Ensuring Food Security

Stacks of wheat near Al Qamishli, Syria.

Maros Ivanic and Will Martin

Trade policy must be complemented by other measures to ensure food is available to all

PRICES of key agricultural staples rose sharply in late 2007 and early 2008 and, despite recent declines, remain well above the average levels of the past two decades. Many analysts suggest that factors such as the new demand for food to produce biofuels will keep prices high. That would be bad news for the poor, and near-poor, who spend a very large share of their incomes on staple foods. Our estimates suggest that food price increases between 2005 and the first quarter of 2008 raised the number of poor by more than 100 million, even while improving the overall lot of some poor people who are net sellers of food (Ivanic and Martin, 2008).

Some analysts and officials say that high food prices, and shortages in some poor countries, are rooted—at least in part—in the liberalization of global trade in agricultural products, which encouraged countries to substitute domestic production of basic foodstuffs for higher-value export crops. To improve food security—to ensure that a country's people are fed—should governments adopt trade and other policies to encourage domestic production of staples and raise self-sufficiency?

Nobel Prize winner Amartya Sen argues that food security and self-sufficiency are not the same. Food security is not determined by where the food is produced, but by whether individuals have access to it (Sen, 1981). His study of major 20th century famines found that acute food insecurity can occur even when ample food is available in a country. He also noted that authorities can enhance security by allowing imports of food when prices would otherwise have risen.

Food security is influenced by trade policy—both domestic and global. And trade policies are but one type of measure that affects the access that poor people have to food. As the world tries to revive trade negotiations to lower global trade barriers, we look at food security in developing countries in the short and the long term and its links with trade policy.

Short-run food security issues

Even temporary problems of food affordability can seriously threaten poor people, who have few discretionary nonfood expenses to cut when food prices rise and frequently lack savings or access to credit to tide them over in a crisis. To deal with short-run food affordability problems, governments generally have available three broad approaches: providing social safety nets, intervening to reduce food prices, and ensuring supply by maintaining stockpiles.

> **"Sustainable improvements in long-run food security depend largely on the ability to bring about sustained increases in the real incomes of the poor."**

Social-safety-net approaches, such as provision of emergency food aid or transfers to the poor, can—in principle—be targeted to those most in need. As a result, safety nets have fewer side effects than policies that result in lower prices for all. Further, safety nets can help whether or not the problem arises from changes in food prices. By contrast, policies that seek to lower food prices are often ineffective in dealing with many food security problems, such as those resulting from drought-induced declines in farm output, for example.

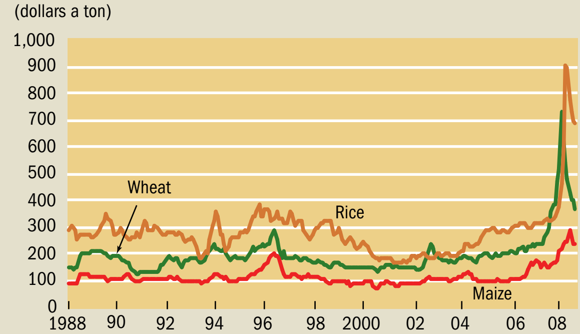
Policy actions to lower domestic food prices—such as the imposition of export taxes or reductions in import tariffs—are administratively easy to implement. When world prices of staple foods rose dramatically in late 2007 and early 2008 (see Chart 1), about 45 percent of developing countries reduced tariffs and/or consumption taxes on food, whereas almost 30 percent imposed export taxes or other restrictions on food exports (Wodon and Zaman, 2008). But these approaches can have unintended consequences. For example, an export restriction that lowers the domestic price of rice also will result in lower production and increased demand at a time of shortage, will hurt poor farmers who sell rice, and will provide benefits to consumers far above the poverty line.

Policies that seek to insulate domestic food markets from changes in world market prices also tend to fuel the fire of the price increases they seek to quell. The imposition of export restrictions by key exporters in late 2007 and early 2008 contributed to the sharp increases in world prices during this period. Removal or relaxation of these restrictions can help reduce the pressure on world prices. For example, when Ukraine announced that it would relax its export restrictions

Chart 1

Here to stay?

Prices of major staple foods increased sharply in late 2007 and early 2008.



Source: World Bank, *Commodity Price Data*.

in April 2008, wheat prices immediately declined by 18 percent (Chauffour, 2008).

Public stockpiles can be used to cope with short-run food-security challenges, but they are costly and involve difficult management issues. There is pervasive uncertainty about the quantity of stocks required and the amount to release at any stage. Moreover, stock management policies can be destabilizing if, as seems to have happened in 2008, governments attempt to create or expand stocks when food prices are high. Most important, food stocks in the granary are not by themselves enough to ensure food security. Whether or not public stocks are used, the key to food security is ensuring that poor people have access to food.

Food security in the long run

Sustainable improvements in long-run food security depend largely on the ability to bring about sustained increases in the real incomes of the poor. Development policies that raise the productivity of poor people's assets are essential to achieving such sustained income increases. Broad-based trade liberalization can help raise productivity and income by ensuring that investment goes into the right activities and by promoting technological change. But trade liberalization must go hand in hand with development policies—beginning with the provision of an adequate legal framework and proceeding through investments in public goods, such as research and development, public health, infrastructure, education, and basic safety nets to help poor households recover from shocks. Investments in rural research and development appear not only to have particularly high rates of return, but also to have the potential to raise returns to farmers while lowering prices to consumers.

Trade liberalization by individual countries usually can be expected to lower domestic prices, except where those actions involve reductions in export taxes or import subsidies. The effects of global trade liberalization are more complex. How an individual country is affected depends on the balance of offsetting factors—global price increases and reductions in a country's own trade barriers.

Historically, developing countries taxed their agricultural sectors to benefit urban sectors—taxing exportable goods more heavily than imports to keep prices down. But in the past 50 years that pattern has shifted, according to a recent World Bank project. Imports that compete with domestic products were subsidized very little in the 1950s, but now have average protection of nearly 30 percent. On the other hand, exportable products have moved from being strongly taxed to selling at close to world prices (Anderson, forthcoming). This finding raises serious questions about the claim that liberalization of staple foods in developing countries has caused the current problems of food security—protection of these commodities has been increasing rather than decreasing.

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Will global trade reforms help or hurt?

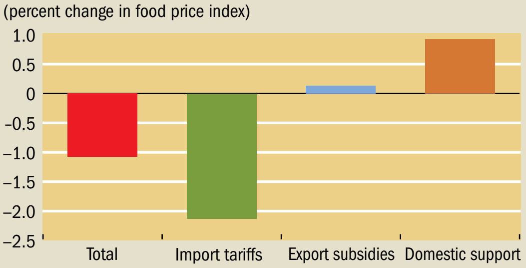
Because global trade reform is expected to raise world food prices and because higher prices for staple foods could raise poverty in poor countries, global reform has the potential to reduce food security for poor people in developing countries. Worldwide tariff reductions stimulate demand for, and therefore prices of, staples on global markets. Most studies estimate that global agricultural trade reform would raise world prices by amounts that are very modest relative to the changes seen in recent years—between 2 and 7 percent for most staple foods (Anderson, Martin, and van der Mensbrugghe, 2006). A key question for developing countries, then, is whether the price-reducing effect of their own tariff reductions would outweigh the price-increasing effect of higher world prices.

Applying the global trade analysis model used in Hertel and others (2008), we find that declines in import prices from full liberalization would outweigh the effect of higher world prices, resulting in a 1 percentage point overall reduction of food prices in developing countries (see Chart 2). This is a key reason behind Hertel and his colleagues' finding that global liberalization of agricultural products covered by the World Trade Organization would reduce poverty in 14 of the 15 countries they studied.

Chart 2

Make it cheaper

Completing agricultural trade reform would reduce the prices of staple foods in developing countries by an average of 1 percent.



Source: Authors' calculations.

The pieces of the puzzle

Agricultural trade reform in developing countries can help improve food security by reducing the cost of food to poor people, and hence increase the security of their access to food. Global liberalization is more complex in its effects, because it results in increases in world prices—a reflection of an increase in world import demand and the abolition of export subsidies. Our analysis suggests that, on average, global trade reform would slightly lower the price of staple foods in poor countries, and hence contribute to a small reduction in global poverty.

Achieving and maintaining an open trade regime is important, but not sufficient, for achieving food security. In the short term, trade liberalization needs to be accompanied by social safety net programs that protect the poorest from shocks such as those resulting from higher international grain prices. In the longer term, the key lies in improved productivity that raises the incomes of poor families. ■

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References:

Anderson, Kym, ed. (forthcoming), Distortions to Agricultural Incentives: A Global Perspective, 1955 to 2007 *(Palgrave Macmillan and World Bank).*

———, Will Martin, and Dominique van der Mensbrugghe, 2006, "Distortions to World Trade: Impacts on Agricultural Markets and Incomes," Review of Agricultural Economics, *Vol. 28(2), pp. 168–94.*

Chauffour, Jean-Pierre, 2008, "Global Food Price Crisis: Trade Policy Origins and Options," Trade Note 34 (Washington: World Bank).

Hertel, Thomas, Roman Keeney, Maros Ivanic, and Alan Winters, 2008, "Why Isn't the Doha Development Agenda More Poverty Friendly?" GTAP Working Paper 37 (West Lafayette, Indiana: Purdue University).

Ivanic, Maros, and Will Martin, 2008, "Implications of Higher Global Food Prices for Poverty in Low-income Countries," Agricultural Economics, *Vol. 39, pp. 405–16.*

Sen, Amartya, 1981, "Poverty and Famines: An Essay on Entitlement and Deprivation" (Oxford: Clarendon Press).

Wodon, Quentin, and Hassan Zaman, 2008, "Rising Food Prices in Sub-Saharan Africa: Poverty Impact and Policy Responses," World Bank Policy Research Working Paper No. 4738 (Washington: World Bank).