Food prices, poverty, and small-scale farmers: Getting the global trade regime right

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Introduction

Rising food prices are caused by a complex mix of factors and their global impact differs widely among countries and among households within countries. Thus appropriate policy responses must be based on a careful analysis of causes and effects, and a recognition that the optimal responses will differ among countries. Impulsive or one-size-fits-all prescriptions are likely to make matters worse, both in countries that are facing humanitarian crises and hunger as a result of higher prices and in other countries where the same price increases hold out the opportunity to lift incomes of millions of poor farmers.

Many of the factors contributing to the recent rapid increase in prices of rice, wheat, corn and other food staples are widely recognized and beyond dispute: increased costs to farmers due to high fuel and fertilizer prices; neglect of agriculture in many developing countries over recent decades, leading to reduced supply; the reduction in food stocks held by many developing countries; supply disruptions caused by drought in some agricultural exporting countries; rising demand in large developing countries that have experienced growth in household incomes; and the decline of the dollar, the currency in which many commodities are priced on global markets. Other causes are acknowledged but their relative importance is strongly contested. These include the impact of competition from biofuels for food crops and land use and the extent of an asset bubble in commodity markets.

The impact of food price increases on poverty in developing countries depends on the importance of agriculture in those economies, both as a source of employment and in terms of contribution to GDP, and on the income and consumption patterns of the poor, including such factors as whether they are net sellers or net buyers of food and whether they depend on the agricultural sector for wages or other sources of income.

Because there are multiple causes of the price increases and widely differing impacts, careful analysis is required to find appropriate policy responses for individual countries and to ensure that global policies allow sufficient flexibility to tailor suitable country strategies. These policies will necessarily span a broad range. This paper addresses trade policy, which has an important role to play in determining how countries and households are affected by changing global food prices and in establishing the environment in which policy responses are carried out. The Doha Round of negotiations at the World Trade

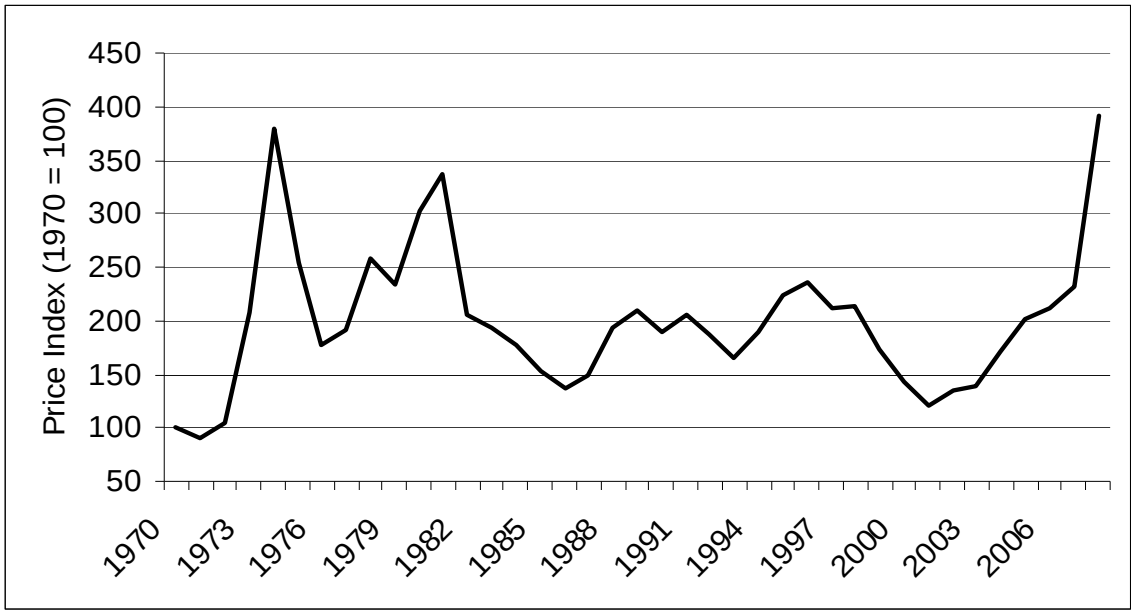
Organization offers a particular challenge, because those trade talks appear to be reaching a crescendo just as food prices have spiked. Bilateral negotiations, particularly those between rich and poor countries, must also be examined in the light of the current food crisis.

The paper is organized as follows. The first section puts the recent price increases in context by examining historical price changes for food commodities and discusses the current causes with that perspective. The second section discusses the varied impact of increased prices on poverty in developing countries. The third section presents an overview of the Doha Round as it relates to food prices. The fourth section identifies key current disputes in the Doha Round that will affect food prices and poverty for the foreseeable future. The next section mentions several issues in bilateral trade negotiations that require further thought. The final section offers conclusions.

Causes of the Current Increase in Food Prices, in Historical Context

The starting point for a serious discussion of current food price increases must be the historical pattern of price changes. Two consistent patterns emerge. First is that food prices are always volatile, because both food supply and food demand respond slowly to changes in price. As a result, any disruption in the match of supply and demand will produce exaggerated changes in price. Figure 1 illustrates the volatility of prices for one crop, rice, over the last 30 years. Data are adjusted for price changes over the period.

Figure 1. The Real Price of Rice 1970–2008

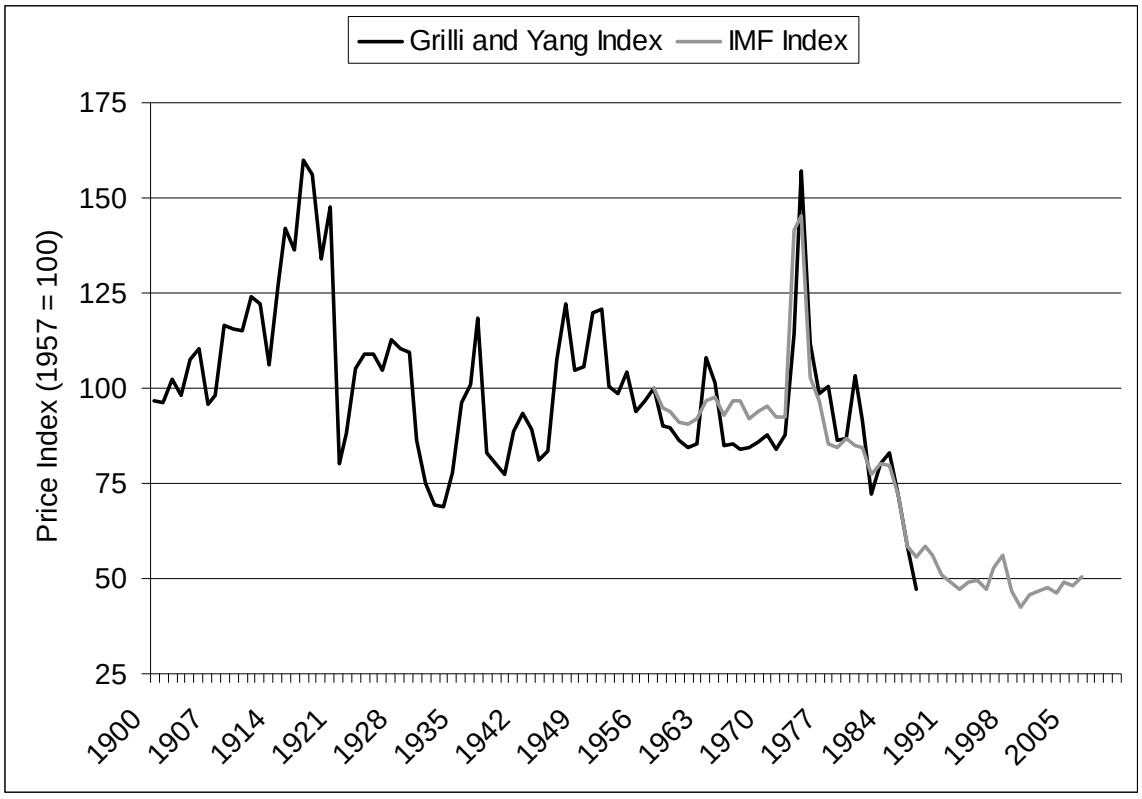


Source: UN Food and Agriculture Organization, staff estimates

The second historical pattern is that the price of food has shown a downward trend over the past century, relative to prices of manufactured goods. Figure 2 presents a generally accepted food price index for the period 1900–1987 developed by World Bank economists, updated with calculations by IMF staff for the period 1957–2006.[1] While food prices have been rising for the last several years, they are still below levels that prevailed for most of the last century. Both the volatility and long-term downward trend of agricultural prices suggest that policy makers plan for both price increases and decreases when responding to current prices and especially when making longer term strategies.

Is there reason to think that the current price spikes are harbingers of a fundamental shift in trends? On the one hand, rising food demand from growing developing countries, a significant factor in current increases, is likely to persist and this is indeed a positive development, as it indicates that more people can afford adequate nutrition. On the other hand, higher prices will elicit increased production—this can already be observed in this season's planting data. However other contemporary factors have complicated the relationship between supply and demand.

Figure 2. Long Term Trends in Real Food Prices



Source: IMF *World Economic Outlook 2006*

The competition of biofuels for crops and land use has had a relatively modest impact on food prices to date, but the effects will grow unless the United States and European

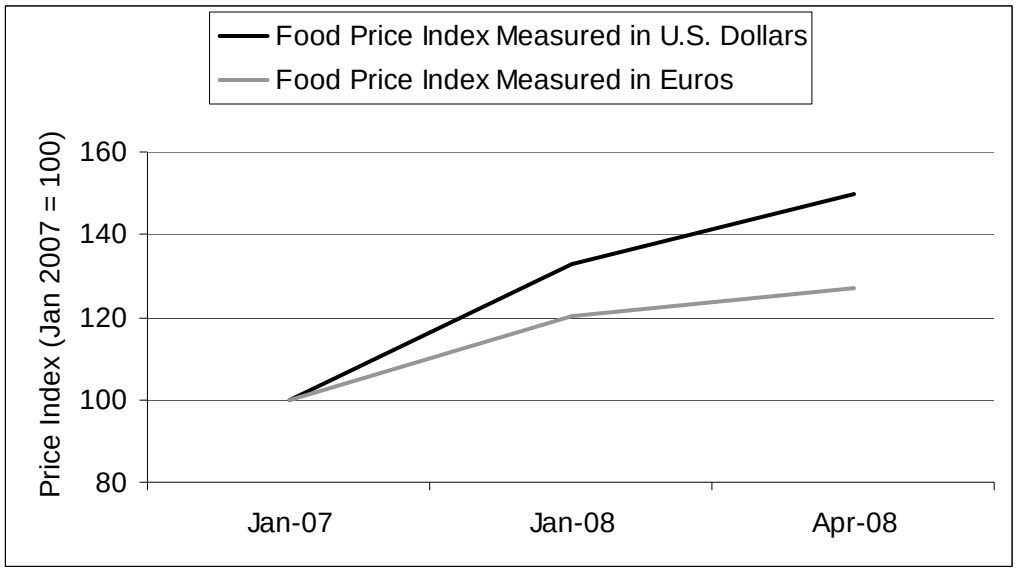
Union revisit policies that subsidize biofuels and require their use in the two huge markets. One respected projection estimates that about 33 per cent of the projected increase in average cereal and oilseed prices over the next ten years will be attributable to biofuel production.[2] While encouraging efficient biofuels could be an appropriate policy choice to diversify energy supply and relieve climate change pressures, some current sources of biofuels, particularly corn, actually add to global warming in addition to competing for crops that are important to food supplies. These policies should be reexamined as a high priority, in light of the increasing evidence of their negative effects.

A large explanatory factor in the current mismatch between supply and demand for food can be found in the decades-long underinvestment in agriculture in many developing countries. As a result, some countries that were once self-sufficient in food have lost that capacity; others have had to import growing shares of their food supply. In a recent report on agriculture and development, the World Bank argues that this was the result of five factors: falling international commodity prices that made agricultural investment less profitable; increased competition for development aid from social sectors such as health and education; emergency responses to crises; opposition from farmers in some aid donor countries to support for agriculture in their export markets; and opposition from environmental groups.[3] The World Bank's own support for agriculture dropped even more precipitously than that of other donors, from thirty-three percent of its development aid in 1981 to only eight percent in 2001.[4] In many cases IMF structural adjustment programs and the Bank's lending also restricted developing country governments from spending their own resources on agricultural development and support to poor farmers. These adverse policies were undertaken despite longstanding evidence that economic growth in the agricultural sector is more effective in raising incomes of extremely poor people than growth originating in other sectors.[5] The policy implications are clear: the World Bank and other donors should dramatically increase investment in developing country agriculture and abandon the harmful conditionalities that prevent governments from supporting their agricultural sectors in appropriate ways.

Two other factors are worth noting because of their significance in recent price rises and because they are susceptible to policy responses. First is the role of the dollar. Most commodities are priced in dollars on global markets and the sharp decline of the dollar against many other currencies has exaggerated the rise in prices. For example, Figure 3 shows recent food price changes in dollars and euros. A second factor is the huge flow of funds into financial markets linked to commodity futures, including those for agricultural commodities. Various estimates put the flow at between $100 billion and $300 billion over the past few years, as hedge funds, large institutional investors and others have fled the real estate market and looked for high returns elsewhere. This has amplified both increases and volatility in food prices. While there has always been speculation in commodities markets, the size of the current investment surge is of a different order of magnitude and has disrupted the functioning of these markets for farmers who use them to hedge against weather and other risks. It must be anticipated that, as with all asset bubbles, when prices turn downward, money leaving these markets will accelerate the fall in agricultural prices, perhaps precipitously. Recent crises in global financial markets and

housing markets in the United States and elsewhere are reminders that market failure is not uncommon and that financial markets amplify underlying failures.

Figure 3: Food price index measured in U.S. dollars and Euros



Sources: IMF Food Price Index; Euro/dollar exchange rates

Impact of Food Prices on Poverty

Rising food prices can either reduce or increase poverty, depending on how poor households earn their income and how they spend it. For example, households that produce and sell food crops will benefit from an increase in prices, unless they buy more food than they sell. In addition to direct selling and buying of food, the poverty impact will also depend on how price changes are transmitted through labor markets. If rising prices lead farmers to expand production and hire more farm labor, landless farm workers may benefit. The poor in urban areas will be adversely affected by rising food prices, unless labor market effects on their income outweigh the price changes. For example, if food prices go down, laborers from the countryside may search for work in nearby towns and cities, contributing to the supply of labor and perhaps lowering wages. Rising prices might improve local economies in rural areas in ways that benefit non-farming households, such as those of small-scale traders and service providers; again, these benefits could be outweighed by rising costs for food. The factors determining the impact on poverty are complex and the net results vary among countries and for different crops.

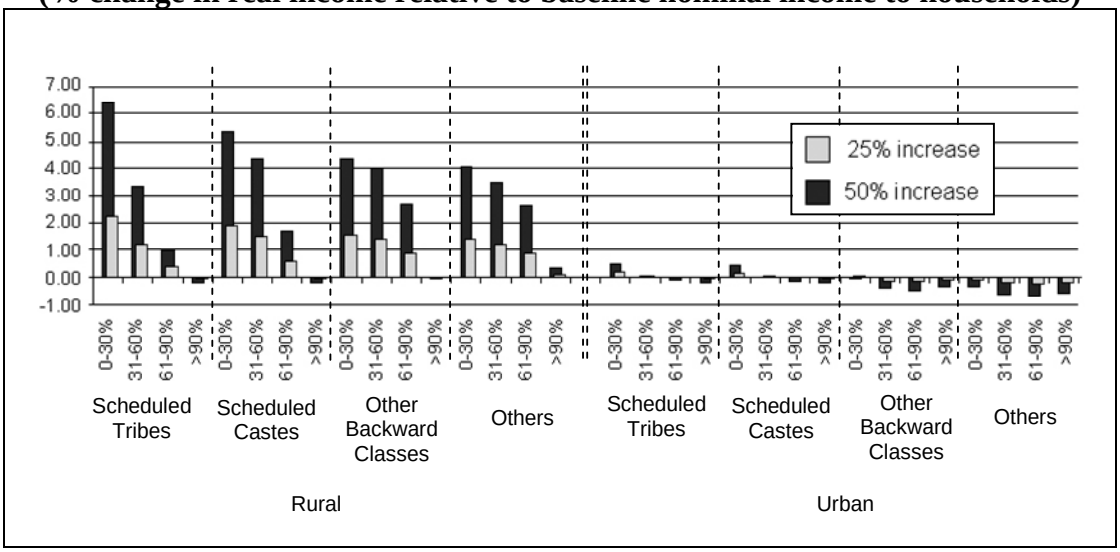
Because about seventy-five percent of the world's poor live in rural areas where agriculture is the main economic activity, one might assume that rising food prices would tend to alleviate poverty on average and at the global level. Surprisingly, the conventional view has been the opposite in recent decades. This view held that because more poor households were net food buyers than were net food sellers, lower food prices

would alleviate poverty. There were relatively few studies that used actual data on sources of household incomes as well as household food expenditures to explore this question. Now, however, a number of studies using detailed household data have called that generalization into question. A forthcoming study by two World Bank researchers finds that in a sample of nine low income countries, the net food sellers were poorer than net food buyers.[6] Rising food prices would tend to transfer income from richer to poorer households, while lower prices do the opposite. Among poor net food buying households, almost half spent less than ten percent of their income on food, meaning that rising prices would have only small impacts on expenditure and might be outweighed by changes in income. The study then explores the links between agricultural prices and the sources of income for net food buying rural households, finding that about half of their income depends on agriculture, whether directly through farming or pastoral activities or through wage and business income that is linked to agricultural incomes. Two other seminal studies, one for Bangladesh and one for Mexico, developed theoretical models of the role of labor markets, land markets, and spillover effects of agricultural prices in rural economies and tested them with household survey data.[7] They demonstrate that secondary effects may outweigh the direct effects of food prices. Findings from all of these studies indicate that a simple focus on net consumption versus net production is likely to be misleading. They also provide important analytical foundations for further work to better understand the relationship of food prices to poverty.

Overall, fifty-four percent of the world's poor live in India and China and thus the response of poverty in these two countries is an important component in assessing how changes in food prices will affect global poverty. A recent study by the Carnegie Endowment probed the effect of food price changes in India, the country with the largest number of poor in the world, where over eighty percent of the population live on less than $2 per day. [8] Using a general equilibrium model to simulate the impact of different prices, we found that an increase in the price of rice would benefit most poor households (Figure 4). The detailed household data we used included information on vulnerable social groups (defined in the Indian constitution as "scheduled tribes," "scheduled castes," and "other backward classes"). The poorest households and the most disadvantaged groups saw the largest gains (up to six percent increase in income from a fifty percent increase in the price of rice). Only the richest ten percent of rural households would lose from a price increase.

We found that labor markets played a largely positive role in transmitting price effects. Income increased for rural workers at all education levels and for both men and women; the largest gainers were illiterate workers and disadvantaged groups. The impact on urban households was more varied, with some poor households gaining slightly and others losing slightly. Illiterate urban workers from all disadvantaged groups would see their incomes rise, while the results for other urban workers showed a mix of small gains and small losses with no consistent pattern.

Figure 4. Impact of an Increase in the World Price of Rice on Indian Households (% change in real income relative to baseline nominal income to households)



Declines in the world price of rice would have negative effects on all major components of the Indian economy, including private consumption, government spending, investment, exports, imports, and total domestic production (Table 1). Seventy-eight percent of households would experience real income losses and the distributional impact would be regressive. Real income would fall for all rural households except the richest ten percent, with the poorest households and disadvantaged groups in rural areas losing the most (Figure 5). Most urban households would feel little impact from the price declines. The lowest income brackets of disadvantaged groups experience small income losses.

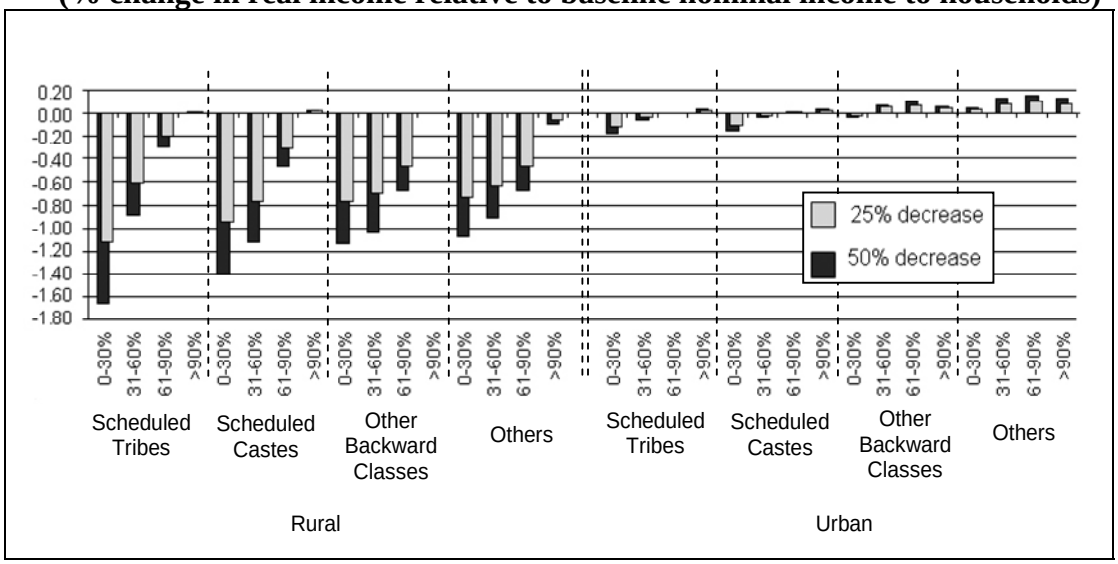
Table 1. Impact of a Change in the World Price of Rice on India's Economy (% change from baseline)

Macroeconomic indicator	World price of rice decreases by 25 percent	World price of rice decreases by 50 percent	World price of rice increases by 25 percent	World price of rice increases by 50 percent
Private consumption	-0.16	-0.24	0.30	0.84
Government consumption	-0.09	-0.12	0.17	0.52
Investment consumption	-0.19	-0.28	0.39	1.20
Absorption	-0.16	-0.24	0.31	0.89
Import demand	-0.88	-1.28	1.82	5.62
Export supply	-0.64	-1.24	0.60	1.08
Total domestic production	-0.12	-0.17	0.23	0.70

The drop in rice prices would reduce demand for unskilled labor in rice production sharply, by almost twelve percent in the case of a fifty percent decline, and reduce overall demand for labor in the agricultural sector. Displaced rural laborers would spill over into urban unskilled labor markets, either driving down wages or increasing unemployment.

Our study demonstrates that the inclusion of linkages between rural and urban labor markets is necessary to understand the impact of agricultural prices on the poor.

Figure 5. Impact of a Decrease in the World Price of Rice on Indian Households (% change in real income relative to baseline nominal income to households)



We conducted a similar exercise for increases and decreases in wheat prices. The results showed similar patterns but with more muted effects. The overall effect of a decline in wheat prices could be to increase poverty, as 92 million rural households in the bottom six deciles of income would experience some real income loss, while only 32 million urban households in the same deciles would experience income gains.

As noted, India is home to the largest number of poor people in the world. The second largest concentration of the poor is in China. Several studies using general equilibrium models have shown that rising world prices for grains would reduce poverty in China.[9] Higher prices are offset by higher earnings for labor and land, leading to a decline in poverty for all household groups with significant poverty, including urban households.[10] Most historical studies conclude that the large reduction in poverty in China since 1978 was based primarily on better incomes in rural areas, attributable in significant part to higher prices for food.

Two other recent studies looked at groups of developing countries that did not include China and India. One study found that higher food prices would reduce extreme poverty in nine of fifteen countries studied.[11] Another looked at nine countries and found that rising food prices would increase poverty in seven.[12] The studies cited here and others provide abundant evidence that patterns of poverty, income, and expenditure differ among developing countries and so the impact of food price increases will differ. Some countries will undoubtedly suffer increases in poverty when prices rise, while others will see poverty decline.

The important conclusion that emerges is that it would be incorrect to generalize from simple net consumer/net producer ratios or the experience of particular countries to judge the effects of food price increases on poverty. The wide variation in impacts across countries, for different crops, and for different types of poor households demonstrates the need for varied policy responses and importance of avoiding misdiagnosis or one-size-fits-all policy prescriptions. We return to this topic in the section of the paper dealing with relevant issues in the Doha negotiations.

How Will the Doha Round Affect Food Prices?

It is generally acknowledged by experts that a Doha settlement would have no short-term impact on food prices. The tariff changes and other rules of a final deal will not begin to take effect until after the agreement is concluded, ratified by member states, and comes into force, a process that will take several years. Countries will then begin to phase in agreed changes over a number of years. The prior Uruguay Round, for example, allowed countries up to ten years to implement commitments. The trade negotiations, however, are not aimed at the short term. The rules and tariffs negotiated will prevail for the foreseeable future, until changed by some yet unscheduled future round of global trade talks. As a result, the Doha Round must be assessed for its medium and long term implications and its impact under conditions of both rising and falling food prices must be taken into account.

During the six years since the launch of the Doha Round, numerous general equilibrium studies have been undertaken to simulate its potential impacts. All studies have found that a Doha package that includes reductions in domestic agricultural subsidies, export subsidies, and tariffs will raise food prices modestly on global markets. These studies have also reached the common conclusion that most developing countries will see some benefits from the Round, although net food importing countries including Bangladesh and many sub-Saharan African countries are likely to be net losers because of the increased cost of food. Focusing on agricultural trade, a recent careful study by World Bank researchers found that globally, an additional nine billion people would fall into extreme poverty as a result of full liberalization of trade in agriculture.[13]

Public discourse on the link between rising food prices and the Doha Round has sometimes been based on a mistaken belief that a conclusion to the negotiations is needed to lower prices by reducing tariffs. However all countries currently have the right to lower the tariffs they actually apply—including to zero—at any time. WTO membership only obligates countries not to *raise* tariffs beyond levels agreed to in previous rounds of negotiations (these are called "bound" rates). In practice, many net food importing developing countries have already cut tariffs on staple foods to bring some immediate relief to their consumers, including the poor.

There is a large gap between bound and applied tariff rates, particularly in agriculture, particularly for developing countries. A major reason they have sought to maintain higher bound rates while sometimes applying low tariffs in practice is their need to deal

with the volatility of agricultural prices and the long period of low food prices that just ended, discussed above. When global food prices are high, as now, governments have the ability to lower tariffs. When global food prices fall (as they have in the past and will again), governments can raise tariffs back up to the bound level to shield their farmers from sharp drops in income. This flexibility is particularly desirable going forward, when two factors may increase price volatility. First, scientists predict more extreme and variable weather as a result of climate change, which could lead to more frequent supply shortfalls. The other factor is the increasing role played by futures markets for agricultural commodities, discussed above. Like other financial markets, they are driven as much or more by expectations, and herd behavior than by underlying fundamentals and so tend to be much more volatile than actual supply and demand.

Optimizing Doha Round Decisions to Reduce Poverty and Increase Food Security

In the medium term, reducing poverty and increasing food security will require many developing countries to expand agricultural production, improve farming productivity, and help to establish well-functioning domestic agricultural markets.[14] There are a number of issues still under negotiation in the Doha Round that will affect the ability of governments to achieve these goals and manage food price changes in the future.

Domestic subsidies, export subsidies, and food aid

The domestic and export subsidies provided by the United States, the European Union, and some other wealthy countries to their farmers have the effect of inducing greater supply than market prices would warrant and allowing excess production to be sold on world markets at prices below production costs. This has reduced global food prices over recent decades, which was seen as positive by some net food importing countries. However it has hurt farmers in developing countries who cannot compete with subsidized exports in global markets. For subsistence and small scale farmers, it has displaced or lowered prices for their output in their domestic markets, thereby driving them off the land or into poverty.

A similar effect is caused by in-kind food aid, which is the main form of food assistance provided by the United States. While most other wealthy countries have shifted to providing food aid by purchasing from farmers in countries targeted for assistance or in neighboring countries, the United States still does so by shipping its excess domestic supplies to destination countries, displacing production or depressing prices there.

Agricultural subsidies and in-kind food aid by wealthy countries have discouraged production and investment in developing country agriculture. The resulting shortfall has emerged starkly as global food demand has risen. Thus, while reducing these agricultural subsidies and constraining in-kind food aid will increase prices modestly in the short run, it is a necessary correction to global agricultural market distortions and an essential part of the Doha deal if developing countries are to build up their own agricultural sectors and increase food supply in the medium and long term.

Special products

Earlier in the Doha Round a framework agreement was reached to allow developing countries to shield some agricultural products, designated special products, from tariff reductions in order to address the livelihood security, food security, and rural development concerns that have been discussed above. Negotiations continue on how extensive these exceptions will be. A large group of developing countries known as the G33 has proposed that twenty percent of tariff lines should be subjected to lesser or no tariff cuts based on these considerations.[15] The United States and some other countries have sought to sharply limit the number of eligible tariff lines and to require other constraints in the designation of special products.

The outcome will determine how much flexibility developing country governments will retain to provide adequate remuneration and some price continuity as a medium term incentive to their farmers to increase production. It will also influence the degree to which they will be able to shield poor farmers and rural communities from high levels of risk or periods of depressed prices that they are ill-prepared to absorb.

While the G33 has been outspoken throughout the negotiations about the need for this policy flexibility, the recent price volatility and supply shortfalls on global food markets have convinced some other developing countries that they need to consider ways to achieve greater domestic production in order to improve food security and reduce vulnerability to global markets. Many African countries in particular have the land and labor endowments needed to increase food production if they invest in irrigation, roads and other rural infrastructure and can induce farmers to invest and increase production. Even if they are able to mobilize resources for public investments, greater effort by farmers and more private investment will not be forthcoming unless governments retain the tariff flexibility to shield farmers, particularly small and vulnerable ones, from the worst of global market volatility and negative price shocks. A robust outcome on special products would be needed to leave sufficient policy tools in the hands of developing country governments.

As already discussed, the impact of food prices on poverty and income distribution varies widely among countries and for different agricultural crops within countries. As a result, the decisions on how to select special products must be left to developing country governments themselves. Efforts in the negotiations to severely limit the number of special products or to impose restrictions on their selection would undermine the ability of developing country governments to balance the needs of rural and urban poor while addressing food supply and longer term rural development concerns. Decisions on such fundamental issues must be left to governments that are accountable to their populations, not to negotiators seeking to maximize profits or increase market access for their own commercial farmers or to dispute settlement panels that have no accountability for poverty and development outcomes.

Special safeguard mechanism

Developing countries also seek a special safeguard mechanism that would permit them to raise tariffs in response to agricultural price drops or import surges. While the special products exceptions discussed above would provide some policy space for developing countries to address medium term food security and livelihood concerns and long term rural development strategies, a safeguard mechanism would still be needed to address short term volatility in food markets. As noted, food prices have always been volatile and volatility is likely to increase due to climate change and increased use of commodities as investments and hedges. Small producers in developing countries are in no position to bear the risk of sharp price and supply swings.

The special safeguard mechanism must be easy to use, allow developing countries to respond swiftly to market disruptions, and be available for relatively small disruptions. In the simulations we performed of the impact of changing rice prices in India, a twenty-five percent decrease in rice prices imposes losses on poor households almost as large as a fifty percent decrease (Figure 5). A current proposal that would require import prices to fall by as much as thirty percent compared to the average price for the previous three years (the "trigger price") before the safeguard mechanism could be employed would vitiate this important tool. Another current proposal would limit a responding tariff increase to one-half of the difference between the lower import price and the trigger price. The practical effect would be to require that half of global market disruptions be absorbed by poor farmers in affected countries. The proposal should be abandoned. Consideration must also be given to the situation of developing countries with low bound tariffs, which might need to raise them well above current bound levels to have an effect on import surges and negative price shocks.

Impact of tariff reductions on government budgets and income distribution

A more general issue in the Doha Round is the overall level of tariff reductions that will be required of developing country governments. This issue is relevant to agricultural production, food prices and poverty because in many developing countries tariffs account for a quarter, a third or more of total government income and thus determine the amount of resources available for public investment in the agricultural measures that have been so badly neglected in recent decades: rural roads, irrigation, extension services, research and development, etc. A recent study on Tanzania illustrates that government investment falls as a result of tariff reductions and thus constrains rural development strategies.[16] Tariffs reductions may also skew benefits from trade toward wealthier households who are more inclined or better able to afford imported goods.

The Role of Bilateral and Regional Trade Negotiations

The global trading regime is established not only through multilateral negotiations and the WTO but also through multiple bilateral and regional trade agreements. These agreements have proliferated in recent years. They often involve highly asymmetrical

bargaining power between the negotiating parties and may lead to terms that disproportionately favor producers and exporters in the wealthier, more powerful country.

This has been a particular concern in agreements in which the US has insisted on opening agricultural markets in developing country trade partners while insisting on maintaining its own agricultural subsidies and distortions. Examples include the US free trade agreement with Mexico, Central American and Andean countries. In the case of Mexico, the US has enjoyed a substantial surplus in agricultural trade with its southern neighbor despite the seeming comparative advantage that Mexico would hold and despite its need to improve livelihoods in rural areas.

Recently the European Union has also pursued bilateral and regional agreements with developing countries, most notably the African, Caribbean, and Pacific group of countries. Many of the developing country partners have resisted terms that they believed would restrict their policy space for development. Although some interim agreements have been signed, these negotiations continue.

Conclusion

The policy tools needed to address the current food crisis cover a broad range. They include immediate assistance for the poor and hungry and dramatically increased investment in developing country agriculture by the international financial institutions, wealthy country development agencies, and developing country governments. Financial regulators should turn their attention to financial markets in agricultural commodities, which show signs of the speculation, mania, and overshooting that have resulted in ongoing crises in global finance and some housing markets. As painful and destructive as those crises have been, they pale by comparison with the threat of serious market failure in the case of food.

The policies implemented must be tailored to the specific conditions of developing country. Short term policies should address the immediate binding constraints in each developing country. For example, in countries facing food insufficiency and/or unaffordably high food import bills, farmers should be supplied with seeds and fertilizer as a matter of urgency to increase production in the current season. Policy makers must then turn to the medium term binding constraints, which will often involve major investments in agriculture.

Trade policy has an important role to play. The emphasis in trade negotiations has often been on exports, to allow developing countries that can compete on global food markets to have better access to wealthy countries. However trade policy has an arguably even more important role in establishing an environment under which developing countries can reverse the losses to agricultural production in recent decades. Trade policy must allow them to create adequate domestic incentives for increased food production, investment in productivity enhancements, stable and rising rural incomes, and targeted interventions on behalf of the poorest and most vulnerable farming households. Trade

agreements that remove flexibility from the hands of governments prematurely or policies that lead them to rely on global food markets and not invest in their own agricultural sectors have proven to be shortsighted. In the case of the Doha Round, an agreement should be carefully constructed to ensure that in the future, developing countries will retain the policy tools, including adequate tariffs and safeguards, necessary to develop and provide appropriate incentives to their domestic agricultural sectors, to increase food security, and to shield the poor from market failures that can affect their very survival. Such an agreement would deserve the name of a development round.

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[1] E. R. Grilli and M. C. Yang, "Primary commodity prices, manufactured goods prices and the terms of trade of developing countries: what the long run shows," *World Bank Economic Review*, Vol. 2, No. 1, 1988; International Monetary Fund, *World Economic Outlook 2006* (Washington, D.C. International Monetary Fund). Prices are deflated by the Manufactures Unit Value (MUV) index. Due to definitional changes, the Grilli and Yang index is not precisely comparable to the IMF index.

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[3] *World Development Report 2008: Agriculture for Development* (Washington, D.C.: World Bank, October 2007) available at: http://econ.worldbank.org.

[4] Independent Evaluation Group of the World Bank, "World Bank Assistance to Agriculture in Sub-Saharan Africa" (Washington, D.C.: World Bank, 2007).

[5] Discussed in *World Development Report 2008,* op.cit.

[6] M. Ataman Aksoy and Aylin Isik-Dikmelik, "Are Low Food Prices Pro-Poor? Net Food Buyers and Sellers in Low Income Countries," (Washington, D.C.: World Bank, forthcoming). Mimeo available from author. The countries covered in the study are Bangladesh, Bolivia, Cambodia, Ethiopia, Madagascar, Nicaragua, Peru, Vietnam, and Zambia.

[7] Martin Ravallion, "Rural Welfare Effects of Food Price Changes under Induced Wage Responses: Theory and Evidence for Bangladesh," *Oxford Economic Papers* 42 (Oxford: Oxford University Press, 1990); George A. Dyer, Steve Boucher, and J. Edward Taylor, "Subsistence Response to Market Shocks," Working Paper 05-004, Department of Agricultural and Resource Economics (Davis: University of California, 2005).

[8] Sandra Polaski, A. Ganesh-Kumar, Scott McDonald, Manoj Panda, and Sherman Robinson, *India's Trade Policy Choices: Managing Diverse Challenges* (Washington, D.C.: Carnegie Endowment for International Peace, 2008) available at: www.carnegieendowment.org/trade.

[9] Recent examples include Fan Zhai and Thomas Hertel, "Economic and Poverty Impacts of Price Distortions in China," Global Trade Analysis Project, GTAP Resource #2706, June 2008, available at: https://www.gtap.agecon.purdue.edu/resources/res_display.asp?RecordID=2706; and "Food Prices and Inflation in Developing Asia: Is Poverty Reduction Coming to an End?," (Manila: Asian Development Bank, April 2008) available at: http://www.adb.org/Documents/reports/food-prices-inflation/default.asp.

[10] Fan Zhai and Thomas Hertel, op.cit.

[11] Thomas W. Hertel, Roman Keeney, Maros Ivanic, and L. Alan Winters, "Distributional Effects of WTO Agricultural Reforms in Rich and poor Countries," World Bank Policy Research Working Paper 4060 (Washington, D.C.: World Bank, November 2006) available at: http://econ.worldbank.org.

[12] See for example statements to the United Nations System Chief Executives Board for Coordination and to Japan regarding the agenda for the G8 meeting in July, available at: http://web.worldbank.org.

[13] Maurizio Bussolo, Rafael De Hoyos and Denis Medvedev, "Global Income Distribution and Poverty in the Absence of Agricultural Distortions", Global Trade Analysis Project, GTAP Resource #2690, June 2008, available at: http://www.gtap.org.

[14] A good summary of the issues and evidence on this point can be found in Jamie Morrison and Alexander Sarris, "Introduction" in *WTO rules for agriculture compatible with development*, ed. Jamie Morrison and Alexander Sarris. (Rome: Food and Agriculture Organization of the United Nations, 2007). Available at: http://www.fao.org/docrep/009/a0913e/a0913e00.htm.

[15] This position is proposed by a coalition of developing countries known as the G33, which has grown to include the following 46 countries: Antigua and Barbuda, Barbados, Belize, Benin, Bolivia, Botswana, China, Congo, Côte d'Ivoire, Cuba, Dominica, Dominican Republic, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, India, Indonesia, Jamaica, Kenya, Rep. Korea, Madagascar, Mauritius, Mongolia, Mozambique, Nicaragua, Nigeria, Pakistan, Panama, Peru, Philippines, St Kitts and Nevis, St Lucia, St Vincent and the Grenadines, Senegal, Sri Lanka, Suriname, Tanzania, Trinidad and Tobago, Turkey, Uganda, Venezuela, Zambia, and Zimbabwe.

[16] Piero Conforti and Alexander Sarris, "Policy Response to a Commodity Price Boom under Structural Constraints. The case of Tanzania", Global Trade Analysis Project, GTAP Resource #2703, June 2008, available at: http://www.gtap.org.