The Distributional Effects of WTO Agricultural Reforms in Rich and Poor Countries

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The mix of high levels of support, specialization, and great wealth is toxic for agricultural reform

The modern apology for preserving rich countries' agricultural protection is that it supports poor farmers in the North and that liberalization would benefit only rich landowners in the South. Both assertions contain grains of the truth, but a new article by Hertel, Keeney, Ivanic, and Winters shows that the predominant effects are the very opposite.

The authors explore two liberalization scenarios: first, a prediction based on the WTO's Hong Kong Ministerial (December 2005) of what the Doha Round might bring in agriculture (75 percent cuts in tariffs, 60–75 percent cuts in domestic support, and the abolition of export subsidies), and second, complete liberalization. They translate these general rules into changes in policies on more than 5,000 products before reaggregating them into a manageable number of categories.

The authors convert the policy changes into resulting medium-run (three- to five-year) changes in prices, outputs, and factor rewards using a global simulation model (GTAP-AGR). The model contains detailed treatments of farm input and production decisions, labor and land markets, and consumption patterns.

Finally, the authors calculate the effects on farm incomes in developed countries and on poverty among all households in 15 developing countries on which they have good data on the sources of income. Among developed countries they give the United States special attention, identifying farm households specializing in four heavily supported sensitive crops—rice, sugar, cotton, and dairy—by their place in the wealth distribution.

For each developing country the authors distinguish seven strata of households by their main income source. They then calculate for each stratum the poverty elasticities at the poverty line ($1 or $2 a day), showing the sensitivity of the number of poor to changes in the prices of consumer goods, in taxes, and in each of 10 sources of income. The global model estimates how these prices and factor incomes change with liberalization, and from these two sets of information the authors calculate the poverty effects.

In developed countries the average farm household earns most of its income from nonfarm activities. Thus in Japan, for example, Doha liberalization might cut farm earnings by 16 percent but boost farmers' nonfarm earnings by 0.6 percent. The net effect is an income loss of just 1.4 percent, because agriculture provides only 12 percent of total earnings for Japanese farm households on average.

In the United States most farms earn little from farming, but large farms producing sensitive products are highly specialized, with the richest deriving up to 90 percent of their income from agriculture. Full agricultural trade liberalization would cut the total income of the wealthiest rice farmers by about 19 percent and that of cotton farmers by 13 percent. This combination of high levels of support, specialization, and great wealth is toxic for agricultural reform.

In the developing economies, rich-country agricultural trade liberalization boosts real returns in agriculture—for land and farm workers—and cuts them elsewhere. How this translates into national poverty depends on a range of factors. The effects, though varied, are generally rather small, even for the abolition of rich countries' agricultural trade barriers. Table 1 reports on four illustrative economies.

Brazil and Thailand are big gainers. The increased demand for their agricultural exports boosts rural incomes, and because agriculture is relatively important for unskilled workers, their wages also rise more generally. Because the poor are clustered around the poverty line, the income benefits shift substantial numbers above it.

Bangladesh and Zambia miss out, especially in the Doha scenario. Part of the reason is that Doha includes the abolition of rich countries' export subsidies—which does little or nothing for poverty in most developing countries because the poor either are isolated or are net purchasers of the commodities affected. In addition, Bangladesh loses because it is an importer of cotton, and Zambia because its farmers are so isolated that they receive relatively little increase in demand and so poor that what they do get is insufficient to pull them above $1 a day.

The authors also compare the "poverty friendliness" of different types of trade liberalization. Agricultural liberalization has larger poverty effects than nonagricultural liberalization. And developing countries' own agricultural liberalization always reduces poverty, in most cases more so than rich countries' reforms. It both reduces the prices of staple foods for the poor and creates market opportunities because developing countries trade a good deal with one another. That Doha requires very little trade liberalization by developing countries is a clear source of weakness in its poverty-reducing credentials.

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Table 1. Effects of Rich-Country Liberalization of Agriculture on National Poverty

	Full liberalization		Doha liberalization	
Country	Percent	Thousands	Percent	Thousands
Bangladesh	–0.06*	–27*	0.00*	0*
Brazil	–1.88	–431	–0.73	–167
Thailand	–7.10	–84	–1.43	–17
Zambia	0.13	8	0.03	2

* Result cannot be distinguished from zero change at the 95 percent confidence level.

Note: The table shows percentage and absolute changes in the population below a poverty line of $1 a day, with a negative value indicating a reduction in poverty.