



**The
World Bank
Group**

www.worldbank.org

**Poverty
Reduction &
Economic
Management
Department**

**By Jean-Pierre
Chauffour**

These notes summarize recent research on global trade issues. They reflect solely the views of the author, and do not necessarily reflect the views of the World Bank Group or its Executive Directors, or the countries they represent.

Trade Note 34

Global Food Price Crisis: Trade Policy Origins and Options

The current spike in global food prices has deep roots in decades of trade-distorting policies that have encouraged inefficient agricultural production in rich countries and discouraged efficient production in developing countries. High-income countries have historically protected their domestic producers and subsidized inefficient production—most recently biofuels—and dumped surpluses onto global markets. In turn, developing countries have often used trade and other domestic policies to simultaneously tax and protect their agricultural sector, with the net effect in many countries of taxing farmers. Overall, the world has suffered from declining agricultural prices, overproduction in high-income countries, and underproduction in poor countries. This has resulted in thinner global agricultural markets than otherwise would be the case, more volatility, and lower overall reserve supply capacity and food security.

A first section of this note discusses the trade policy origins of the global food price crisis and a second section reviews trade policy options to deal with the crisis.

World Trade Policies: A Taproot of the Crisis

While several factors beyond trade policy have combined to produce an upward global food price spiral, including high energy and fertilizer prices, depreciation of the U.S. dollar, biofuel production, changes in food buffer stocks, droughts, and increased world demand (World Bank 2008a), the current food crisis has deep historical roots in the distortions of the world trading system. Governments around the globe have intervened in food and other agriculture markets for decades, particularly through trade policies. Trade-distorting policies have taken the form of specific and ad-valorem tariffs that are sometimes linked to quantities of imports (that is, tariff rate quotas); quantitative restrictions or prohibitions on imports and exports; and domestic producer supports and export subsidies for farm products. Countries have also availed themselves of additional restrictions in the form of safeguard protection in case of import surges.

The trading system in agriculture is further distorted and segmented by the existence of various trade agreements, whereby preferential tariff rates and/or market access conditions are offered on a reciprocal or nonreciprocal basis to a subset of partner countries. Overall, with differing in-quota and out-of-quota tariff rates for agriculture products, many of them specific or compound rather than just ad valorem, and with a wide array of preferential bilateral tariffs in place in most countries, the trading system in agriculture is nontransparent, discriminatory, and highly distorted.

Trade restrictiveness across products and countries tends to show a clear pattern: richer countries tend to have higher barriers to trade in agricultural products. This is a phenomenon that



initially emerged in the late 19th century and has been a persistent feature of global trade policy ever since: the higher the level of development of countries, the lower the overall trade restrictiveness, and the higher the level of trade restrictiveness in agriculture (World Bank 2008b). While high-income countries have the lowest overall barriers to trade, their overall trade restrictiveness (OTRI) is 43.1 percent for agriculture as compared to 4.3 for manufacturing (Table 1). This is explained by a relatively high tariff trade restrictiveness (TTRI) (at about 12.4 percent for agriculture compared to only 1.4 percent for manufactured products) combined with nontariff measures (NTMs) such as price control measures, quantitative restrictions, monopolistic measures, and technical regulations. NTMs tend to be more prevalent in high-income and upper-middle-income countries and to play a less important role in lower-middle-income and low-income countries. For higher-income countries, NTMs account for about two-thirds of total restrictiveness. While NTMs capture policies that do not necessarily have a protectionist intent—product standards are a major example—they do have the overall effect of restricting trade.

Table 1: OTRI and TTRI by income group, 2006 (percent)

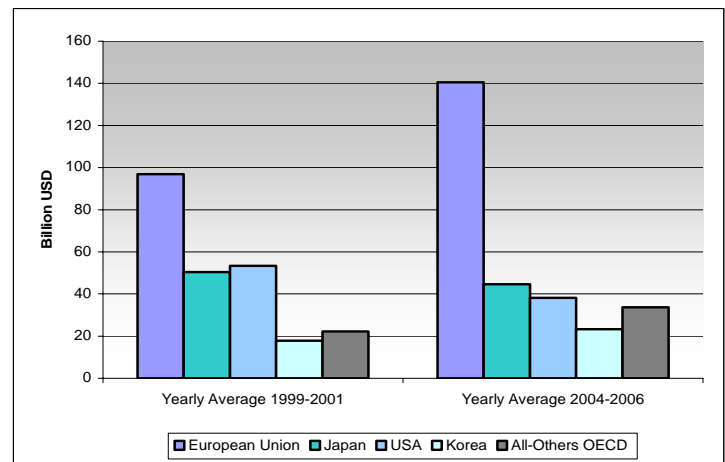
	Total Trade	Agriculture	Manufacturing
High Income	7.0	43.1	4.3
	<i>2.1</i>	<i>12.4</i>	<i>1.4</i>
QUAD	7.1	44.5	4.0
	<i>1.9</i>	<i>11.1</i>	<i>1.3</i>
Middle Upper	13.0	29.3	11.8
	<i>4.6</i>	<i>6.6</i>	<i>4.5</i>
Middle Lower	11.8	26.5	10.6
	<i>6.5</i>	<i>11.5</i>	<i>6.0</i>
Low Income	17.7	26.6	16.7
	<i>10.8</i>	<i>15.3</i>	<i>10.4</i>

Note: TTRI in italics; OTRI in boldface. QUAD comprises Canada, the EU, Japan and the US.
Source: World Bank (2008b).

Agricultural trade restrictions and direct subsidies in high-income countries are a major source of support for producers. For 20 years the Organisation of Economic Co-operation and Development (OECD) Secretariat has been

publishing annual estimates of producer support to farmers in OECD member countries. These Producer Support Estimates (PSEs) provide a transparent set of numbers that allow monitoring over time of the extent to which farmers are being assisted by governments through myriad direct payments and agricultural market price support policies. Although PSEs have fallen in some OECD countries since 1999–2001 (for example, Japan and the United States), they have increased in the European Union (EU), the Republic of Korea, and a number of other countries (figure 1). Support to producers in high-income countries was estimated at US\$268 billion in 2006, accounting for 27 percent of farm receipts (OECD 2007).

Figure 1: Producer Support Estimates for OECD Members, 1999–2006



Source: OECD (2007)

Trade-induced distortions have historically been more pronounced for a number of commodities currently experiencing a price surge, such as rice. While support based on commodity output has been shown to be (1) the most distorting of production and trade; (2) a relatively inefficient means of increasing farm household income; and (3) most damaging to the environment, some commodities, especially rice, sugar, and milk, continue to be heavily supported through price protection policies and payments based on output (OECD 2007). Border measures such as tariffs not only increase the domestic price of these commodities but reduce domestic consumption, and the resulting impact on domestic production and consumption in



the protected markets means that these tariffs also reduce the world price for these goods, disadvantaging producers in other countries.

Developing countries have also put in place trade policies that are highly restrictive of trade in agricultural products. All geographic regions have policies that are more restrictive of trade in agricultural products than manufactures, although the levels of trade restrictiveness in agriculture differ widely across regions (Table 2). Countries in South Asia have on average a level of trade restrictiveness in agriculture similar if not higher than that observed in high-income countries. At the other extreme, Sub-Saharan Africa has the lowest level of agriculture trade restrictiveness in the world.

Table 2: OTRI and TTRI by developing country region, 2006 (percent)

	Total Trade	Agriculture	Manufacturing
East Asia	11.3	26.6	10.4
	<i>5.0</i>	<i>8.7</i>	<i>4.8</i>
Europe and Central Asia	10.1	25.9	9.0
	<i>4.5</i>	<i>10.3</i>	<i>4.0</i>
Latin America & Caribbean	15.0	28.1	13.8
	<i>5.4</i>	<i>6.6</i>	<i>5.3</i>
Middle East & North Africa	21.6	32.3	19.4
	<i>11.9</i>	<i>12.1</i>	<i>11.8</i>
South Asia	19.5	46.4	18.2
	<i>14.0</i>	<i>31.4</i>	<i>13.2</i>
Sub-Saharan Africa	14.4	24.9	12.9
	<i>8.4</i>	<i>13.8</i>	<i>7.6</i>

Note: TTRI in italics; OTRI in boldface font.

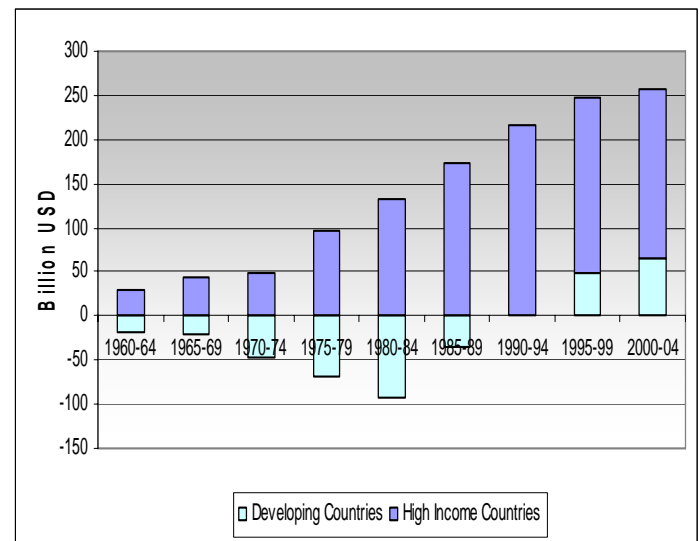
Source: World Bank (2008b).

In addition to trade barriers, many developing countries, especially low-income countries, have had agricultural policies that effectively taxed their farmers. The extent of taxation measured by nominal rates of assistance (NRAs) was of the order of 20 percent from the mid-1950s to the mid-1980s. Since then it has not only diminished, but, on average, has become slightly positive (figure 2). In Africa there has been the least tendency to reduce the taxing of farmers—the average NRA has been negative in all 5-year periods except in the mid-1980s when international prices of farm products reached an all-time low in real terms. While taxing agriculture has been detrimental to farmers (and

the more recent trend toward a more neutral policy stance for agriculture relative to other sectors of activity is therefore to be welcomed), going beyond this and emulating OECD members by starting to subsidize agriculture has contributed to further distorting global trade in agriculture.

Figure 2: Gross Subsidy Equivalents of Assistance to Farmers in Developing and High-Income Countries, 1960 to 2004

(current US\$ billion per annum) Source:



Anderson et al. (2008).

The combined impact of these trade-distorting agriculture policies has been to displace and reduce the efficiency of agriculture production globally – and particularly in the developing world. While trade measures are introduced for a wide range of domestic motives (for example, economic, social, environmental, security), they are mostly welfare reducing—both in the country applying them and in the rest of the world—relative to direct first-best policy instruments for achieving those domestic objectives (Bhagwati 1971). In distorting the incentives producers and consumers would otherwise face, they are also welfare-redistributing and inherently discriminatory. By promoting less efficient production in developed countries at the expense of investment in generally more efficient production in developing countries, both global agriculture production and world food prices have been kept artificially low, and domestic food prices in protected markets have been kept artificially



high. Policies in developing countries have, until recently, generally taxed agriculture to channel resources into manufacturing, with the result that investment in increasing supply has not been adequate to provide for rapid responses to global price spikes. Furthermore, because agricultural production has taken place in relatively inefficient, thin, and insulated markets, global trade in food products is less resilient to exogenous shocks and less able to handle volatility in terms of trade and output.

More recently, biofuel policies in high-income countries, which consist of import duties, subsidies, tax credits and legislative mandates, have had the effect of further distorting global agricultural trade and contributing to the global food price crisis. Biofuel production in the United States from food crops such as maize and soybean oil and in the EU from rapeseed and sunflower seeds oil have fuelled the rise in food prices by increasing the demand for these food crops and shifting land out of other crops. In the last three years, 5 million hectares of cropland that could have been used for wheat have gone to rapeseed and sunflowers for biofuels in major wheat producers, including Canada, the EU, and the Russian Federation. Biofuels have absorbed virtually all of the increase in US corn production in 2004-2007, the period of accelerated increases in maize prices. The US is the main supplier of the global market (Mitchell, 2008). Increased demand for biofuels is estimated to account for 70 percent of the increase in corn prices and 40 percent of the increase in soybean prices (IMF 2008). Though oil prices may have been somewhat higher in the absence of these biofuels, these subsidies do not promote economic efficiency as an offset to their inflationary impact.

Lastly, the introduction of export restrictions on agricultural products by many large net food exporters has compounded the crisis. The world's major non-OECD exporters of wheat (that is, Argentina, Ukraine, Russia, and Kazakhstan) and rice (that is, Vietnam, India, and China) have introduced various types of temporary export restrictions in an attempt to decouple domestic markets from global markets and rein in domestic food prices. These

restrictions usually have major adverse economic and social effects because they tend to (1) distort prices and the allocation of resources, therefore impeding investment and the supply-side response; (2) prevent local farmers from receiving the higher world market price for their production, therefore slowing the reduction of poverty in rural areas where most poor people live; (3) displace local production to crops that are not subject to export restrictions, therefore aggravating the very food security and price concern that justifies the measure in the first place; (4) cut local production from global buyers and distribution chains, therefore jeopardizing future reentry in once-secure markets; (5) create space for illegal trade, therefore fuelling corruption and other governance malpractices; (6) exacerbate the rise and fluctuations of global food prices, therefore creating a vicious incentive for trading partners to follow suit, curb exports, and hoard; and (7) harm the multilateral trading system, therefore weakening the security of poor and vulnerable countries. As more countries implement export controls, world prices go up substantially—up to 20 percent—due to export restrictions, with particularly harmful effects in the case of rice (Ivanic et al. forthcoming).

The surge in global food prices has its origins in long-term policies that led to thin and potentially volatile markets with diminished resilience, especially in the South. Then, the sudden emergence of other factors – energy price increases and demand for biofuels, drought, and short term policy responses -- provided the spark for today's crisis.

Looking Forward: Trade Policy Options

Trade policy options to deal with the crisis involve correcting these historical distortions. They include removing export controls on agricultural products, eliminating restrictions on humanitarian food aid, reducing excessive stocks of food grains, reversing biofuel subsidies and protection to inefficient producers, lowering customs duties on agricultural products, facilitating agriculture trade, completing the Doha round of trade negotiations, and, in the long run, further liberalizing agricultural trade on a multilateral basis. Many importing



countries have already embarked on this agenda by slashing tariffs to lower the costs in their domestic markets.

Eight Ways to Make the Future Better

Pressure on food supplies and associated high food prices are likely to be a medium- to long-term reality, because some of the driving factors—rising prosperity in the developing world, which creates more demand; high fuel prices; stagnant agricultural productivity; and climate change—induced pressure on agricultural supplies—are also durable. While the policy response to the current crisis must involve much more than trade policy (World Bank 2008a), a number of trade policy options could help mitigate the impact of the crisis, both in the short term and in the medium to long run.

1. Removing export bans and other export restrictions on agricultural products

While exports restrictions are introduced as an attempt to address the complex political economy of rising food inflation, they only make matters worse both from a global and domestic perspective (Nogués 2008). In the case of the thinly traded rice market, the impact of these restrictions has been especially strong. India's decision last October to ban rice exports, except for Basmati, was quickly followed by Vietnam and other major players, with an immediate impact on prices. Actions by large rice importers, such as the Philippines, which organized large tenders to obtain needed rice imports against this background of shrinking traded supplies, aggravated the problem. Reversing these policies would significantly ease market pressure and reduce the price of rice. For example, when Ukraine announced that it would relax its export restrictions in April 2008, wheat prices immediately declined by 18 percent. An international call has been made for removing all export bans and restrictions on food products, at the very least for shipments to the least developed countries and those in fragile situations (Zoellick, 2008). Furthermore, the need to discipline export restrictions is all the more important as the prospect of being

confronted with them perversely bolsters the argument that net food importers need to have the ability to support farmers through restrictive trade policies. In the absence of reliable world markets for food products, a country cannot help but self-insure and support its own farmers.

2. Eliminating taxation or restrictions on humanitarian food aid.

Untying food aid would allow countries such as the United States, Canada, and Germany to significantly increase their assistance for a given amount of financial resources (Subramanian 2008). If the tying requirements were eliminated, just the savings from increased shipping and distribution costs would allow every dollar of food aid to go much further (Elliot 2006). Clear rules should be set so that even countries with restrictions on commercial exports allow food for humanitarian needs to be sourced from their country. Restrictions on procuring food grains for humanitarian purposes have been particularly detrimental.

3. Reducing excessive stocks of food grains.

Japan currently has roughly 900,000 tons of U.S. medium grain rice and 600,000 tons of long grain rice imported from Thailand and Vietnam, which are surplus to domestic consumption requirements based on its World Trade Organization (WTO) obligation. However this rice may not be reexported because of Japan's market access commitments under the WTO Agreement on Agriculture. These stocks are not sold domestically; instead they are allowed to decay and then used as livestock feed. Last year about 400,000 tons of rice was disposed of in this manner. Temporarily allowing Japan to sell its stocks commercially or as food aid could make a significant difference and prick the current rice price bubble. China is also holding rice stocks equal to at least four months of domestic consumption (significantly in excess of food security guidelines of 18–20 percent of total consumption) and could help stabilize the world rice market without affecting its food security.



4. Curbing subsidies and tariffs on European Union (EU) and U.S. biofuels production and imports.

Phasing out biofuel policies that subsidize production from food crops, such as corn and vegetable oils, and reducing tariffs that restrict imports from lower-cost producers would promote biofuels that are both more efficient and less competitive with production of staple foods (that is, sugar cane). It would remove pressure from food prices and allow the potential benefits of biofuels to be gained without the negative consequences. Biofuel production from sugar cane in Brazil is both competitive at current oil prices without the need for subsidies and does not come at the expense of shifting large amounts of land away from staple foods. It is also five times more efficient in terms of carbon emissions than biofuel from corn. This is an opportunity not just for Brazil, but for many other developing countries, including several in Africa (for example, Mozambique, Tanzania) that are very large potential efficient suppliers of sugar cane biofuels.

5. Reducing import tariffs on agricultural products.

Many countries that had relatively high import tariffs on wheat, maize, and/or rice until the recent food price surge have reviewed and significantly reduced their duties on food products in recent months to cut food costs to local consumers. However, such revisions, at times, appear to have been ad hoc, to lack transparency, and to lead to uncertain effects on the actual level of protection and domestic food prices. Tariff cuts should to the extent possible be made in the context of a broader tariff schedule reform. Countries where high import duties still apply (for example, rice in the Philippines) should consider reducing their tariff, especially when they have the fiscal space.

6. Facilitating agricultural trade in developing countries.

Beyond tariff cuts, many developing countries could reduce the price of imported agricultural products through trade facilitation measures. For many low-income countries (LICs), especially

net-food importing countries, transport and logistics costs are often a more important component of total trade costs than tariff barriers. Their logistics costs could amount to up to 50 percent of the import value, compared with the Organisation for Economic Co-operation and Development (OECD) benchmarks of around 9 percent. The situation is particularly severe in landlocked countries, notably in Africa, where land transportation adds significantly to logistics costs (typically US\$ 10 cents per ton and kilometer). This could double the shipping charges from overseas sources, which for high volume, relatively low value goods such as grains and edible oils could represent a significant part of the final price to consumers. While countries can do little to reduce ocean shipping costs, or the impact of fuel prices on trucking costs, they have substantial margin for improving the efficiency of their supply chain and addressing the broader facilitation issues that affect price and availabilities of food deliveries. According to the World Bank's Logistics Performance Index, customs clearances, logistics, competence of services, and timeliness are particularly poor in LICs, in particular net-food importing countries. In many LICs, food products are often subjected to a series of delays, unnecessary overhead costs, and losses and damages that further tax consumers. Furthermore, thin markets and weak competition and governance encourage rent-seeking behaviors. In some African trade corridors, distribution margins have been inflated by 30 percent on top of increasing transportation prices.

7. Completing the Doha round of multilateral trade negotiations.

While the WTO cannot provide anything immediate to help solve the current crisis, it can, through the Doha Round negotiations, provide medium- to long-term solutions (WTO 2008). A Doha deal is unlikely to have much, if any, impact on food prices in the next two or three years because implementation of its provisions is gradual and because the long-run impacts on prices of staple foods would be modest since many countries have now reduced applied rates below bound rates, the target of Doha negotiators. Nonetheless, a successful Doha



round would place important disciplines on the use of agricultural subsidies and tariffs if and when prices eventually do come down and the temptation to revert to the distorting policies of the past reemerges. Completion of the round would therefore represent a major step in the right direction. It would help create a more transparent, rules-based, and predictable food trading system. In particular, a Doha agreement would eliminate export subsidies and may somewhat reduce domestic farm support for inefficient production in developed countries. Tariff bindings, even if above applied duties, would allow cutting tariff peaks, which are often the most costly, while reinforcing predictability of the trading system. Such efficiency gains in agricultural production may provide incentives to promote investments in the agriculture in developing countries. A Doha agreement could also add some transparency disciplines on the use export restrictions in enforcing the notification of new export restrictions or prohibitions to the WTO; and minimal disciplines on the period of application of these restrictions or prohibitions. A better functioning multilateral trading system would in turn help prevent the recurrence of such types of crisis by reducing the magnitude of distortions for agricultural production and making agriculture markets more resilient. Current high food prices should make it politically easier to strike a deal that would require farmers in rich countries to adjust. Negotiations in the area of non-agricultural market access (NAMA), services and trade facilitation could also have positive impacts on national transport and infrastructure, food distribution systems, and marketing costs for food and food inputs, especially if supported by a strong Aid for Trade program.

8. Beyond Doha, further liberalizing agriculture trade would help.

In the longer run, taking steps toward fully liberalizing agriculture trade on a multilateral basis would help establish a more efficient and resilient global agriculture sector. Restrictive trade policies by net commodity exporters to protect the urban poor tend to have unintended negative consequences at the domestic level, and

at the global level, they push up world prices even further and hurt net importers. From a global perspective, maintaining free trade in commodities while fostering incentives for production and using efficient policies to protect the urban poor (for example, targeted cash transfers) is a priority. WTO members would therefore need to make more substantial cuts to their bound tariff rates and domestic farm support commitment to seriously begin to eliminate global distortions. Some of these are now being achieved unilaterally with the reductions in tariffs in many importing developing countries. More importantly, the benefits of freer global trade would go way beyond the positive impact on food and changes in food prices. For low-income countries, they will result in higher real incomes as other (nonfood) distortions are removed and more opportunities are created in nonfood agriculture (for example, for cotton farmers, for sugar producers to satisfy ethanol demand), manufacturing, and services.

Conclusion

The most effective trade policy response to high food prices over the long term is greater liberalization around the world that would allow new supplies to emerge, particularly in developing countries. This can only occur through greater commitment to multilateral trade rules that discipline border barriers, domestic support, and export subsidies. Progressively curbing the use of trade policy to interfere with market signals—on both the export and import side—is the most sustainable and inclusive policy option available to trade policy makers to create more efficient and resilient agricultural markets.

Trade policy is usually an ineffective instrument to improve income distribution or to provide food security and rural development. This is not just because trade policy distorts consumption and production decisions but also because the distributional consequences of protecting agriculture may be harmful to many poor households, especially those that are net consumers and do not derive income from agriculture.



This means that trade liberalization, to be effective, needs to be complemented by other domestic policies aimed at increasing agricultural productivity, linking rural communities to markets, and ensuring that poor benefit from trade liberalization. While emphasis varies from country to country, these policies broadly include ensuring an adequate investment climate as well as making specific investments in agriculture, such as market extension, rural roads and other infrastructure, and agricultural technology (see World Bank, 2008c). In an era of climate change, investments in agricultural security through improved weather forecasting, monitoring, and preparedness are also required to avoid catastrophic losses.

References

- Anderson, Kym, Marianne Kurzweil, Will Martin, Damiano Sandri, and Ernesto Valenzuela. 2008. "Measuring Distortions to Agriculture Incentives, Revisited." Policy Research Working Paper 4612, World Bank, Washington, DC.
- Bhagwati, J. N. 1971. "The Generalized Theory of Distortions and Welfare." In *Trade, Balance of payments and Growth*, ed. J. N. Bhagwati et al. Amsterdam: North-Holland.
- Elliott, Kimberly Ann. 2006. *Delivering on Doha: Farm Trade and the Poor*. Washington: Peterson Institute for International Economics and Center for Global Development
- IMF (International Monetary Fund). 2008. Remarks by John Lipsky, First Deputy Managing Director, International Monetary Fund, at the Council on Foreign Relations, Commodity Prices and Global Inflation, New York City, May 8, 2008.
- Ivanic, Maros, Will Martin, Aaditya Mattoo, and Arvind Subramanian, forthcoming.
- Mitchell, Donald O. 2008. "A Note on Rising Food Prices" World Bank, mimeo April 8.
- Nogués, Julio. 2008. "Socio Economic and Fiscal Impacts of Policy Barriers on Argentine's Agro-Industrial Exports." Draft mimeo.
- OECD (Organisation for Economic Co-operation and Development). 2007. *Agricultural Policies in OECD Countries: Monitoring and Evaluation*. Paris: OECD.
- Subramanian, Arvind. 2008. Statement before the U.S. House of Representatives, Committee on Financial Services, hearing on Contributing Factors and International Responses to the Global Food Crisis, May 14, 2008.
- World Bank. 2008a. "Addressing the Food Crisis: The Need for Rapid and Coordinated Action." Group of Eight, Meeting of Finance Ministers, Osaka, June 13–14.
- World Bank. 2008b. *Global Monitoring Report*.
- World Bank, 2008c *World Development Report, Agriculture for Development*, World Bank: Washington
- Zoellick, Robert, Statement to the Rome Food Summit, June 3, 2008.
- WTO (World Trade Organization). 2008. Statement by Pascal Lamy at the Rome Food Summit, June 3, 2008

I am grateful to Jean-Francois Arvis, Mona Haddad, Bernard Hoekman, Mariem Malouche, Will Martin, and Richard Newfarmer for useful comments on an earlier version of this draft.

This trade note has also been published in two parts as World Bank PREM Notes.