Policy Responses to High Food Prices: Domestic Incentives and Global Implications

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I. Introduction

Food[1] commodity price volatility is a high profile issue across the world, particularly for rice and wheat consumers. Everyday, approximately 3 billion global consumers depend on rice for one-third of their calories. The majority of these consumers are in low-income countries and are spending 40 percent to 80 percent of their income on food versus 17 percent in high-income countries (ADB, 2008; Slayton and Timmer 2008; Seale, Regmi and Bernstein, 2003). Understandably, global food commodity price inflation beginning in 2006 and continuing through mid-2008 became a priority concern for global consumers, producers and policy-makers alike. In response, many governments across the world implemented policies targeting high food commodity prices in their domestic markets. These policy responses were concentrated in lower income countries and primarily targeted rice and wheat.

The 2007-08 policy responses across countries included liberalized import tariffs, export restrictions and increased domestic support for both consumers and producers. Some of the policy choices such as major exporters implementing export bans were somewhat surprising from an international trade perspective where competitive exporters would be expected to leverage their trading position and maximize export revenues when prices are high, ceteris paribus.

[1] Food is defined here as the general basket of global staple foods including, but not limited to, rice, wheat, soybeans, meats and cooking oils.

To investigate the seeming contradiction of the policy responses during the 2006-08 food price surges and future policy expectations, we develop a case study of 15 major global trading, lower-income countries' policy responses[2]. The analysis addressed the following questions: a) What policy responses did major global traders with relatively large domestic food commodity price vulnerabilities choose?; b) What are the expected short-term and potential longer-term market impacts of these policies?; c) What domestic incentives exist for the selected countries' policy choices?; and d) Did the response policies work?

While the short-term price spike of 2007-08 is over, key political incentives and economic consequences of these policy actions are important for global policymakers to understand and anticipate in the case of future price volatility. By looking at policy responses and expected short-term response policy impacts across countries with different domestic demographics, consumer purchasing power, localized political objectives and other key domestic indicators, we can explore countries' policy choices beyond the standard international trade model when precarious issues arise. For example, a country comprised of consumers with low purchasing power is relatively vulnerable to food price shocks, both economically and politically. As economic and political pressures mount domestically, the incentives to employ policies with expected short-term benefits are strengthened. Policy outcomes may differ from the expectations of maximizing comparative advantage.

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[2] For the purposes of this analysis, we classify countries (high-income and lower-income) according to 2008 World Bank Atlas Method income classifications. The classification "lower-income" is applied to countries not classified as high-income and includes the following income classifications: low income, lower middle income and upper middle income. Classifications are available at www.worldbank.org "Data: Classification of Economies."

Given that much political and economic variance exists across international trading partners, it is important to understand the motivation for policy choices during food price surges. Countries may use policies to target domestic situations, but in a global economy, policy impacts spillover beyond a country's borders. Unintended consequences or externalities occur for the rest of the international market. If domestic incentives persist and policies implemented are perceived to be beneficial domestically, there is little incentive against once again using these policies in future food price surges.

II. Staple Commodity Prices Rise Rapidly

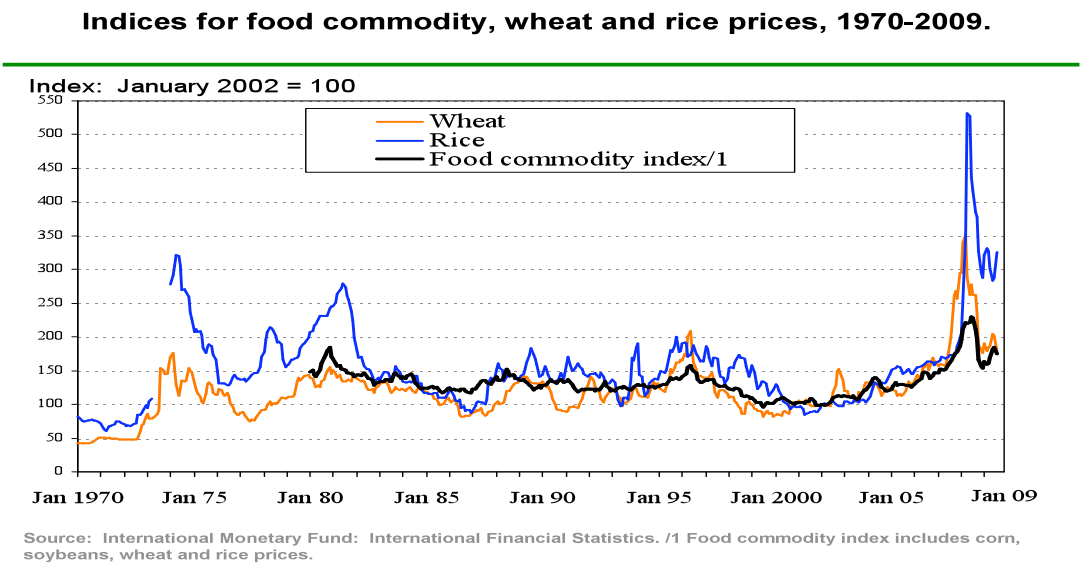
Most food commodity prices rose rapidly in 2007 and into 2008 before coming down by the start of 2009 (figure 1). According to IMF price data, global food prices increased 47 percent from June 2006 to December 2007; global prices of staple foods such as rice, wheat and cooking oil rose 86 percent, 99 percent and 60 percent, respectively, within the same time period.

Initially, the food grains (wheat and rice) prices lagged the feed grains (corn and oilseeds) prices. Feed grain prices were pressured upward due to increased demand for livestock, grain-based ethanol and bio-diesel derived from oilseeds. By August 2007, wheat prices had soared to record highs, due in part to weather problems in the Central Asia and the Former Soviet Union. By November 2007, rice prices which lagged increases in most other food commodities began to increase at a much faster pace due to export restrictions by India and Vietnam (Childs and Kiawu, 2009). Food prices have since decreased, but they remain volatile and price pressures could resume as the global economy stabilizes.

Many studies have focused on the catalysts for the swift increase in global food prices during this time period[3]. While the causal factors behind the 2007-08 food commodity price spike may be unique, the food commodity price surges are not an isolated incidence. Similar global food price hikes were experienced in the first half of the 1970s, in 1980 and 1997 (Peters, Langley and Westcott, 2008). Evidence of food commodity price surge repetition and observed volatility reiterates the importance of understanding these policy responses as countries' domestic priorities continue to evolve parallel with the global trading environment.

[3] See Abbott et al; Headey and Fan; Schnepf; and Trostle for a comprehensive discussion of causal factors.

Figure 1. Global food commodity prices, 1970-2009./1



III. Policy Responses Across the Globe

When domestic food prices change significantly due to factors in the global markets, countries have two basic sets of policy tools to adjust domestic prices. These tools include trade policies which target imports and exports and domestic policies which target domestic consumers and producers.

Beginning in mid-2007, several countries implemented some or all of these policy tools to mitigate relatively high domestic food prices. In general, high income countries who responded focused on expanding eligibility and access within domestic programs and lowering import tariffs on certain food commodities. By and large, lower income countries also responded with lowered import tariffs on food commodities, but also implemented other high profile policies such as export restrictions, domestic consumer price ceilings and agricultural input subsidies which impacted both domestic and global food markets.

According to a 2008 FAO survey of 60 low-income, food deficit countries, the majority of countries surveyed reduced import tariffs to some degree; however, these countries already had relatively low tariff rates of 8 and 14 percent on cereals and vegetable oils, respectively, prior to the food price surge. Approximately one-fourth of the countries surveyed implemented export restrictions. Furthermore, while all regions surveyed implemented some policy response, trade and domestic policies used varied greatly across regions. Export restrictions were highly concentrated in Central/East/South Asia, Europe, Middle East and North Africa. In contrast, the surveyed countries which did not implement response policies were concentrated in Africa and Latin America and the Caribbean. That said, about 65 percent of countries surveyed in Latin America and the Caribbean implemented consumer price controls or subsidies (FAO, 2008).

To better understand domestically-targeted policy responses and their interactions with global markets, we build on the FAO discussion and specifically examine the responses of 15 lower income countries which are major players in global food markets (figure 2). Each of these countries is heavily involved in staple food markets. Given that many policy responses targeted consumer rice prices, the majority of the countries examined are in South and East Asia.

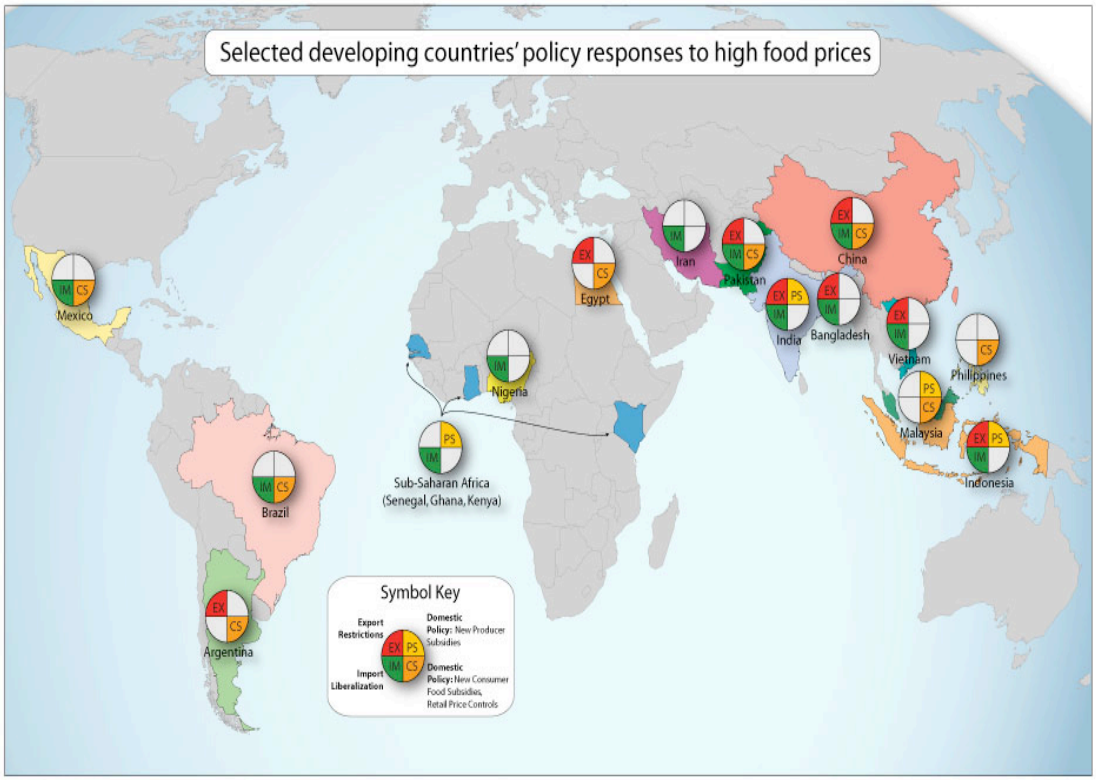
Selected country responses are identified and categorized as trade-related or domestic-related responses. Trade-related policies include export restrictions and import tariff liberalization. Export restrictions include export limitations and bans and other export restrictions. Exports bans are relatively straightforward and refer to a situation when a country has blocked the export of a particular commodity. Generally, export

restrictions create some type of barrier to discourage exporting the target commodity. Methods used within our country sample include increased export taxes, increasing minimum export prices (MEP) and limiting exportable quantities. In contrast, import liberalization encourages importation by reducing the import tax on a particular commodity.

Domestic policies are divided into producer and consumer support categories. Domestic consumer support refers to price ceilings imposed on domestic retail prices. Some countries targeted one or two food staples whereas other countries capped retail prices on a much larger food basket (e.g., China and Mexico). Domestic producer support includes increased farm subsidies, primarily fertilizer, and enhancing infrastructure[4]. Direct fertilizer subsidies provide immediate support whereas providing education and research or enhancing infrastructure is a longer-term policy.

[4] Both short-term (e.g. fertilizer) and long-term (e.g. infrastructure) policies are included if they were announced as new policies in response to food commodity price surges.

Figure 2. Lower-income country policy responses to 2007/08 food commodity price surges.



Source: Compiled by authors from Food and Agricultural Organizaiton (FAO), USDA Foreign Agriculture Service GAIN REPORTS and other news reports.

In general, these selected global players behaved similarly to the larger FAO survey sample with three-fourths responding with import tariff reductions. Approximately one-half implemented export restrictions. Rice was a particularly important target commodity. Key global rice producers such as India, Vietnam and

Egypt banned rice exports and major consumers such as Bangladesh, Sub-Saharan African countries, Mexico and Nigeria lowered import tariffs.

Three-fourths of selected countries also implemented domestic policies; consumer- or producer-focused policies were equally distributed. However, countries generally chose to focus on consumer or producers, not both.

China, India, Indonesia and Pakistan each responded more comprehensively with a portfolio of trade-related and domestic policy responses. These countries, coincidentally, are major world food producers and their consumers represent 47 percent of the world's population with an average of US$3,500 per capita annual purchasing power (CIA, 2009).

Taking a closer look at the countries' staple food global trading status, a consistency across the 11 countries which reduced food import tariffs is that all but three (India, Indonesia and Vietnam) were average net staple food importers from 2003-08 (table1). Besides India, all of these countries were net rice or wheat importers.

The pattern across export restriction implementation is less obvious when looking at staple food trading status across countries. Both net exporters and net importers implemented export restrictions. Furthermore, rice and wheat export bans were implemented by both net exporters (Argentina, Egypt, India, Pakistan and Vietnam) and net importers (Bangladesh) of the respective commodities, although, in some cases (Vietnam), state-sponsored exports continued. In the case of net exporters, this implies that either countries were attempting to mitigate domestic food prices (at a cost of forgone export revenues) or to state-monopolize export revenue opportunities.

Table 1. Selected country international trade status, 2003/04-2007/08.

	Staple* Food Trade Status Avg 2003/04-2007/08	Rice Trade Status Avg 2003/04-2007/08	Wheat Food Trade Status Avg 2003/04-2007/08
Argentina	Net EX	Net EX	Net EX
Bangladesh	Net IM	Net IM	Net EX
Brazil	Net IM	Net IM	Net IM
China	Net IM	Net EX	Net IM
Egypt	Net IM	Net EX	Net IM
India	Net EX	Net EX	Net EX
Indonesia	Net EX	Net IM	Net IM
Iran	Net IM	Net IM	Net IM
Malaysia	Net EX	Net IM	Net IM
Nigeria	Net IM	Net IM	Net IM
Pakistan	Net IM	Net IM	Net EX
Philippines	Net IM	Net IM	Net IM
Sub-saharan Africa (Ghana, Kenya, Senegal)	Net IM	Net IM	Net IM
Thailand	Net EX	Net EX	Net IM
Vietnam	Net EX	Net EX	Net IM

Source: Table compiled using Global Trade Atlas, June 2009.
*Staple food is defined as corn, wheat, rice and palm and soy oils.

Generally, we would expect domestic policy responses to have less correlation with the country's international staple trading status, particularly consumer-focused support. However, it is not surprising that net exporting countries which implemented export restrictions would also provide support to producers of the restricted crop to offset foregone export market opportunities, as did India, Indonesia and Pakistan. Argentina, Egypt and China focused more on consumer support.

IV. Policy Responses Have Domestic and Global Impacts

Each policy tool implemented by the countries in this study has its own set of short- and long-term expected market impacts according to economic theory. Furthermore, policy tools generally affect domestic consumers and producers differently depending on the degree of separation between consumer and producer households within the country.

Based on economic theory and assumptions of the standard international trade model, we can infer the direction of the policy impacts on domestic and global markets (table 2). The strength of the policy impacts will be impacted by price transmission within the country and policy duration. Price transmission from global to domestic wholesale to consumer markets varies across countries (Dawe, 2008). Policies with short-term domestic benefits may be attractive although there are long-term trade-offs for the country and the rest of the world (ROW). For example, reducing import tariffs and imposing export restrictions are attractive to governments of net food importers because domestic food prices are expected to be impacted quickly.

Table 2. Direction of short-term* expected market impacts of selected developing countries' policy responses to 2007/08 high food price, ceteris paribus.

	Export Restrictions		**Import Liberlization**	**Domestic Consumer Support**	**Domestic Producer Support**
	Implement Export Bans	Increase Export Taxes	Reduce Import Tariffs	Implement Retail Price Ceilings (caps)/1	Increase Agricultural Production Subsidies/2
Short-term* Expected Impacts					
Domestic					
Domestic Supply	+	+	+	-	+
Domestic Prices	-	-	-	-	-
Rest of World (ROW)					
ROW Supply	-	-	-	+	+
ROW Prices	+	+	+	-	-
Longer-term Expected Impacts					
Domestic investment in agriculture	-	-	-	-	+
Competitive Domestic Production	+	+	+	+	+/-

*Short-term is defined as the time period between when the policy is put in place and the next growing season. /1 Retail price caps are assumed to be below the relevant market price. Producers are assumed to be able to divert sales into other (foreign) markets. /2 Agricultural production subsidies (e.g. fertilizer subsidies) are assumed to be provided early enough to influence production decisions.

Do policies result in lower domestic prices? In the short-term, each of these policy responses create downward pressure on domestic prices either by increasing domestic supply[5] or de facto limiting consumer prices as in the case of price ceilings. Over time, as producers adjust to policy incentives, investment in domestic agriculture is disincentivised by each of the policy tools aside from agricultural subsidies. As a result, domestic and global food prices could be higher in the longer-term depending on how producers in the rest of the world react.

In an international trading environment, domestic and international markets function in tandem. When policies from table x are used, these policies impact both domestic markets and markets in the ROW. As discussed, the trade-related policies implemented put immediate downward pressure on domestic prices. However, when the available global supply is decreased due to these measures, there is upward pressure on food prices in the ROW. On the other hand, effective price ceilings encourage producers to seek other markets and agricultural subsidies encourage producers to continue or increase production. Both of these policies push supply into the ROW when implemented independently, thus, providing downward pressure on ROW prices in the short-term. The amount of displaced market volumes from the domestic markets will inform how much upward or downward pressure exits on ROW food prices.

Who benefits? In theory, market operations without policy distortions maximize both consumer and producer welfare. A trade-off occurs between both short-term and long-term policy impacts and who benefits (domestic consumers or producers) when policies

[5] We assume that non-regulated trade outflows (smuggling) are controlled.

alter market operations (Houck, 1986). Policies that benefit domestic consumers often harm domestic producers and vice versa unless all households are producers. "Whose welfare are you willing to trade-off?" is a relevant question for policymakers to consider when implementing policies.

In this study, the selected countries targeted benefits for domestic consumers in the short-term as evidenced by the expected downward pressure on domestic prices associated with the policy responses. Export restrictions increase domestic supplies and reduce prices paid to producers. Lower import tariffs provide consumers more competitive food options, but increase competition for producers which likely decreases producer prices. Domestic policies such as price ceilings also reduce producer revenues. While agricultural subsidies softened the effects of rising input costs during this time period, they were often coupled with the effects of export restrictions and liberalized imports.

Impacts Down the Road… Each policy used to decrease domestic food prices today has an impact tomorrow. Depending on the duration and intensity, policy responses create longer-term incentives, both domestically and in the ROW. The most obvious longer-term impacts are those on domestic agricultural production. Each policy response aside from domestic producer support discourages investment in agriculture by reducing market transparency and limiting the benefits from food price surges. However, remaining producers have incentives to produce competitively[6] if they want to maintain or increases profits. Domestic producer support which facilitates "farm to market"

[6] Competitive production refers to minimizing per unit costs.

efficiency is expected to encourage both investment in agriculture and competitive production. Competitive domestic production does not ensure domestic consumers sufficient access to food.

A closer look at the expected short-term impacts associated with each policy reveals a potentially misleading nuance across the expected policy impacts (table 2). It appears that export restrictions and import tariff reductions have the same market impacts both in the short- and longer-term. Yes, both export restrictions and import liberalization put downward pressure on short-term domestic prices. Furthermore, when used alone, they both encourage competitive domestic production and discourage investment in agriculture. A major difference, however, is that export restrictions create a smaller, isolated market and import liberalization moves closer to a competitive and efficient *global* market.

In a market isolated by export restrictions, the remaining producers are likely to be competitive within the isolated market, but increased agricultural investment would not expected due to an artificial restriction on the market size. In contrast, competitive global markets with few trade restrictions encourage competitive production within a global market. As globally competitive supplies enter the domestic market, we would expect downward pressure on domestic prices leaving little incentive for increased private domestic investment in agriculture unless this country holds a comparative advantage. Ultimately, in this global market, the sellers are the most efficient sellers with a comparative advantage. In other words, consumer and producer welfare is maximized and no extra benefit is "left on the table" which is particularly desirable regarding food markets.

The Asian Development Bank and IFPRI recently prescribed that higher productivity (targeting globally competitive production) should be incentivized for long-run food security in vulnerable countries. Agricultural growth will provide food security by increasing supply, reducing prices and raising incomes. Productivity is encouraged through better infrastructure [technology, information, access to capital] and the ability to participate in the market without policies that interrupt market signals**.** In contrast, a long-run scenario incorporating market interrupting policies such as export restrictions on major food commodities depicts an ironic outcome where the global market cannot efficiently respond to unexpected food needs such as in a drought situation combined with a strong incentive for self-sufficient food commodity production policies.

A look at U.S. history provides a tangible and telling example where trade policy responses to domestic food price surges are associated with long-term unintended global consequences. In 1973, the United States banned soybean and soybean oil exports in response to domestic food price inflation. This ban is often cited as a catalyst in Brazil's soybean industry emergence (Warnken, 1999; Ray, 2004). Japan, a major world soy importer, sought alternative soy supplies as the U.S was thought to be an unreliable source. In the near-term, Japanese investors bought agricultural land in Brazil for soybean production. Later, in 1980 the governments of Japan and Brazil put into place the Japanese-Brazilian Cooperation Program for the Development of the Cerrados which lasted 21 years and helped finance the soybean production expansion into areas with less desirable land (cerrados). Brazil is now a key competitor for the U.S. in the oilseeds market as the number two oilseed producer in the world.

V. Domestic Landscapes Create Incentives for Policy Responses

Lower income countries in this study generally focused on policies which could decrease or stabilize domestic food price in the short-term. Export restrictions and domestic price ceilings were implemented at the expense of exporting producers and consumers in the rest of the world. Furthermore, the responses were inconsistent with policy prescriptions for longer-term food and nutrition security and stability (ADB, 2008; IFPRI, 2008). On the other hand, import tariff liberalization was welcomed as a movement toward the competitive global market, but was generally limited in duration. Either way, a few questions remain. Why did these selected less developed countries choose to swiftly implement policies on behalf of consumers given the potential costs involved? What factors provide incentives for countries to choose short-term (potential immediate impacts for stabilizing domestic jobs and hunger) vs. long-term (promoting competitive markets and sustainability) policies?

In examining these questions, we must take a look at the domestic conditions in the selected countries. Each country in the global trading scheme has a domestic landscape which influences policy choices. More specifically, a country's relative development level, often proxied by structural transformation and per capita income, is a major factor in food and agricultural-related policy choices (Kuznets 1966; Chenery and Taylor 1968; Bates and Block 2009).

Three interesting trends have been found regarding the political economy of food and agriculture (Olson, 1965; Bates and Rogerson 1980; Anderson, Hayami et al 1986; Lindert 1991; Anderson, 1995; Bates and Block, 2009).

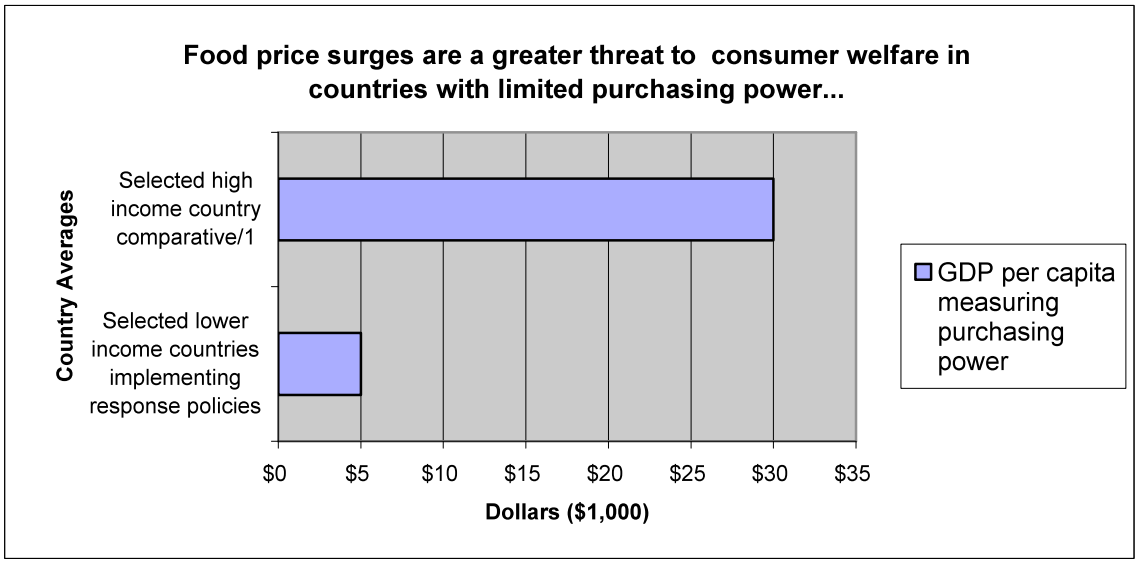
#1 When consumers spend a large portion of their incomes on food, they demand that governments adopt policies which lower foods costs; as consumers spend less on food, pressure for adopting policies which lower food prices tends to decline.

#2 When agriculture is the largest sector in the economy and farmers are the single largest labor force, governments tend to adopt policies which lower farmers' incomes; when agriculture and farmers represent a smaller potion of the economy and labor force, governments tend to adopt policies which favor farmers' incomes.

#3 When a large proportion of the population is rural, then the agricultural sector is typically comprised on many small producers across the rural areas. In this case, consumers are found to have a relatively stronger lobby and governments with large rural and agricultural populations are expected to adopt relatively producer-adverse policies.

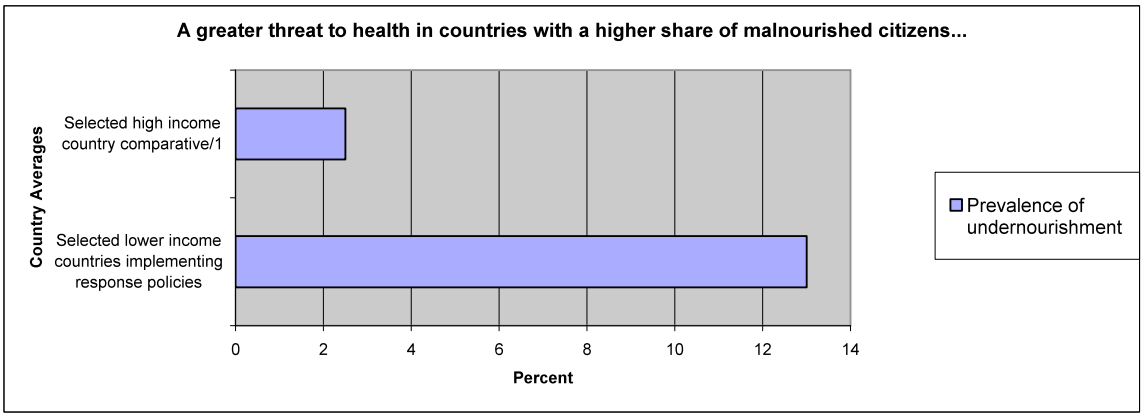
Clearly, each of the lower income countries in this study has a unique domestic landscape. However, there also exist unifying domestic characteristics across countries choosing similar policy responses to the price surges. Similar domestic characteristics create relative incentives for short-term, pro-consumer policies observed which is consistent with expectations drawn from agricultural political economy literature. Consumers in high-income comparative countries have seven times the purchasing power of consumers in the selected lower-income countries implementing response policies and less than 20 percent of the amount of undernourished (figures 3.a and 3.b). Regarding the importance of agriculture, selected lower-income countries have a significantly larger agricultural sector (in GDP terms), proportion of agricultural employment and rural population (figure 3.c).

Figure 3.a. Policy responses to food price surges are more likely in countries with limited purchasing power.



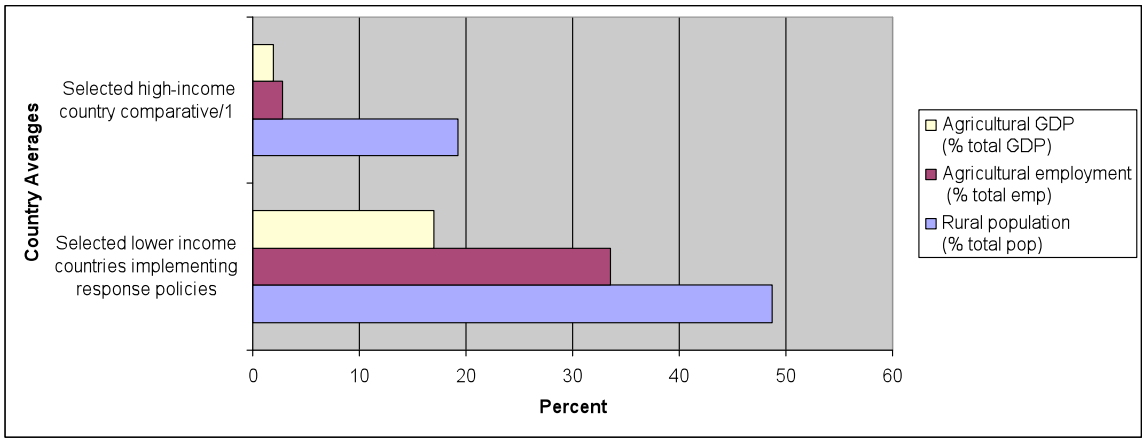
Source: Chart created by authors using CIA World Factbook data (2009). /1 Selected high-income countries include Australia, Canada, Japan, US and UK.

Figure 3.b. …And in countries with a higher share of malnourished citizens



Source: Chart created by authors using World Bank Development Indicators (2007)./1 Selected high-income countries include Australia, Canada, Japan, US and UK.

Figure 3.c. …and in countries with a large agricultural sector.

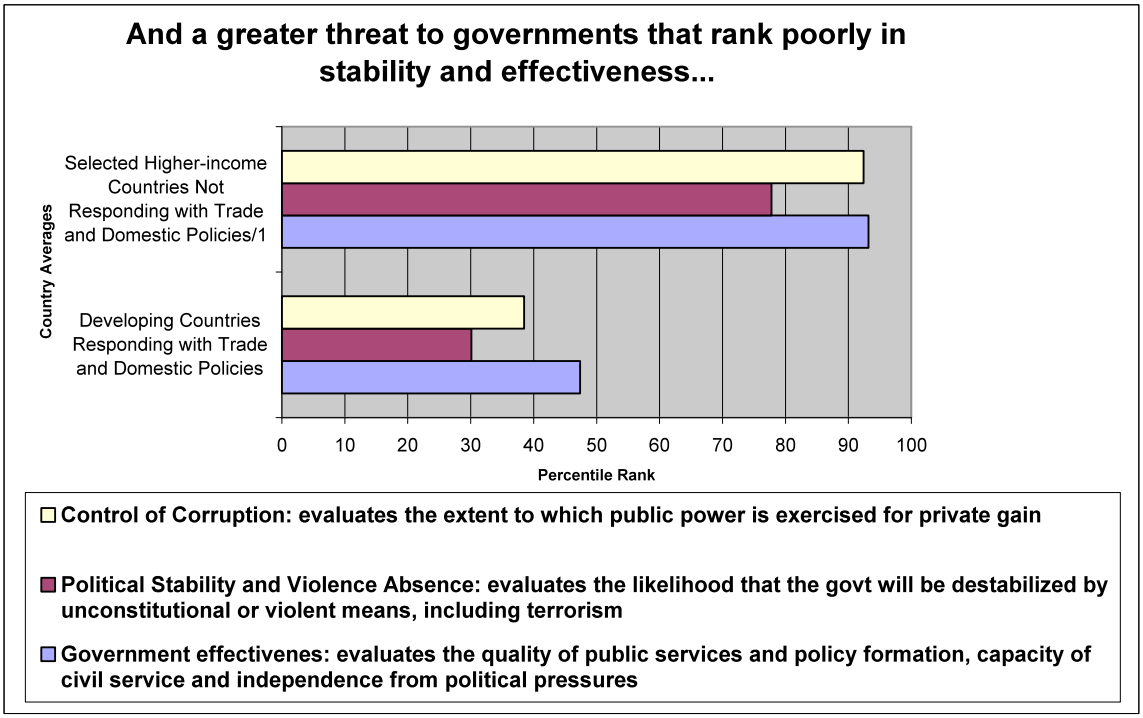


Source: Chart created by authors using World Bank Development Indicators (2007)./1 Selected high-income countries include Australia, Canada, Japan, US and UK.

From an institutional perspective, relatively low rankings in corruption control, political stability and effectiveness contribute to volatile domestic environments. Food price surges will further agitate any instability, particularly coupled with relatively low purchasing power. IFPRI reports that 78 percent of 2007-08 violent food protests occurred in countries ranking at or below the 50th percentile for government effectiveness.

Selected lower-income countries are around the 40th percentile, on average, across these institutional measures (figure 4). Selected high-income countries exhibit a more stable, effective domestic political environment ranking around the 85th percentile, on average, across these measures. Policymakers in unstable economic and political environment compounded with poverty have incentives to trade-off long-term economic consequences to stabilize the domestic consumer environment in the short-term.

Figure 4. Policy responses to food price surges a more likely where governments rank poorly in stability and effectiveness.



Source: Chart created by authors using D.Kaufmann, A. Kraay and M. Mastruzzi "Governance Matters IV: Governance Indicators for 1996-2004" www.worldbank.org/wbi/governance. /1 Selected high-income countries include Australia, Canada, Japan, US and UK.

VI. Policy Responses to Food Price Surges: Will History Repeat?

The domestic incentives for many of the observed policy responses in lower income countries during the 2007-08 food price surge are clear. According to political economy literature, these responses should have been expected and are consistent with past trends. Should we expect globally disrupting policy such as export bans to occur again in the face of a relatively large increase in global food prices?

In the future, we would expect policymakers to refrain form trade-disrupting policies such as rice export bans if a) domestic consumer purchasing power changes drastically; b) the short-term response policy goals were not met; or c) future global trade agreements implement rules against export bans.

In general, it is difficult to assess if countries implementing export bans will develop sufficiently to better withstand future food price surges or if trade agreements will address export bans. However, we can examine if short-term response policy goals were achieved in terms of domestic prices and political objectives.

Vietnam and India provide relatively clear examples where short-term domestic outcomes positively reinforced their respective rice export bans. Additionally, the policy decisions in these two countries are key examples where domestically-focused policy objectives have impacts well beyond domestic borders given the policies' contribution to increased uncertainty and price spikes in the global rice market in mid- to late-2007 (Childs and Kiawu; Slayton and Timmer, 2008).

Globally-traded rice is a "thin" market with an average annual trade of 30 million metric tons which is approximately 7 percent of global consumption (USDA PSD, 2009). It is also largely stratified across quality and variety. Long-grain rice is the primary "consumer" rice in Southeast/South Asia and Sub-Saharan Africa. As mentioned previously, rice is a staple in most of the trading countries, aside from the U.S., with little substitution occurring across crops. However, among the major rice exporters, India is unique in that there is staple substitutability between wheat and rice which increases India's flexibility during food price surges.

A few dominant sellers (India, Vietnam, Thailand, United States) supply the long-grain rice market and importers (Bangladesh, the Philippines, Malaysia and Sub-Saharan Africa) purchase large quantities. An interesting nuance within the long-grain import market is that South and Southeast Asian importers purchase large quantities, but

these imports represent a relatively small percentage of domestic consumption (approx. 15 percent). On the other hand, Sub-Saharan African countries are much more dependent on imports as a percentage of domestic consumption (approx. 40 percent).

India entered the world rice market fairly recently with a release of 4.16 million metric tons in 1995 and since has typically taken the position of number three/four world rice exporter. Prior to 1995, India had been fairly isolationist with a history of domestic agricultural support and import tariffs. A domestic expectation likely existed for Indian government intervention during the 2007-08 food price surges, particularly given their history of self-reliance.

India's rice export restrictions were implemented at a time when Indian consumer food costs in general had been rising for wheat and edible oils. Due to weather-related crop losses, India went from being a net exporter of wheat to a net importer of the crop in the year. In 2006/07, India imported an estimated 6.7 million metric tons of wheat, up from the previous year when the country imported just 118,000 metric tons. India wheat import tariffs began be lowered in 2006 and a zero wheat import tariff policy was implemented and extended into 2008. Additionally, edible oil import tariffs were reduced and edible oil exports were banned, effective in early 2008.

India began restricting non-basmati rice exports in late 2007 with an export tax on basmati rice and a minimum export price (MEP) on non-basmati rice. In March 2008, these export restrictions evolved into a ban of all non-basmati rice exports. India made rice export ban concessions for Bangladesh and committed to filling standing government

contracts. Although some exceptions to the non-basmati rice export ban were made, the rice export ban resulted in great supply uncertainty for major rice importers.

The Indian rice export restrictions were announced as a policy to mitigate rising domestic rice prices; however, the political situation at the time was also a likely motivator for this ban. India is in the bottom 25th percentile for political stability and violence rankings (WGI) indicating the potential for domestic upheaval. Domestic incentives for implementing policies which signal stabilization in the near-term were amplified with the highly-competitive Indian General Elections occurring in April 2009. Price stability is a major issue within Indian national politics, particularly with an upcoming election (Gentleman, 2007.).

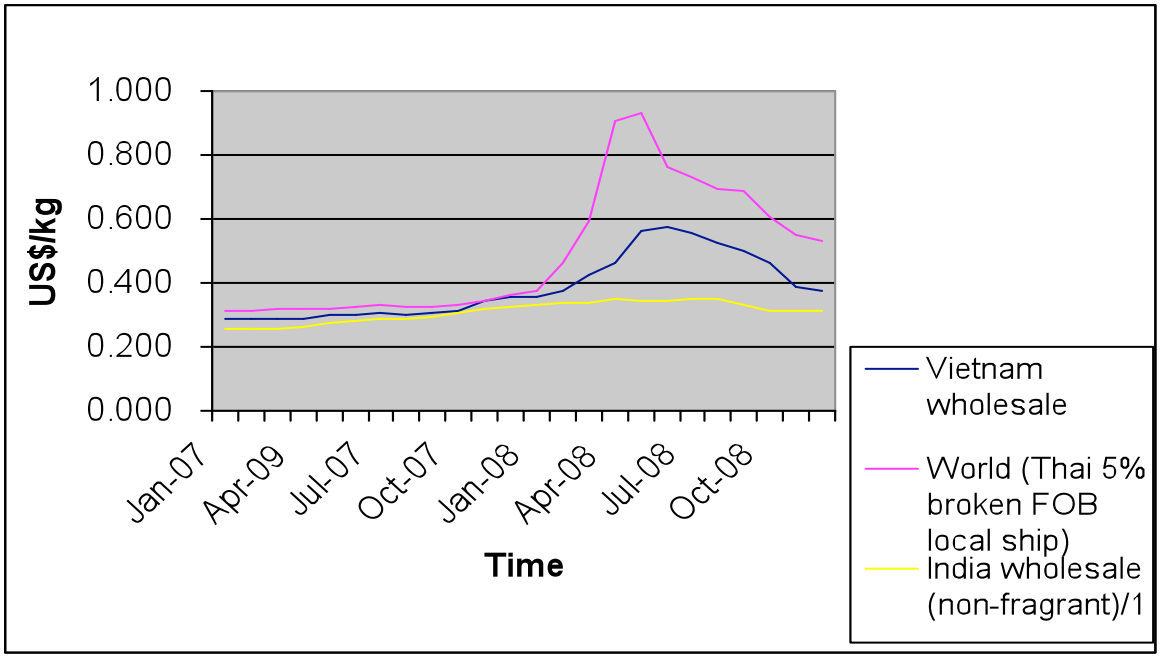
Vietnam is a major part of the world's long-grain rice market typically holding the position of the second largest exporter. Also voicing that it wanted to keep domestic inflation under control, the Vietnamese government followed India and implemented a ban on *new, commercial* rice exports from April 2008 to July 2008. Vietnam's population is also poor according to world standards with $2,549 per capita income. In contrast to India, Vietnam is in the 52nd percentile for political stability and absence of violence, but is in the 29th percentile for control of corruption.

The majority of Vietnamese rice exports, however, are not exported by private traders. State-backed companies, VinaFood 1 and 2, export much of the country's rice surplus. Government-related entities continued to fill old rice contracts during the export ban.

Short-term goals in both countries seem to have been met. First and foremost, domestic wholesale rice prices in India and Vietnam increased at a much slower rate than global rice prices in early 2008 (figure 7). India, in particular, avoided much of the 2008 global surge as perceived by domestic consumers. Furthermore, from 2003-2007, the FAO finds that India and Vietnam consumers cumulatively experienced only 9 and 11 percent global rice pass-through given various "stabilizing" policies implemented as compared to 64 and 53 percent in China and Thailand, respectively.

Second, each country appears successful in meeting potential secondary objectives. In India, the incumbent political party won the 2009 Indian General Election gaining the majority. Vietnam generated considerable revenues from the inflation in global rice markets due to the country's relative competitiveness in the global market coupled with policy-induced oligopoly selling power. For the first nine months of 2008, exports decreased by 7.4 percent in volume, but rose by 90 percent in value. Vietnam's additional revenues generated during the price surge likely did not flow to farmers—if so, it will be widely recognized and long remembered and possibly impacts Vietnam's ability to do this again.

Figure 5. Global rice price spikes outpace India and Vietnam domestic market prices.



Source: Price data taken from Vietnam Ministry of Agriculture (www.agro.gov.vn), India Ministry of Consumer Affairs, Food and Public Distribution (www.fcainfoweb.nic.in) and USDA ERS Rice Outlook, table 7, October 2009. /1Excludes food distribution program schemes.

Despite a policy's domestic focus, global consequences are inevitable in today's trading environment. From figure 8, it is clear that the ROW was also largely affected in terms of prices during 2008. The cumulative effects of "panic and hoarding" policies during this period are thought to have caused the mid-2008 price spikes (Slayton and Timmer, 2008). For example, India banned 2 to 3 million metric tons of rice which typically constitute only about 2-3 percent of the domestic Indian market. However, the withheld rice is much larger percentage of the global long-grain rice trade market, approximately 10%, and has a much larger impact on global prices. Exporters in countries [as opposed to consumers] such as Thailand and Pakistan benefited tremendously in the short-term and import-dependent countries were worse off.

Policy responses which disrupt global staple food markets have the potential to recur in the future if there was perceived short-term success with the associated policies. This potential could be tempered with sufficient global backlash and feedback from trading partners, particularly in terms of trade agreements.

VII. Conclusion

To summarize, many lower-income countries implemented export restrictions, reduced import tariffs and increased domestic support in response to food price surges during 2007-08. Although import tariff reductions were the most common policy observed, major lower income country traders implemented rice export bans and were associated with "panic and hoarding" in the rice market during this time period.

Across the responding countries examined, the majority of implemented policies directly targeted domestic consumers and, according to economic theory, were expected to put downward pressure on domestic prices in the short-term. Countries implementing export restrictions and retail price ceilings appear to have traded-off short-term costs for domestic producers and costs to the ROW for short-term price stability for domestic consumers.

Domestic incentives for implementing policies with expected short-term, consumer-focused outcomes are clear within the responding countries. Food price surges are a relatively larger threat to countries where consumers have little purchasing power and lack confidence in the government which leads to political instability. Furthermore, producers in these countries are not well organized and have a smaller voice relative to consumers.

History may repeat itself in the face of future global price surges unless sufficient feedback is received from trading partners. Looking at India's and Vietnam's experience, it appears that short-term goals associated with the rice export bans were achieved, both in terms of perceived mitigation of domestic prices and political objectives. Without tangible consequences, market disrupting policies could be expected in the future if the domestic incentives within relevant countries persist.

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