may little resemble the typical assumption that governments behave as a unitary, rational decision maker.

Claim 6: Policy makers' private interests also drove policy choices.

In the self-interested model of quadrants three and four, policy makers are influenced to varying degrees by both altruism and other ulterior motives, examples of which were enumerated earlier. Several of the country study authors surveyed, confirm that self-interested motives were the principal motivating factor for the government and that this is standard operating procedure. In countries with elections, those elections are universally ranked by the country study authors as one of the most determining factors for when to respond, while specific details were often motivated by improving the chances that the government would be re-elected. It is widely believed by Indian policy elites that rapidly increasing onion prices have cost politicians elections. Many countries, including Mozambique and Senegal in the country studies, begin implementing promised programmes only just before elections. Kirsten (2015: 422) indicates that the few policy innovations South Africa's government enacted were 'half-hearted initiatives [designed] to limit political damage' from rising prices. In some cases, such as Zambia, the government made a conscious choice to ignore stakeholder contributions that would maximize welfare in favour of policies that would maximize political influence instead. Malawi's political system similarly relies on patronage, with choice political assignments, public resources, or other government favours provided in order to gain political support or in reward for services rendered. During the 2009 campaigns, the single most important issue was what each political party would do in regards to the extremely popular fertilizer subsidy.

The country studies tend to support the core supporter model (Cox and McCubbins 1986) which suggests that governments should reward strong loyalty by distributing scarce resources to their

strongest supporters. Parts of Malawi and Zambia that had supported the winning party in the previous election tended to receive more subsidized fertilizer vouchers than areas that had not. Mason and Ricker-Gilbert (2012) indicate that households in voting districts that supported the government receive 11kg more on average, an amount that increases by 0.5kg for each additional percentage of the vote gained by the government. It has already been mentioned how Nigeria's stocks programme tended to serve political and private interests rather than the public good. While Olomola (2015) argues that the federal government was not part of the problem in this episode and that its chief interest was to reduce hunger, it should be noted that grain stocks were apportioned to states based on whether those regions had supported the president, rather than by poverty, population, state-level price data, or some other measure of need.

Policies were also selected to generate private wealth. The President of Malawi owned the firm that was granted a monopoly to distribute and oversee the fertilizer subsidy. The fertilizer subsidy's expansion can therefore be justified both as a measure that increases the social welfare of the rural poor and as a means of accumulating private wealth (quadrant two). Other Malawian politicians similarly stood to gain from high international prices since they were the primary exporters to Zimbabwe. They therefore had private incentives to instruct the National Food Reserve Agency not to release grain stocks in order to keep prices high. This directly caused the implementation failure of the marketing board's price band (quadrant four).

3.2 External agents

We have thus far largely ignored stakeholders outside the government. To include them, consider the Stigler–Peltzman rent-seeking model as generalized by Hillman (1982). It assumes that governments are self-interested, valuing: 1) the rents/political support from consumers and industry; and 2) income from tariffs. It is assumed that citizens reward the government with political primarily for improving group welfare, so one might expect both social welfare maximizers and self-interested governments to enact similar policies. The differences will be in the details, such as the evidence already discussed from the core supporter model or Malawi's fertilizer subsidy. Depending on how much weight governments place on the welfare of different constituencies and their own tariff revenue, they select tariff rates and other policies to influence market prices in order to maximize a weighted sum of rents and income.

Governments face and make use of two primary groups of external agents: firms, who tend to work with the government as lobbyists or insiders, and citizens whose voices are often ignored unless they protest. Insider/outsider models (e.g. Maloney et al. 1994) separate interest groups depending variously on their access and influence on the government or on the strategies chosen in order to gain that influence. Insiders are both able to and choose to consult directly with the government while outsiders attempt to influence government decisions through the media or social protest. This paper focuses on the work of insider business lobby groups, leaving the effects of protest to other work.

Claim 7: Insider business lobbyist groups played a pivotal role in policy formation, primarily in lower-level committees.

Claim 8: Lack of transparency fuels mistrust between the government and the private sector, leading to policy and implementation failures.

These two claims demonstrate the tension that exists between lobbies and the government. On the one hand, Zambia's stocks monitoring committee followed the guidance of Zambia's three largest agricultural lobbies when they were in agreement in January 2008. As soon as a disagreement between the lobbies arose, government action ground to a halt until protests in the

mining region elevated decision-making. Those lobby groups with access to the cabinet-level decision makers were also able to get their initiatives forward, overriding the recommendations of the technical staff. On the other hand, this private influence is constrained by public mistrust. The Zambian government 'accused private traders of acting as saboteurs who only care about profits while poor people suffered' while the traders simultaneously accused the government of favouring only a few well-placed firms (Chapoto, 2015: 17). Similar stories occur in Egypt and Malawi. Admassie (2015) refers to harassment and intimidation with a dual purpose of preventing protests, but details are not known. Bangladesh's caretaker government fought against corruption by disrupting supply chains and decimating the informal markets the poor relied on for food access. As a natural result, food supply dropped and food prices rose in many parts of the country, harming the people the government had hoped to help by fighting corruption. Mozambique ignored business's inputs despite creating a forum for them to air their concerns. India debated forcing traders to sell off their private grain stocks under threat of imprisonment.

This distrust of the private sector reduces policy transparency. The lack of transparency in turn creates uncertainty for market participants. At what prices will the government purchase grains or release public stocks? How long will export bans or lower import tariffs last? How large will subsidies be and how long will they last? Particularly farmers, but also traders and processors must make investment decisions without being able to predict government plans, creating market inefficiencies, underinvestment, and greater hoarding than would exist with transparent policy-making. The feedbacks generated from this dual-sided mistrust therefore create policy failures and inefficient food markets.

This takes multiple forms. The Kenyan government refused to tell farmers the maize price it would set in advance of the 2010–11 season (Mugambi 2010). This in turn reduced Kenyan farmers' incentives to invest in improved seeds, physical infrastructure, and fertilizer, reducing the total harvest. When it was announced, Egypt's export ban was going to last for six months. The ban was subsequently extended for six more. India and Malawi regularly evince significant policy swings on the one hand and piecemeal policy-making on the other (Babu and Sanyal 2007). Nigeria announced many policies that were never enacted or that were quickly removed, increasing hoarding and market uncertainty.

Resolving the dual-sided mistrust and the policy and market failures it engenders will require much greater transparency (Pinstrup-Andersen and Watson 2011). Jayne et al. (2006) declare that:

The phenomenon of subsidized government intervention in the market, or the threat of it, leading to private sector inaction, is one of the greatest problems plaguing the food marketing systems in the region. Effective coordination between the private and public sector would require greater consultation and transparency with regard to changes in parastatal purchase and sale prices, import and export decisions, tariff rate changes and stock release triggers (Jayne et al. 2006: 338).

Because governments face uncertainty about current market conditions, let alone the future states of the world, they should ideally pre-commit to certain conditions under which these emergency policies would be enacted and removed—grain price thresholds for instituting or removing bans and subsidies, for example. Market and policy efficiency would be improved. As policy becomes more automated, there would be less delay during crises. Private sector actors would be assured of when and how much government would intervene, and therefore be able to plan investment decisions. There is room for action in this regard from the World Trade Organization as well: it is better that governments pre-commit and announce at what

international prices export restrictions will be triggered than that governments pretend there are no restrictions and then enact them by surprise through ad hoc processes.

4 Conclusions

This synthesis has explored eight of the claims about why governments responded the way they did to the 2006–08 food price crisis:

1. The responses to past crises are the best guides to predicting future actions.
2. Governments preferred policy changes with lower costs, such as changing the level of a currently existing policy rather than introducing a new policy.
3. Much of the common policy response can be explained by a social welfare function maximizing government.
4. One primary cause of policy failure was fragmented government decision-making.
5. Uncertainty and incorrect forecasts magnified policy failure and the effects of fragmentation.
6. Policy makers' private interests drove policy choice in select examples.
7. Insider business lobbyist groups played a pivotal role in policy formation, primarily in lower-level committees.
8. Lack of transparency fuels mistrust between the government and the private sector, leading to implementation failure.

The policy-making processes have been divided into a two-dimensional grid, divided for ease of discussion into four quadrants. The first dimension reflects the extent to which the policy-making process can be approximated by appealing to a single decision maker with a well-defined maximand, or whether it is necessary to include multiple, possibly competing agents with different goals, processes, targets, and constituencies. The second dimension reflects the extent to which policies are enacted primarily in order to maximize some form of a social welfare function, or whether policy makers are more self-interested, using the opportunities presented by the food price crisis to increase their wealth or political influence. As stated before, the purpose of the exercise is not to categorize entire governments within one of the four quadrants, but to focus on particular policy responses and policy-making processes. It is not only possible, but it has been seen that the same government often enacted policies in multiple quadrants.

The broad commonalities in policy response across countries can indeed fit into the first quadrant, with a unitary, social welfare maximizing decision maker. Sudden and large changes in food prices upset the previous balance between supporting net food sellers and net food buyers. Governments interested in maximizing social welfare will transfer some of the gain from the winner—in this case from net food sellers—to buyers through export tariff increases/import tariff decreases, food subsidies, and production subsidies for net food-buying producers. To the extent governments believe this price change will be only temporary, it makes sense for this assistance to focus on policies that do not have to be long-run sustainable or ignore improving their long-run productive capacity. Governments' ability to respond in this manner may be constrained by macroeconomic stability concerns, but this does not appear to have prevented most governments from expensive, short-term policy-making.

It has also been seen that countries typically measured to have greater policy capacity, as measured by CINC, were significantly more likely than average to enact procurement price policies and import/export policies. The countries with the highest index of economic freedom scores were more than half of the countries that enacted consumer price policies. As the World Bank and FAO food policy datasets grow, it will be possible to identify further correlates, enabling international and non-governmental organizations to provide better support. Watson (2015) noted that their international actors seemed to have taken very minor supportive roles in the food policy crisis. Even where governments were heavily dependent on official development assistance, there seem to be very few instances of externally instigated policy change.

The social welfare maximizing, unitary government model is insufficient, however, to explain how governments deviated from these predictions. Fragmented decision-making slowed responsiveness (e.g. Nigeria and India) and created competing policies that directly competed with each other (e.g. Vietnam). Even where broad agreement exists across ministries over some policies, the food price crisis revealed fractures between government entities and between public and private actors (e.g. Egypt). These fractures are only exacerbated by uncertainty without solid, real-time data and analysis. Fragmented decision-making may be responsible for the lion's share of the policy and implementation failures during the food price crisis. This may be ameliorated to a degree by formal and informal institutions that restrain political choice (e.g. Brazil and South Africa).

In a further departure from the first quadrant assumptions, many policies were either enacted or altered for the express purpose of providing private benefits to public officials. Malawi's fertilizer subsidy was not only popular with voters, but was run through a monopoly that enriched the president. When policies were both self-interested and fragmented, it could create complete policy paralysis or create such great inefficiencies that the system is harmed rather than benefitted (e.g. Nigeria's stock policy, Malawi's price band).

Most of the country studies work from the premise that, in their dealings with external agents, governments place greater weight on the welfare of particular social groups: urban consumers received larger food subsidies and social safety net expansions (e.g. Bangladesh and Kenya); net food sellers were more likely to be favoured if they were politically united (e.g. the USA, South Africa, Zambia); and governments targeted groups that were more likely to protest instead of those in greatest need (e.g. Ethiopia, China, Senegal).

Mutual distrust between government and firms paralysed both investment and policy decision-making (e.g. Kenya, Zambia). Governments' deliberate choice to avoid transparency increased the degree of food hoarding and speculation and decreased private sector investment on farms, processing plants, and both domestic and international trading capacity. Those private sector responses reaffirmed governments' distrust of the private sector, encouraging further sudden policy shifts and lack of transparency in the future. It has been argued that clear policy trigger rules that pre-commit to when certain policies that are particularly market-distorting (such as export bans, changes in government procurement practices or food subsidies) will be enacted and removed can enable the private sector to better accomplish the functions it is best at, reducing both public and private sector distortions. Otherwise, the ongoing coordination failure between private and public sectors is liable to become a vicious, self-reinforcing cycle. It is possible, however, that such additional preparation may not be sufficient to prevent the kind of ad hoc policy-making processes witnessed here. Politicians must be perceived to be 'doing something' when a crisis occurs, and that often means making changes to policy in sudden ways that are not pre-announced.

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