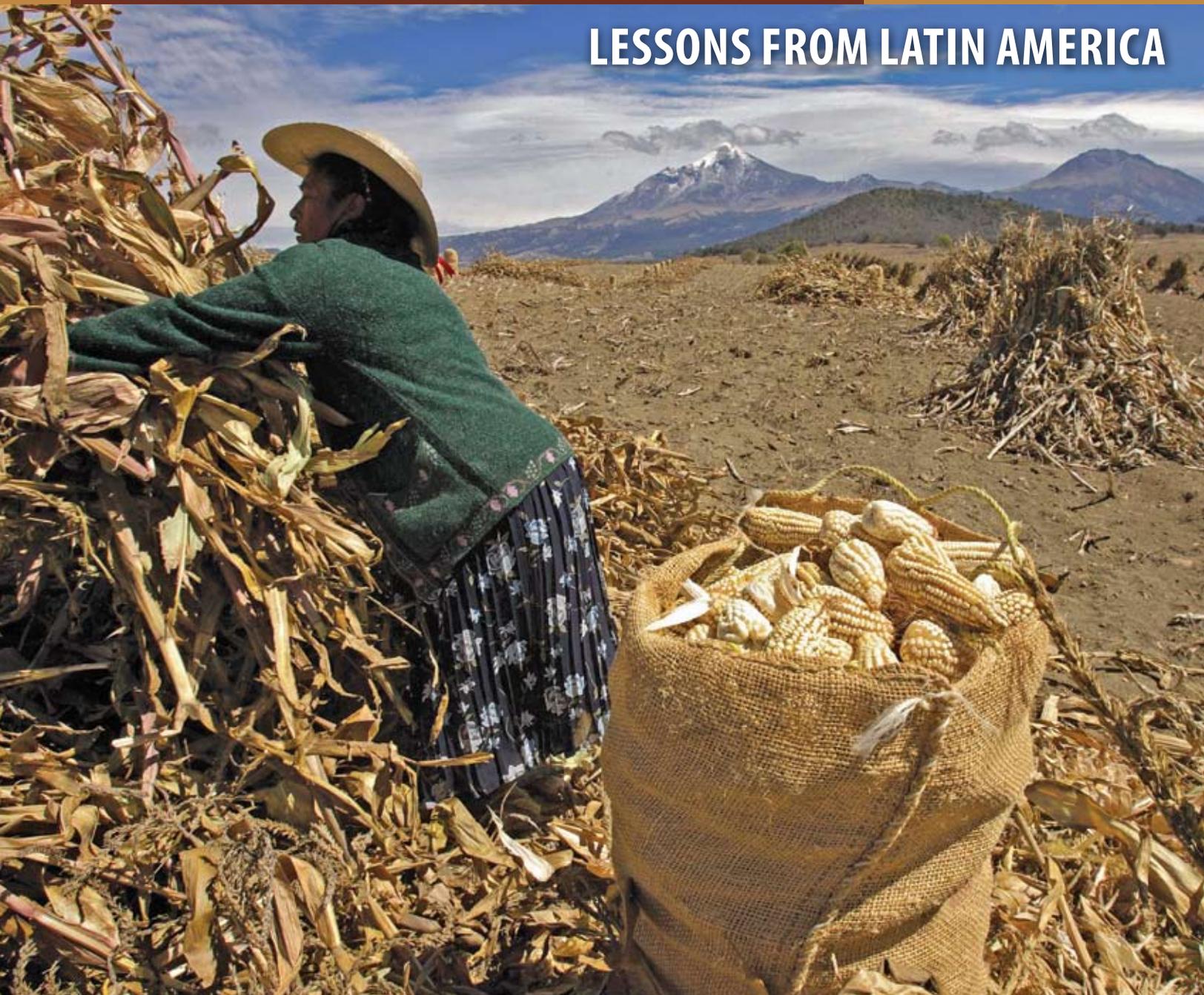


The Promise and the Perils of Agricultural Trade Liberalization

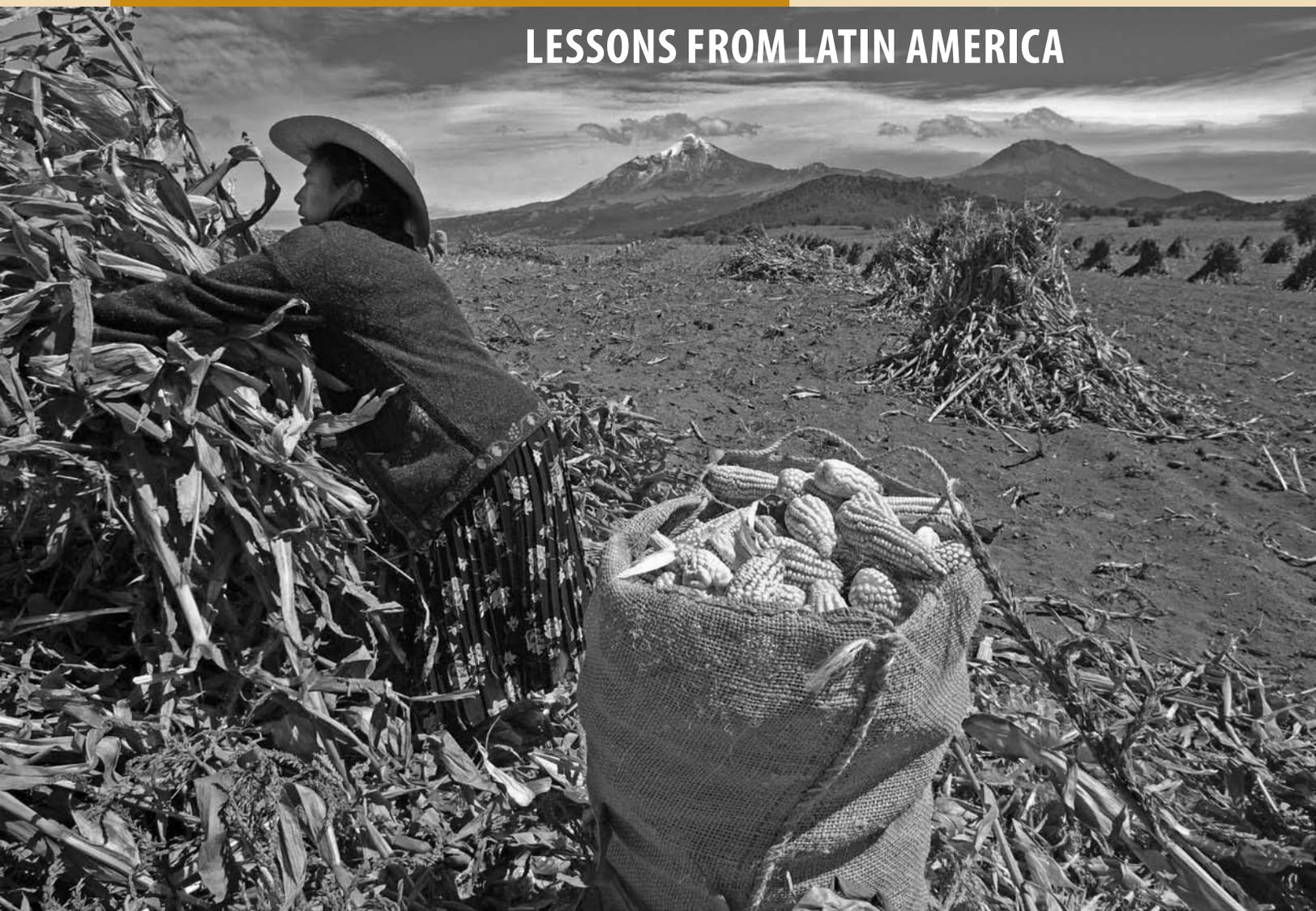
LESSONS FROM LATIN AMERICA



by Mamerto Pérez, Sergio Schlesinger, and Timothy A. Wise with
the Working Group on Development and Environment in the Americas

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PUBLISHED BY: Washington Office on Latin America (WOLA), 1666 Connecticut Avenue, NW, Suite 400, Washington, DC 20009, 202-797-2171, www.wola.org and the Global Development and Environment Institute (GDAE) at Tufts University, 44 Teele Ave., Medford, MA 02155, 617-627-3530, www.gdae.org.

ACKNOWLEDGMENTS: This report would not have been nearly as effective without the support and leadership of Vicki Gass, Lilia López, and others at the Washington Office on Latin America. Versions of this report are being published in Spanish by the Bolivian NGO AIPE and in Portuguese by ActionAid-Brazil. We thank the foundations that provided support for the research that went into this report: Rockefeller Brothers Fund, the Charles Stewart Mott Foundation, the General Service Foundation, and the Moriah Fund.

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ISBN # is 0-929513-81-9

Cover photo: Associated Press

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Executive Summary

As a region, Latin America enacted the most sweeping reforms to its trade policies in the world. Following the Washington Consensus policies, government after government opened its economy significantly to foreign investment and goods. In agriculture, the new policies have generated dramatic increases in agricultural trade, but have they produced sustainable rural development?

That is the question this report seeks to answer. Based on detailed studies by a select group of U.S. and Latin American researchers, it examines both the promise of agricultural trade liberalization for developing countries — growth through expanded exports — and its perils — the potential loss of rural livelihoods as low-priced imports flood domestic markets. The coordinators of the project, Mamerto Pérez of Bolivia, Sergio Schlesinger of Brazil, and Timothy A. Wise from the United States, conclude that the promise of export agriculture for development is overstated while the perils for small-scale farmers are very real.

An estimated 46% of
the rural population
live below the poverty
line of \$2 per day.

This report, produced with the Washington Office on Latin America (WOLA) and Tufts University through its Working Group on Development and Environment in the Americas, is based on seven case studies on the impacts of liberalization and related policies on specific countries. To assess the promise of export agriculture, researchers examined the South American soybean boom with studies of Brazil, Argentina, and Bolivia. To review the impacts on small-scale farmers, the project commissioned case studies on El Salvador, Bolivia, and Brazil. Finally, a case study on Mexico after fourteen years under NAFTA looks at both the expansion of export agriculture and the impacts of rising imports on small-scale farmers.

This report offers concrete policy suggestions for the U.S. government, international financial institutions, and national governments in the region. The recommendations offer a new approach to Latin America, one that recognizes the limited promise and the real perils of agricultural trade liberalization for developing countries. The recommendations are based on the following six overarching conclusions, with a focus on smallholder agriculture and poverty reduction:

- 1 Agriculture and rural development remain important economically.** More than 20% of Latin American residents still live in rural areas, as does a large portion of the region's poor, with an estimated 58 million rural residents (46% of the rural population) living below the \$2/day poverty line. Sustainable rural development for local and regional markets is critical to reducing poverty.
- 2 Export agriculture, through expanded access to global markets, is not by itself a reliable engine for broad-based development that benefits the rural population.** South America's soybean industries are undeniable winners from global trade liberalization, but few of the benefits go to rural communities. Based on high-input, industrialized monoculture farming, employment and wages have both declined despite rising production. Ecological harm from agricultural expansion onto sensitive lands leaves lasting damage.
- 3 Smallholder agriculture can be made more productive and can serve as the catalyst for integrated rural development and poverty reduction.** With appropriate government investment, many small-scale farmers can increase their productivity, meeting critical domestic food needs while reducing poverty.
- 4 Governments need to play an active role that emphasizes productivity and breaks from the prevailing focus on anti-poverty programs.** The withdrawal of government

investment in favor of targeted anti-poverty programs relegates rural communities to the role of welfare recipients rather than important food producers. The private sector will not provide adequate investment; it must come significantly from the public sector.

- 5 **Smallholders need government support and organization to ensure they benefit from new demand in niche markets and from the growing supermarket sector.** The globalized economy offers opportunities for small-scale farmers, but they need sustained public support and organization to take advantage of them. Supermarkets and other buyers demand volume, uniformity, and timely delivery, which put smallholders at a disadvantage compared to agribusiness firms.
- 6 **It is critical to recognize, enhance, and reward smallholders' role as stewards of the rural environment.** The deregulated market fails to recognize the contributions of small-scale farmers to the maintenance of a healthy environment. Government policies need to find ways to reward these critical ecological services — seed diversity, watershed management, soil preservation, carbon sequestration, biodiversity conservation, etc.

These conclusions are consistent with many of the findings of the *World Development Report 2008: Agriculture for Development*, published by the World Bank. In a welcome shift from its advocacy of export-oriented policies, the report reasserts agriculture's importance in the economic development process, particularly for less-developed, agriculture-based economies such as those in Sub-Saharan Africa, but also for what the report calls the "urbanizing" economies of regions such as Latin America. The report notes the particular importance of small-scale agriculture in poverty reduction: "Improving the productivity, profitability, and sustainability of smallholder farming is the main pathway out of poverty in using agriculture for development."

Most importantly, the report's authors recognize the critical role of government in overcoming market failures. They call on governments and international agencies to increase the assets of poor farmers (particularly access to land, water, education, and health care), to raise the productivity of smallholders, and to generate opportunities in the rural non-farm economy.

Unfortunately, the World Bank report continues to call for deeper liberalization in agriculture, an approach we find to be at odds with these stated goals. The studies in our project demonstrate that sustained rural development and poverty reduction in Latin American societies with strong agricultural sectors cannot be achieved under a framework of indiscriminate liberalization. The most important policy reform needed for Latin America now is a much more selective and careful management of international trade, particularly in agriculture. Such an approach is even more urgent in light of the current food crises in developing countries.

A New Approach to U.S. Policies

This report establishes the economic and environmental importance of rural areas and smallholder agriculture. It also demonstrates how these sectors have been harmed by the dominant policy of liberalization. With a new administration coming to Washington, the United States has the opportunity to take the lead in setting policies that promote real development and reduce poverty.

To begin with, the Administration and Congress should evaluate the trade agreements with Colombia and Panama to assess whether they will promote equitable and sustainable development. The agreements should be rejected if they do not. Existing trade agreements, such as NAFTA, should also be evaluated and reformed to recognize the profound rural impacts of trade liberalization. Recent efforts in the U.S. Congress to establish clear criteria for

The most important policy reform Latin America needs now is a more selective and careful management of international trade, particularly in agriculture.

trade agreements are welcome, as are proposals by some candidates for the U.S. presidency to evaluate NAFTA and other trade agreements.

In addition, the U.S. Agency for International Development, which has often provided technical assistance and grants to help Latin American governments make market liberalization policy changes, should shift away from this kind of assistance and provide more aid directed toward strengthening producers who supply local and regional markets, and to building infrastructure. Similarly, the Treasury Department should charge the U.S. Executive Directors at the World Bank, IDB, and IMF to press the institutions' boards to revise policies and issue loans that support local and regional markets and that build local infrastructure to benefit local producers.

These concrete measures are a first step towards ensuring that U.S. policy supports smallholder agriculture and rural development as central strategies. They are also consistent with the long term interests of the United States in fighting poverty and generating development in Latin America. Development can bring political stability to hemispheric neighbors, reduce the push factors that contribute to extensive immigration, and offer alternatives to poor rural farmers who might otherwise turn to illicit activities. Local and regional market development can also stimulate demand for U.S. goods and services.

Rural development
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Further recommendations for policy reform include:

Trade Policy:

- ▶ Governments in developing countries must retain the right to regulate imports and exports in order to protect vulnerable populations and resources.
- ▶ Governments must also retain their ability to support national industrial development.
- ▶ Developed countries should reduce tariff escalation on processed goods.
- ▶ Trading partners must develop meaningful anti-trust enforcement and limit the undue market power of transnational agro-food firms.
- ▶ Trade agreements must protect farmers' rights to preserve and strengthen native seeds by withdrawing restrictive intellectual property regimes.
- ▶ The European Union, which has been aggressively pursuing trade agreements with Latin American countries, should consider similar policy reforms.

Export Agriculture and the South American Soy Boom:

- ▶ Governments must adopt policies that favor smaller farms, advance land reform programs, and promote crop diversification.
- ▶ Governments must establish policies that control the unregulated extractive model of soybean farming.
- ▶ Governments must use the precautionary principle to guide the adoption of new agricultural technologies, including genetically modified seeds.
- ▶ Governments must promote regional integration, not just of infrastructure but of standards and policies, including those for foreign investors.
- ▶ Governments must encourage the development of domestic processing industries to capture more value from primary production.
- ▶ Governments must redirect research and development away from industrial monoculture farming and toward sustainable production on smaller farms.

Introduction

The World Bank's annual World Development Report took as its thematic focus for the 2008 edition "Agriculture for Development." Twenty-six years had passed since the Bank last focused its bellwether reference publication on agriculture. The neglect went beyond a lack of editorial attention. Developing country agriculture languished in an era dominated by the debt crisis, reductions in national governments' developmental role in their economies, and economic globalization.

In agriculture, as in the rest of the economic policy arena, trade liberalization was the order of the day. In the 26 years since the Bank's 1982 World Development Report, developing countries opened their economies to an unprecedented extent. In the race to adopt Bank-mandated, IMF-enforced policies consistent with the "Washington Consensus" on liberalization, Latin America was a leader. Once the bastion of the "developmental state," the region's increasingly conservative governments opened their economies.

Post-coup Chile led the charge in the mid-1970s, following the dictates of the increasingly influential "Chicago School" of economists. Mexico perhaps best exemplified the policy shift, dramatically opening its economy then signing the North American Free Trade Agreement (NAFTA) in 1993 with the United States and Canada. Most countries in the region followed suit. Average tariffs fell from nearly 50% to just over 10% between 1985 and 2002.¹ Government spending as a share of GDP declined some 30% in the early-mid-1990s.² For the developing world as a whole, agricultural GDP grew at just 2% per year, well behind growth in the rest of the economy.³

The region that liberalized the most saw some of the slowest growth in the developing world. After posting an average per capita growth rate of 2.7% from 1950-80, the region's economies shrank 0.9% per year during the so-called lost decade of the 1980s, but recovered to grow at just 1% per year per capita from 1990-2002.⁴ Growth has been more dynamic in recent years, fueled in part by the rise in commodity prices.⁵

While the region has urbanized at a rapid rate, agriculture remains important. More than 20% of residents still live in rural areas. Even with the rise of mega-cities and their slums, a large portion of the region's poor still reside in the countryside. According to the World Bank, 58 million rural residents in the region live below the \$2/day poverty line, some 46% of the rural population (in 2002). The expansion of industrialized export agriculture, taking advantage of the region's much-touted comparative advantages in the liberalized global economy—abundant and inexpensive land and water, cheap labor, and limited environmental controls—has been accompanied by the exodus of small farmers from the land. From 1993-2002, some 15% of rural residents moved to the cities.⁶ Even in recent years, with rising demand for agricultural products from the region and rising agricultural productivity, the sector has lost jobs.⁷

Still, through 25 years of neoliberal reforms traditional smallholder agricultural sectors retained economic and social importance alongside a growing agro-export sector. This dualism highlights the two faces of trade liberalization in Latin America, the promise of agro-exports and the perils for small farmers producing staple foods.

In this context, the World Development Report 2008 is a breath of fresh air. The report asserts agriculture's importance in the economic development process, particularly for less-developed,

A dualism characterizes the two faces of trade liberalization in Latin America: the promise of agro-exports and the perils for small farmers producing staple foods.

agriculture-based economies such as those in Sub-Saharan Africa, but also for what the report calls the “urbanizing” economies of regions such as Latin America. The report notes that agriculture can play a particularly important role in poverty reduction, citing research showing that aggregate growth originating in agriculture was 2.7 times more effective in reducing poverty than growth outside agriculture.⁸

Most significant, the authors are not referring only to industrial export agriculture. “Improving the productivity, profitability, and sustainability of smallholder farming is the main pathway out of poverty in using agriculture for development.”⁹ According to the authors, this includes improving price incentives, increasing both public and private investment, developing product markets, improving access to financial services and reducing exposure to uninsured risks, strengthening producer organizations, promoting innovation through increased research and development, and making agriculture more sustainable so it can provide needed environmental services.

The overall priorities, according to WDR2008, are to increase the assets of poor farmers (particularly access to land, water, education, and health care), to raise the productivity of smallholders, and to generate opportunities in the rural non-farm economy. The report recognizes that the state must be actively involved, that the sector is plagued with multiple market failures, and that assistance must go beyond safety-net social programs to focus on raising smallholder productivity and stimulating broad-based rural development of both the farm and non-farm sectors.

This report confirms the value of many of these priorities but questions the World Bank’s continued assumption that maintaining and expanding trade liberalization is the best way to achieve them. Here, we assess the promise and the perils of agricultural trade liberalization for Latin America. It is based on a series of country studies sponsored by the Global Development and Environment Institute at Tufts University as part of its Working Groups on Development and Environment in the Americas. These collaborative policy projects have assessed the empirical evidence of globalization’s impacts on the region, drawing lessons for trade and national development policies. Following an influential first report, *Globalization and the Environment: Lessons from the Americas*, new Working Group projects took up the subjects of foreign investment and agricultural trade liberalization.

The report summarizes the findings from three studies of the South American soybean boom, focused on Brazil, Argentina, and Bolivia, three on liberalization’s impacts on small farmers, in El Salvador, Bolivia, and Brazil, and an assessment of Mexico’s experience under NAFTA. Following a brief exploration of some of the misconceptions about the promise of agricultural trade liberalization, we present the study of Mexico, which perhaps offers the starkest lessons on both the promise and the perils of liberalization. We then examine the soy boom and present the studies of small farmers under liberalization. We conclude with an examination of some of the policy implications of our findings in an attempt to draw lessons for policy-makers in both the developed world and Latin America.

The World Bank is correct to reassert agriculture’s continued importance in economic development, and some of the policy prescriptions in the 2008 report offer a refreshing shift from the institution’s past neglect of the sector. This report suggests that for Latin America a still more substantial policy shift will be needed to take advantage of agriculture’s potential to generate sustainable and equitable development in an era of economic globalization. We assess some of the World Bank’s policy recommendations in the conclusion.

The False Promise of Export Agriculture

There are a number of reasons export agriculture holds less promise than free-trade proponents suggest. First, despite the repeated assertions that developing countries hold a comparative advantage in agriculture, it is the rich countries that dominate world agricultural markets. With the exception of tropical commodities such as coffee and bananas, they hold a large and in many cases rising share of global agricultural commodity markets. Developed countries in 2005 controlled two-thirds or more of exports of maize, wheat, barley, and cotton. Among the most traded non-tropical agricultural commodities, only rice, sugar, and oilseeds showed developing countries as a group with a majority share of export markets.¹⁰ And rich countries control the entire value chain in most agricultural commodities, from patented seeds, agro-chemicals, machinery, and credit to trade itself, even in the case of many commodities exported from developing countries.

Second, not all developing countries are equal in the world of international agricultural trade. To compete in global commodities markets, countries need a relatively high level of industrial development and infrastructure. It is not surprising, then, that only a few countries have shown the ability to compete internationally. Parts of the former Soviet Union can compete in temperate grains, and China competes in global maize markets (though its own growing consumption of animal feed and its depleted environment limit its production and export potential).

But the two countries that dominate developing country agricultural trade are Brazil and Argentina. Both have vast tracts of rich land suitable for industrial agriculture. Both have achieved levels of development that give them the infrastructure and capital to compete internationally. Brazil has emerged or is poised to emerge as an export power in soybeans, sugar, coffee, oranges, meats, tobacco, and ethanol. Argentina has established a strong and growing market presence in soybean products and maize. When the World Bank and other international agencies speak of Latin America as a region showing gains from trade liberalization, they are overwhelmingly speaking of Brazil and Argentina.

As Timothy A. Wise shows in his overview for this project, if one separates out Brazil, Argentina, China, and the former Soviet Union in analyzing the developing world's export potential in agriculture, the rest of the developing world has demonstrated little capacity to compete in major agricultural markets. While this is not necessarily the result of liberalization, Wise shows that besides these few (but important) countries or regions, from 1995-2005 developing countries gained little in the way of global market share.

Among the highest value agricultural commodities, developing countries as a group have lost market share in cotton and rice. The former Soviet Union accounts for 10 of the 13 percentage points in market share gained by the developing world in wheat, and 16 of 20 percentage points in barley. In sugar, Brazil captured 11 of the 14 percentage points gained by developing countries between 1995 and 2005. China (10) and Argentina (6) gained most of developed world's 24 points in lost market share in maize. In oilseeds, the commodity group in which developing countries have made the strongest gains, Brazil gained 19 percentage points and Argentina four (see table).

Despite repeated assertions that developing countries hold a comparative advantage in agriculture, it is the rich countries that dominate world agriculture markets.

Oilseeds: Top 10 Exporting Countries by Export Share, 2005

	2005 share	Change, 1995-2005
USA	32.0%	-19.1
Brazil	25.7%	19.0
Argentina	11.6%	4.0
Canada	6.8%	-4.0
China	3.2%	-1.1
France	2.9%	-2.0
Paraguay	2.9%	1.3
Netherlands	2.1%	0.1
Australia	1.4%	0.7
India	1.4%	0.2

Source: UN Statistics Division, Comtrade

These are important shifts in global competitiveness, but they do not suggest that the remaining developing countries are in a good position to compete internationally in the most heavily traded agricultural commodities. Now, they have to compete not only with industrialized Northern agriculture but with industrialized Southern agricultural powers.

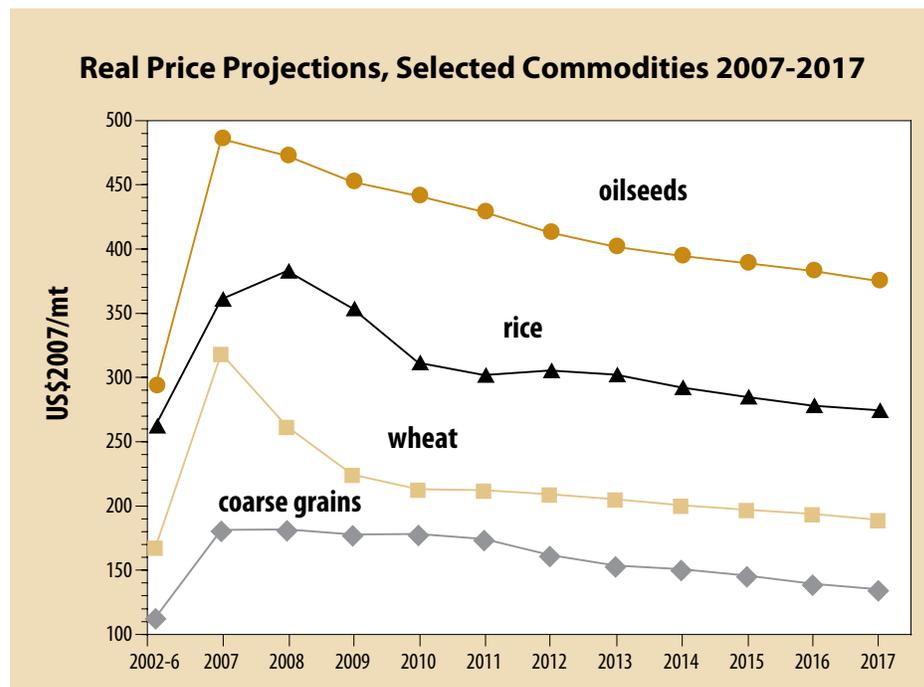
Limited Impacts of Northern Liberalization

Another reason the promise of export agriculture is overstated for most countries is that the impacts of reforms to Northern agricultural policies are quite limited. As economic models of the Doha Round have shown, the kinds of reforms on the table in WTO negotiations are projected to generate limited production and price impacts for most commodities. One study showed price increases of more than 3.1% for only three commodities following a Doha agreement: cotton, rice, and oilseeds.¹¹ Thus developing countries are unlikely to gain higher prices for their agricultural products as a result of direct or indirect tariff or subsidy reductions in Northern countries.

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Where liberalization does raise world prices, smallholders are unlikely to benefit. The World Bank's new report, in fact, notes that the transmission of world prices to local producers is "very imperfect," such that any benefits from higher world prices due to Northern policy reform will be limited. "So the overall effect of trade policy reform on farm incomes of staple food producers in the poorer developing countries is likely to be small."¹²

Why would rich country agricultural reforms generate so little impact? As Wise shows, agricultural markets adjust to liberalization measures, be they tariff reductions in the European Union and Japan or reduced farm subsidies in the United States. Where supported production in the global North declines in response to reforms, production in other parts of the world increases. New land is brought into production. Yields continue to rise with technological



Source: OECD-FAO Agricultural Outlook 2008-2017; 2007 prices are preliminary; prices deflated with annual MUV of 2%.

advancement. And in a matter of a few short years the production and price impacts of liberalization have vanished, leaving prices back where they were before the reforms.

This should not be surprising. According to the FAO, from 1960-2002 real agricultural commodity prices declined 2% per year, an overall drop of more than half. This is the story of industrial agriculture. Demand grows mainly with population growth; the demand for food is inelastic because the human stomach is inelastic, as U.S. agricultural economist Willard Cochrane famously said.¹³ Production grows faster, as technology raises yields and more land is brought into industrial production. Supply outstrips demand, driving prices down in a long-term trend that has shown brief interruptions but few hints of structural change.

Even the current agricultural commodity boom, driven by new demand for bio-fuels and rising demand for animal protein, fails to promise sustained high prices for farmers. Most projections show production again catching up to demand, albeit after several years rather than just one or two. Vast new tracts of land are being brought into production, more than enough to meet and exceed the increases in demand. Even for a crop like soybeans, in high demand both for animal feed and agro-fuels, real prices are projected to resume their downward trend after 2007. As Figure 1 shows, the same is true for other important staple crops. While real prices mostly stay above the low levels that predominated from 2002-2006, by 2017 prices are again close to those levels for most crops.¹⁴

New Sources of Demand, New Challenges

There is no question, though, that the recent surge in agricultural prices poses new challenges and opportunities. For farmers (if not society as a whole), the current upswing has two things going for it. First, it is driven by shifts in demand from vegetable to animal-based protein in growing parts of the world, especially China. It takes much less corn and soybeans to feed humans than it does to feed animals that can then be fed to humans. So demand increases faster than population growth for commodities used as animal feed. This is particularly true in the early stages of development, when the shift to meat-consumption is the most dramatic.

Second, demand for agricultural-based fuels is adding a large new source of demand to international markets. This too takes agriculture beyond the limited demands of the inelastic human stomach by adding a non-food-based source of demand for what the land can produce.

Both new sources of demand present daunting challenges. Unless there are spectacular and unexpected increases in agricultural productivity, agriculture probably cannot sustain a world in which the majority of the population is deriving the bulk of its protein from meat. One cost of this transition is rising prices for staple foods, as we have seen recently. This is unsustainable even in the short run for the world's poor, who will not view the long-run probability of lower crop prices with calm.

Similarly, most bio-fuels offer limited net environmental benefits while putting added pressure on land. With further industrialization of global agriculture, based on petroleum-based inputs, the world faces the prospect of farm prices increasingly tied to oil prices. Add to this panorama the land-use implications of climate change, which already threatens to render parts of southern Brazil unsuitable for grain production.

It is beyond the scope of this report to address the complex issues of climate change, bio-fuels, and the so-called "food vs. fuel debate." But there is no doubt these factors will be decisive in the evolution of agricultural commodities markets.

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The Perils of Liberalization for Family Farmers

If the promises of agricultural trade liberalization are exaggerated, the perils are very real. As case after case has shown, in a global market in which rich countries or a select few advanced developing countries dominate, liberalization leads to a flood of cheap imports, which undermine domestic producers previously protected by tariffs or other government supports. Employment in expanding sectors of the domestic economy generally does not grow fast enough to absorb new entrants into the workforce, never mind those displaced from traditional agriculture. The result is often a decline in livelihoods for the rural poor, a decrease in food security, and a rise in food dependency for the nation as a whole. Poor urban consumers may benefit from lower food prices, but it is doubtful that there is a net benefit to the nation from this trade-off.

Of course, displacing small-scale producers from the land is precisely the goal of this economic model. Smallholders are seen as hopelessly inefficient, and trade liberalization is intended to force inefficient farmers into more productive work. Often lost in the market calculations of efficiency, though, are the market failures that plague the sector. Smallholders are being asked to compete with low-priced imports from countries that not only subsidize their agricultural sectors but also offer adequate infrastructure, functioning credit markets, strong histories of research in applicable technologies, and the agricultural extension services to help farmers raise productivity. Smallholders in most of Latin America share few of these benefits. As U.N. researchers have noted, “free market rules in a context of highly concentrated property and imperfect and missing markets [lead] to the marginalization of otherwise perfectly viable enterprises”.¹⁵

Trade liberalization globalizes not only markets, it globalizes market failure. Bringing smallholders in Latin America into unmediated competition with subsidized and supported industrialized farm products from the global North places millions of productive farmers—and food-producers—at risk.

Nowhere is this clearer than in Mexico, where the government opted for a more rapid agricultural liberalization process than NAFTA called for. We begin with an examination of Mexico, which perhaps best highlights the limited promise and real perils of agricultural trade liberalization.



Mexico: NAFTA's Legacy

Mexico was perhaps the Latin American country best situated to demonstrate the efficacy of the free-trade model for agriculture. Taking effect in 1994, the North American Free Trade Agreement (NAFTA) gave Mexico privileged access to the world's largest consumer market. Because it predated by several years other trade agreements and liberalization measures, NAFTA gave Mexico an advantageous trade position relative to other developing countries. Not only that, NAFTA opened the U.S. market to Mexican goods at the beginning of what would turn out to be the longest economic expansion in U.S. history. With demand growing in the United States for fresh fruits and vegetables, Mexico seemed poised to realize the benefits of its comparative advantages in agriculture.

Fourteen years later, as the last aspects of NAFTA's agricultural agreement are fully phased in, the balance for Mexican agriculture is far from positive. As Fernando Rello documents in his thorough case study, NAFTA and the broader neoliberal economic project of which it was a part, deepened longstanding structural inequalities in the Mexican countryside, aggravated balance of payments problems, and failed to stimulate the kinds of productivity improvements promised by NAFTA's proponents.

Liberalization succeeded in speeding the growth of Mexico's already-developed export agricultural sector. By 2004, Mexico had doubled the value of its tomato exports, to nearly \$1 billion a year. Other fruits and vegetables—cucumbers, avocados, lemons and limes, watermelon—saw dramatic export growth with NAFTA. There was no question NAFTA stimulated agricultural trade.

The export boom may have seemed a success for NAFTA's proponents, but its development impact was problematic:

NAFTA deepened longstanding structural inequalities in the Mexican countryside, aggravated balance of payments problems, and failed to stimulate productivity improvements.

- ▶ Mexico's agricultural imports from the United States—mainly corn and other staples—grew faster than its exports, leaving the country with a negative trade balance for the sector.
- ▶ Employment in export agriculture did not make up for losses in other agricultural sectors. From 1995-2003, Mexico lost half a million agricultural workers, about 5% of contracted agricultural labor.
- ▶ Agricultural wages fell dramatically following the 1994-5 peso crisis, and by 2003 they still had not reached their pre-crisis levels in real terms.
- ▶ Mexico's export sector became increasingly dependent on the multinational firms that dominate global agro-food chains, leaving successful Mexican producers with expanded production and productivity but decreasing power within those integrated production-distribution chains.

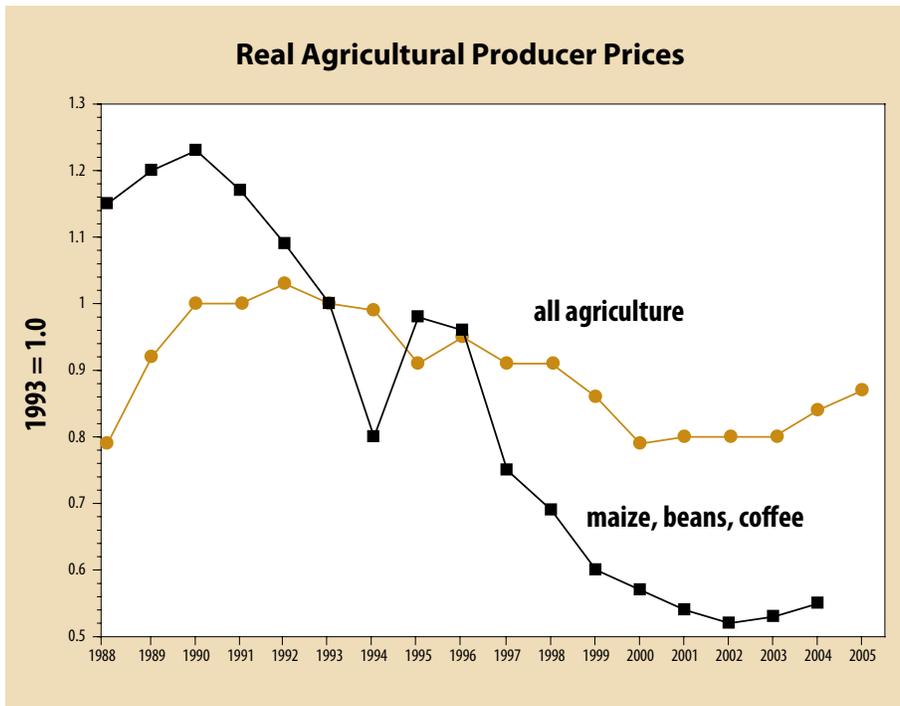
If the export boom was problematic, the import surge was devastating. Like most Latin American countries, Mexico retains a significant population of smallholders. In Mexico's case, according to Rello, this is partly the result of the land reform that came with the Mexican revolution. In 1990, nearly 2.5 million producers farmed small or medium-sized plots on the country's *ejidos* or *comunidades*. Nearly half were subsistence producers, but the rest were integrated into the market in one form or another, most growing and selling corn, beans, and other staples in local and regional markets, as well as some export crops such as coffee.

Many of these producers were devastated by NAFTA's liberalization. Though the treaty included a 14-year transition period to full liberalization, based on a tariff-rate-quota system, the Mexican government, citing domestic shortages and fears of inflation, did not enforce most quotas or collect above-quota tariffs. Large quantities of U.S. corn and other staple crops, much of it heavily subsidized, flooded the Mexican market. Prices fell dramatically. From 1993-2004, agricultural producer prices fell more than 15% overall in real terms. For three key smallholder crops—corn, beans, and coffee—prices fell nearly 50% (see graph). Rural poverty increased. NAFTA's poor track record in creating formal-sector employment left families with little choice but migration, to seasonal labor in the export sector, to the tourist resorts such as Cancún, to informal employment in the cities, or to the United States.

Rello concludes that NAFTA and the broader neoliberal model of which it was a part have failed to overcome the dualism in Mexican agriculture or transform the sector. His recommendations include:

- 1 **It is critical to increase the productivity of the smallholder sector.** The Mexican government must play a strong role in leading that transformation since the sector is plagued with market failures—lack of credit, market concentration, poor diffusion of technology, lack of private investment in research and development.
- 2 **There is great potential to increase smallholder productivity, both by high-input packages (agro-chemicals, improved seeds, etc.) and low-input approaches.** But the state must lead the way, and must shift its focus from income support to productive investment.
- 3 **Mexico needs a more coherent trade strategy that supports smallholders.** According to Rello, the already-serious problems of the small-farm sector were aggravated by NAFTA. Removing corn and beans from NAFTA will not by itself solve the problems of the sector. That said, trade policy in Mexico does need to protect smallholders from import surges that can undermine development strategies.

Mexico: Real Prices for Peasant Crops Fell Faster than Prices for Other Crops



NAFTA failed to generate adequate employment for those displaced from traditional agriculture.

- 4 **Mexico needs broad-based rural development focused on neglected regions.** Development strategies need to go beyond specific agricultural crops or sectors.
- 5 **Corn and bean farmers need a set of differentiated and integrated policies designed to stimulate a very heterogeneous sector.** Policies need to address the food security needs of subsistence farmers as well as the commercial potential of those more integrated into the market.

As Rello points out, NAFTA's agricultural liberalization failed in Mexico on its own terms. While certain agro-export sectors benefited, NAFTA worsened Mexico's trade balance with imports outpacing exports, it failed to generate adequate employment for those displaced from traditional agriculture, and it failed to stimulate greater efficiency and productivity in Mexican agriculture.



Associated Press

The Promise: The South American Soy Boom

Soybeans attained global significance shortly after World War II, when the United States made soybean exports part of its negotiated assistance packages in the reconstruction of Europe. This allowed the United States to establish a dominant position for this emerging commodity and to rule global soybean markets for two decades as the crop's sole exporter. As late as 1970 the United States accounted for two-thirds of the world's 44 million tons of soybeans. Canada was the second largest producer, followed by a number of European countries.

Production grew slowly until the 1980s, then took off when the crop became an essential protein source in animal feed. By 2001, global soybean production had quadrupled its 1970 levels, and by 2007 global production was up to 230 million tons, more than five times 1970 production.

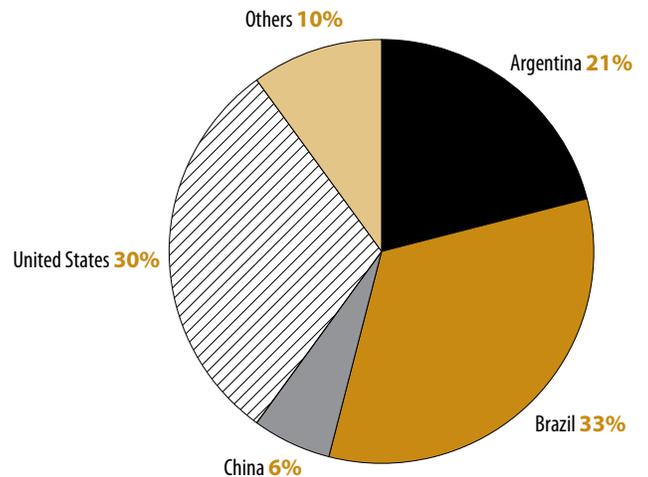
Commercial soybean production in South America began to be more aggressively promoted in the late 1960s, when weather-related losses cut U.S. soybean production, while also affecting the supply of animal feeds derived from fish and other marine life. At first, only Brazil and Argentina entered the market, but a decade later Paraguay, Uruguay, and Bolivia expanded soybean cultivation too, although always at much lower levels than the two dominant regional producers.

The South American soy boom began in earnest in the early 1990s, to the point that Brazil and Argentina began to take market share from the United States and Canada. By 2007, the United States accounted for 37% of global production, with Brazil at 24% and Argentina at 20%. All projections show Brazil soon surpassing the United States as the world's largest producer, with South America dominating this growing market. The region already displaced the United States as the largest exporter, with Brazil the largest raw soybean exporter and Argentina the world's largest exporter of soybean oil. The region is also threatening to surpass the United States in the predominance of transgenic soybeans. Argentina produces virtually 100% transgenic soy, while other producers in the region now grow at least half their soy from transgenic seeds.

The region's competitive advantages in soybean production derive from a variety of factors, most importantly abundant and undervalued land. Brazil alone has 80 million unused hectares of agricultural land, according to the government. In addition to cheap land, these Mercosur soybean producers have good water supplies, low labor costs, and advanced research capacities to adapt the crop to tropical and sub-tropical climates. They also have limited environmental regulations on land use.

As our case studies of Brazil, Argentina, and Bolivia show, these competitive advantages, then, are somewhat overstated since they depend on the unsustainable exploitation of the region's rich natural resources. While the opportunities offered by the soy boom are undeniable, the region's governments need to recognize the environmental issues, and need to harness soy production in ways that will maximize the long-term development potential of the sector .

Projected World Soy Production, 2015/16



Brazil: Winning Markets, Losing Development?

The three principal products from Brazil's soy sector—soybeans, meal, and oil—together represent the country's most important agricultural exports. In 2006 they amounted to 8% of total exports. More than 22 million hectares were planted in soybeans in 2005, an expanse equal to all the land planted in rice, beans, corn, and wheat, Brazil's other four important grains.

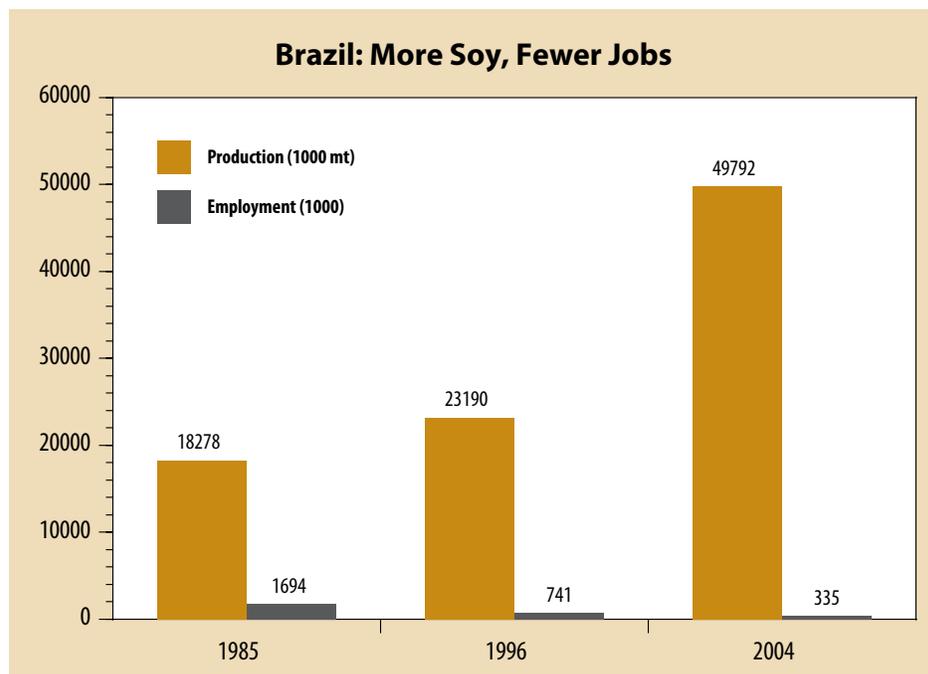
By 2003-4, Brazil was the world's largest soy exporter, and the second largest producer after the United States. Projections have Brazil consolidating its dominant position in global export markets and surpassing the United States as the world's leading producer.

How did Brazil achieve this leadership position?

As Sergio Schlesinger explains in his detailed case study, soybeans were first grown in Brazil in the early twentieth century. For most of the first half of the century, soybeans were produced on family farms for domestic use. Commercial production began in the 1960s and by the 1970s had gained a share of the world market—16% in 1976. After a brief decline in the 1980s, production grew dramatically.

In the 1990s, Brazil adopted a broad set of commercial and financial liberalization measures. In the new policy environment, soybean production took off, growing at an annual rate of 4.8%. The expansion was overwhelmingly on large properties, which have now come to dominate Brazil's soy sector. Agricultural trade liberalization did spur growth for these large farms.

Agribusiness has been the driver of this growth, with the capital-intensive, technologically advanced farming of vast tracts of land. (For example, in Brazil's largest soy-producing municipality 85% of farms are larger than 1,000 hectares.) At the same time, multinational agro-food firms and equipment companies began to displace the state as the principal financiers of soy production, creating new forms of dependency in the production chain. This intense level of corporate concentration extended throughout the sector, leaving producers dependent on multinationals rather than the state. In 2005, just four firms accounted for 59% of soy processing and 61% of soy-based exports.



The dominance of capital-intensive, mechanized agricultural production has had severe negative impacts on rural employment.

As Schlesinger points out, the dominance of capital-intensive, mechanized production has had severe negative impacts on rural employment. Between 1985 and 2004, a period in which production nearly tripled, from 18 to 50 million tons per year, employment in the sector fell 80%, from 1.7 million workers to just 335,000.¹⁶ Conditions worsened even for those who found jobs. The federal government considers Brazil's most productive soy municipality to have working conditions tantamount to slavery.

Transgenic soy, which began to be cultivated illegally in Brazil in 1998 and was officially authorized in 2003, now represents 60% of total Brazilian production. The cultivation of transgenic soy has resulted in an ever greater reduction in the number of workers employed, generating an exodus of farmers. The control of the sector by a small number of large companies—which control the supply of seeds and other inputs—has allowed for a systematic increase in the value of royalties charged, as well as those for the respective herbicides. The consumption of these herbicides by hectare has also been continuously increasing, as a result of the resistance developed by the plants that they are designed to combat.

Finally, Schlesinger points out that large firms and growers are still receiving state support, in spite of the ending of most forms of direct government support. The state has renegotiated and pardoned debts, at an annual cost of over 1.3 billion dollars. Governments also grant large tax exemptions to attract investment and promote exports. The state is also investing heavily in infrastructure projects to serve the sector.

Schlesinger recommends that public resources be redirected from soy agribusiness interests, with its export orientation, to Brazil's ongoing land reform, to family farms, and to promote small and medium-sized food-based enterprises. The goal is to prioritize meeting the food needs of the Brazilian market, while allowing the soy expansion to continue. The author calls for the expansion of family-based soybean farming based not on high-technology monoculture but on diversified farming systems that produce high-value soybeans for niche markets. Government-funded research should support such diversity.

Brazil's dominant position in global soybean markets makes it the envy of the developing world. The soy boom will not last forever, and the current government would be wise to take

advantage of its advantageous position to promote agriculture and related industries that leave the country's people, not just its largest farmers and their agribusiness partners, better off. Key to that strategy is more careful management of the expansion of soybeans (and other crops in high demand, such as sugar) so as not to permanently damage the country's most valuable asset—its land.

Argentina: Betting on Transgenic Soy

Argentina is South America's second largest soy producer and third in the world. Its soy industry is a model in many respects. Average yields are among the highest in the world, as is its labor productivity. The country also maintains the practice of crop rotation between wheat and soybeans, reducing soil depletion. But the most distinctive feature of Argentine soy is its wholesale adoption of transgenic soybeans. Since adopting the technology in 1996, conventional soybeans were quickly replaced, to the point that Argentina now grows virtually 100% transgenic soybeans. This makes Argentina the world's second largest producer of transgenic soy after the United States.

Still, despite the widespread enthusiasm, inside the country and internationally, for Argentina's success in transgenic soybeans, researcher Miguel Teubal exposes some of its limitations in his paper for this project.

First, Teubal points out that the transgenic soy boom has pushed Argentina further toward specializing in the production and export of a small number of primary products. Argentina for most of the last century was one of the world's most important producers of meat and cereal grains. The country was nearly self-sufficient in food production for its population. Now, the country has lost that self-reliance as it has moved decisively toward monoculture in soybeans.

Argentina's standard double-harvest of wheat and soy in rotation has replaced cattle ranching and other important food crops, with an effect on food security. Nearly half of all land in cereals and oilseeds (46%) was in soybeans in 2002-3, up dramatically from 9% in 1980-1. While soy production increased 20 million metric tons from 1997-2004, production of fruits and cotton declined, as did the production of rice by 500,000 mt.

Second, Teubal notes that the widespread adoption of transgenic soybeans has greatly increased the country's dependence on foreign multinational firms. Most worrisome is the dominance of Monsanto and Novartis, which provide not only the seeds but also the technological package, particularly herbicides and other agro-chemicals. Sales of glyphosate, the main chemical ingredient in the most common herbicide, increased by \$350 million from 2000-2003, a remarkable 33%. Monsanto has also been aggressively pursuing legal actions to defend its intellectual property claims for royalties on Argentine seeds, which were widely traded without royalties. Teubal says that producers since 1999 have had to pay \$2.00 in "extended royalties" for each 50 kg. bag of seeds the farmers save for future use. Transnational firms also control the processing and marketing, and even have extensive connections with the financial sector to form "planting pools."

Third, the expansion of the Argentine soy model has caused the near-disappearance of family farming and small-scale farming, as well as most agricultural wage workers. According to the census, from 1988-2002 the country lost 87,000 farms, 86% of them smaller than 200 hectares. Teubal argues that Argentina's agricultural sector became one of "farms without farmers."

The soy boom has come with a high environmental cost. In addition to the unresolved questions about the long-term risks of transgenic seeds on such a massive scale, soy monoculture has impacted fragile, subtropical lands as well as flora and fauna throughout the

The expansion of the Argentine soy model has caused the near-disappearance of family farming and small-scale farming, as well as most agricultural wage workers.

soy regions. Soy has also contributed to extensive deforestation, particularly in the northern provinces, compromising these areas' rich biodiversity.

Finally, Teubal warns of two worrisome signs for the future. The growing demand for biofuels, from the United States among other countries, is increasing demand for soybeans. So is China's ever-growing demand for soy products. This may benefit big Argentine soy producers, but it will also increase the economic incentives for Argentina to pursue its dangerous dependence on a monoculture of transgenic soybeans.

Bolivia: Peripheral Development in Soybeans

Bolivia is the fourth largest producer of soybeans in South America, though with just under one million hectares in soy, the country is far behind the region's two behemoths. While Bolivia's soy exports are just a small share of world trade, the crop is important to the national economy. In 2000, soy accounted for one-quarter of Bolivia's exports. (The share is lower now with the recent run-up in mineral prices.)

According to the study by Mamerto Pérez, Bolivians started growing soybeans in the 1950s. Production grew steadily then took off in the early 1990s. The area planted expanded nearly six-fold from 1985-1995, with exports rising from \$20 million to \$143 million.

Like other countries in the region, Bolivia's soy boom coincided with trade liberalization. Pérez points out, however, that the Bolivian case has several unique features.

First, even though the country's soy is grown primarily by large landowners, a significant number of smallholders grow soy, a number that is growing with the crisis in traditional agriculture in Bolivia. Smallholders (those with less than 50 ha.) grow 10% of Bolivian soybeans, while they represent 78% of the country's soybean producers. Smallholders are generally paid the lowest prices for their crops, to the benefit of middlemen and, indirectly, larger producers.

Second, Bolivian soybean production is dominated by foreigners, especially Brazilians, who have bought up large tracts of Bolivian farmland. About 36% of the land in soybeans in Bolivia in 2001-2 was owned by foreigners, 29% by just 250 Brazilian growers. If one adds to this the soy land held by naturalized Japanese farmers and Mennonite farmers from a variety of countries, the foreign-controlled share rises to 63%. The processing and marketing sectors are also dominated by foreign investors. These include some large multinational firms which finance production in exchange for the crop, as in Brazil.

A third difference from Brazil and Argentina is that the sector is an important source of jobs, with industry sources suggesting that with 43 jobs per 1,000 hectares the sector employs some ten times the number of workers per thousand hectares of soy as Argentina.

Finally, Bolivia's soy industry is significant less because of free-trade policies than because of regional trade agreements. Bolivia exports almost exclusively to the other countries in the Andean Community of Nations, the trade community formed in the early 1990s by Bolivia, Peru, Colombia, and Ecuador, with Venezuela and Chile as important associate members. Bolivia is the ACN's only major soy producer, and 75% of its exports go to ACN countries. To a significant degree, foreign investment in Bolivian soy is a means for Brazilian and other producers to get access to this protected regional market, since non-ACN producers have to pay a 20% tariff.

This raises questions for the future of Bolivian soy. To the extent regional ACN protections are reduced, Bolivia may lose its main export markets. The current and pending trade agreements

between the United States and other ACN members also represent a threat to Bolivia's export markets, since the United States is a major exporter.

Bolivia's limited competitiveness is due in part to the country's land-locked status, which makes transport more expensive, even after significant government investments in infrastructure. The government has also subsidized fuels used by the soy sector and, in times of crisis, bailed out producers facing debt problems. The state has also offered significant tax breaks to the soy sector.

As in Brazil and Argentina, Bolivia's soy expansion has come with a high environmental cost. With land relatively cheap and environmental regulation and enforcement limited, large producers follow an extractive model, expanding onto new lands by cutting primary forests, exhausting the soil with the monoculture of soybeans, then moving on. Bolivia has seen the constant reduction in its primary forests in the state of Santa Cruz, the main soy-producing state. Some producers have also begun to use transgenic seeds, despite concerns about the legality of such crops. There are no government figures on the prevalence of transgenic soybeans, but unofficial sources estimate that over half of Bolivia's soy land is planted in transgenics, and the share is growing.

Pérez suggests that Bolivia and other producers in the region need to harmonize their regulations for the sector and improve cooperation in the management of the soy boom to avoid negative social and environmental impacts. For example, governments could develop and enforce similar environmental regulations to control extractive practices, or limit the practice of offering tax breaks to attract investment.

The soy boom can be harnessed to become a vehicle for development, but only with strong government control of this expanding market. This should include the negotiation of regional performance requirements for foreign investors.

Conclusions: The Limited Promise of Export Agriculture

These three cases show the limitations of the South American soybean model. While liberalization and agro-export orientation have benefited some producers, the strategy is based on undervalued natural resources, and foreign enterprises dominate all parts of the industry except the farming—financing, inputs, processing, marketing, and export operations. Despite dynamic growth in productivity and output, the sector has seen a significant drop in employment.

In this context, the governments of the producing countries have in different ways adopted policies to support the industrial soybean sector. In Argentina we see the widespread legalization and adoption of transgenic soybeans. In Brazil, soy-producing states have offered tax breaks to stimulate production. In Bolivia, the state has subsidized energy costs. Public funds in Brazil and Argentina have also gone to research that has benefited the private sector.

So even though all the soy-producing countries in the region (including Paraguay and Uruguay) generally follow the same production model, and belong to the same regional integration association (Mercosur), each government is following policies to compete with its neighbors. Paradoxically, the region that is coming to dominate global production and exports of soybeans and its various products is engaged more in competition within the region than in coordination of national policies in order to benefit the region as a whole.

In this context it is important to recognize the relationship of Bolivia and the other smaller producers with their more dominant producers, Brazil and Argentina. Transnational firms do not get directly involved in production in any of these countries, but in the smaller soy-producing countries Argentine and Brazilian producers have come to dominate the soy industries. This leaves Bolivia, Paraguay, and Uruguay in a peripheral relationship, even in relation to other developing countries.

As in Brazil and Argentina, Bolivia's soy expansion has come with a high environmental cost.



Associated Press

The Perils for Small-Scale Farmers

Small-scale agricultural production in Latin America shows wide diversity in its structure, organization, and even the size of farmers' plots. From peasant producers operating as individuals or in organized associations to the larger family farms of Brazil and Argentina, this sector of producers who farm their own land remains important. When we examine the effects of liberalization on small producers in this project we are looking at all these categories of producers.

Smallholders in Latin American have struggled in an era of liberalized trade and neoliberal government policies.

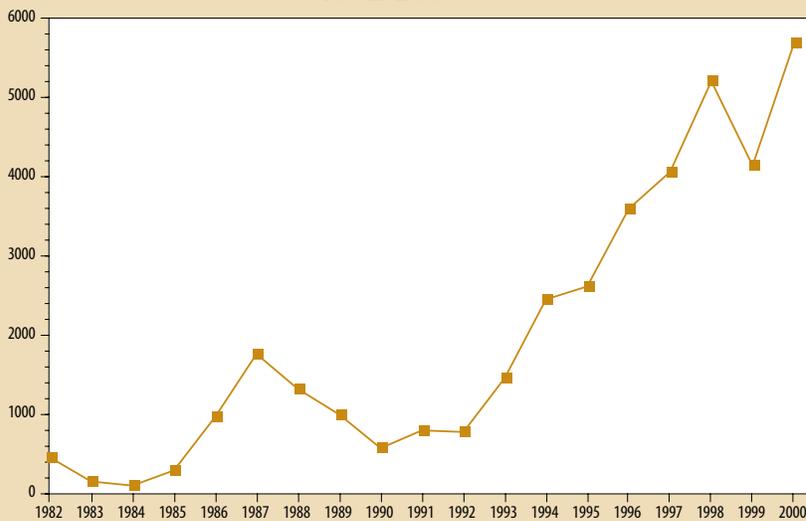
We have chosen several paradigmatic examples to study, in addition to the case study already mentioned on Mexico. Together, they present the diversity of small-scale production in the region. On the one hand, Bolivia offers an economy with a large peasant sector, based in indigenous regions of the altiplano. Brazil, by contrast, presents a family-farm sector that, while relatively small in Brazil's dynamic agriculture of today, has traditionally been strong, even in modernized production such as soybeans. Finally, El Salvador highlights the dynamics of a small economy with a large smallholder sector buffeted over the years by war, structural adjustment, and now the Dominican Republic-Central American Free Trade Agreement.

Bolivia: The Peasant Economy Under Threat

Bolivia liberalized its economy in the mid-1980s, and the effects have not been well documented. Mamerto Pérez and Yara Pérez begin to fill this void with their study of the impacts on the Andean region, still the home of most of Bolivia's smallholders.

The Bolivian government deepened the initial reforms in the 1990s when the country signed several regional agreements, including the Tariff Union of the Andean Community of Nations (CAN) and trade agreements with Chile and Mercosur. These left practically all smallholder agricultural products without protection.

Bolivian Imports of Traditional Andean Farm Products*, 1982-2000



*Includes potatoes, maize, beans, tomatoes, onions, apples, peaches, grapes.

In Bolivia, farm incomes lost 50% of their purchasing power between 1985 and 1998.

Since 1989, imports of agricultural goods that compete directly with smallholder products increased steadily with the lifting of trade barriers, in contrast to the projections offered at the time of liberalization. This was true for the potato, Bolivia’s emblematic food crop from the altiplano. Imports of all such goods grew from \$1 million in 1989 to \$6 million in 1999. Since 1980, corn imports grew from zero to 138,000 metric tons in 2005, while pea imports went from zero to 758,000 mt.

As the imports entered, prices fell. Between 1985 and 1989 there was a 30% drop in real prices for tradable smallholder products. Only in 1999 did prices recover to 1985 levels. Farmers could not make up in productivity what they were losing in price and markets, largely because of their limited access to technology, scarce capital for investment, and natural limits imposed by their harsh growing conditions (high altitude, low temperatures, limited rainfall, etc.). As a result, real agricultural incomes fell for the majority of smallholders. The authors estimate that farm incomes lost 50% of their purchasing power between 1985 and 1998. (There has been only slight recovery since 2002.)

The worst crisis for the sector came in the early 1990s, which saw sharp increases in migration from rural areas to the cities and internationally. While this was consistent with the predicted displacement of the least “efficient” producers, it by no means signified the depopulation of the countryside. In fact the rate of decline of the rural population was lower between 1992 and 2001 than it had been between 1976 and 1992.

A minority of producers managed to improve their productivity through new technologies or switched from their traditional crops to more profitable agricultural activities. But the majority of rural smallholders had few options and continued in traditional production, supplementing their incomes with off-farm work and temporary migration. These are Bolivia’s current rural poor.

It is not surprising that smallholder production in the Andean region stagnated. For traditional Andean crops—potatoes, maize, beans, tomatoes, onions, apples, and grapes—production remained at or below the region’s 1985 production levels of 1.2 million metric tons. Among

these crops, the decline in potato production was particularly dramatic, with per capita production falling by more than a third.

Pérez and Pérez conclude that liberalization policies contributed to the dismantling of the productive apparatus in the traditional areas of the Andean region of Bolivia and that continuing such policies can make this decline irreversible, with dire consequences for thousands of peasant households as well as for the country's food security. They recommend that the government adopt policies to strengthen agricultural production in the region. It will be important to support this effort by negotiating (and renegotiating) trade agreements to allow the government to protect key peasant crops, along the lines of the Special Products designation now under discussion in the World Trade Organization negotiations. Many Andean crops qualify as critical to livelihoods, food security, and rural development.

Up to now, the government of Evo Morales has made few substantive changes to Bolivia's trade policies. His National Development Plan identifies the peasant sector as strategic for development, but thus far there has been little new funding to support this priority. His administration has also made subsidized credit available to stimulate peasant production.

Under pressure
from rising imports,
Brazilian farmers saw
average annual real
price declines of 4.7%
during the decade, a
45% overall drop in
real prices.

Brazil: Family Farmers in the Land of Agribusiness

Brazil may be best known for its dynamic and internationally competitive export sector, but the country still has a large number of family farms. Nelson Delgado points out in his study for this project that data on the sector are limited, but he presents a compelling picture of the pressures family-based farms have faced, using data mostly on the decade of the 1990s.

Agricultural liberalization in Brazil began in 1988 and deepened into the early 1990s. Agricultural imports nearly tripled between 1990 and 1996, with dramatic increases in the importation of wheat, rice, and powdered milk. At the same time, public expenditures on the sector fell dramatically, with an 80% drop in spending from 1988-1992 and an 85% reduction in government grain storage.

Using census data from the mid-1990s and a detailed study by Melo,¹⁷ Delgado shows that 85% of Brazil's farms qualified as family farms. In Brazil, this means they are not larger than 100 hectares, they are run by the farmer, and hired labor does not exceed the family's labor in agricultural operations. In the mid-1990s, this group employed 13.8 million people, covered 30.5% of agricultural land, and produced 38% of the value of Brazil's agricultural production. Family farms primarily produced for the domestic market, although some of the more modernized farmers were involved in some of the export sectors such as soybeans.

Relying on a detailed study of the 1990s, Delgado presents the impacts of liberalization on the sector by examining the trends for 12 products most commonly produced by Brazil's family farmers. These include most staple food crops, such as beans, yucca, tomatoes, and onions, small-scale livestock such as milk, hogs, and chickens, and some cash crops, such as tobacco. Under pressure from rising imports, Brazilian farmers saw average annual declines in the real prices for these products of 4.7% during the decade, a 45% overall drop in real prices. This was far less than the 2.6% annual decline in prices for large-scale agricultural enterprises.

Despite falling prices, production of most crops did not decline. This was due to very high productivity increases in the family farm sector, particularly in the latter half of the 1990s. Yields rose at an average annual rate of 5.8% for the decade, higher than for large-scale farms, possibly due to more widespread availability of agro-chemicals. Still, the family-farm sector

experienced an overall decline in the area cultivated during the decade, as prices lowered the value of their production despite efficiency gains.

There is clearly a need for more detailed study of the sector given its continued importance to the livelihoods of the rural population and to the national economy. Delgado notes that much of the sector's future depends on its relationship to agribusiness interests and the influence they can have on government policies. In international trade negotiations, for example, agribusiness advocates further market access while family farmers place priority on continued protection of the domestic market. In the WTO, family farmers remain interested in using the commitment to "special and differentiated treatment" to allow Brazil to designate "special products" for exemption from tariff cuts based on their importance to rural development, food security, and rural livelihoods.

Delgado concludes that Brazil needs to reconsider its agricultural development model, which promotes commodity exports—particularly soybeans and maize—and monoculture farming, even for family farmers. This model is leading to the introduction of transgenic crops, the destruction of the environment, and rising debt levels for family farmers using high-cost inputs. The Brazilian government's current emphasis on the expansion of its bio-energy crops is particularly worrisome for Brazil's family farm sector.

El Salvador: The Rise in Food Dependence

In 2006, most Central American countries and the Dominican Republic ratified the Central American Free Trade Agreement (CAFTA) with the United States. Countries in the region have also begun negotiating a trade agreement with the European Union. Studies have predicted disastrous impacts on small farmers from both agreements.

These agreements do not begin the process of liberalization for Central American countries. As Rene Rivera explains in his detailed analysis for this project, in the context of armed conflicts in several countries in the region, the IMF and World Bank imposed widespread structural adjustment programs that reduced the government role in the economy and opened the economies to imports. From 1985 to 2000, average tariffs for the five Central American nations fell from 45% to 7%, leaving the region with the lowest tariffs in Latin America.

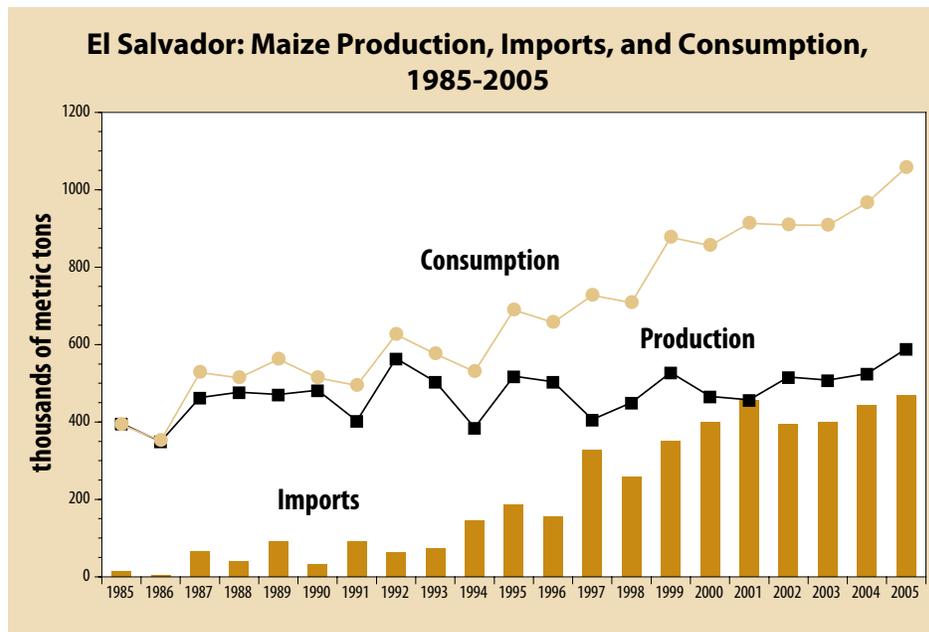
The effects on traditional agricultural sectors were severe. Rivera focuses on El Salvador, where adjustment measures followed on the heels of the civil war in the early 1990s. The countryside had already experienced significant restructuring due to the war, which was waged largely in rural areas, and to the government's counterinsurgency land reform program, which distributed some land to smallholders. El Salvador also dollarized its currency, reducing the government's policy options.

Smallholders are still important in Salvadoran agriculture. Roughly half a million families try to live on agriculture. Half of them do not own land and either rent or hire out their labor. Of those with land, about half produce basic grains while the rest have more diversified production, including fruits, vegetables, coffee, and livestock.

Rivera looks in detail at what has happened to farmers of maize, dry beans, and coffee. Liberalization opened the door to maize imports, with tariffs on white maize falling from 30% in 1989 to just 1% in 1996. (They subsequently went back up to 15%.) From 1990-2005, El Salvador saw the import share of domestic maize consumption rise from 6% to 44% (see graph). Small increases in productivity barely made up for a steady decline in the land planted

From 1985-2000, average tariffs for the five Central American nations fell from 45% to 7%, leaving the region with the lowest tariffs in Latin America.

For El Salvador, CAFTA will mean continued decline unless the government adopts new policies to help stimulate peasant production.



to maize after 1995. Yellow corn imports affected domestic sorghum production, competing in the market for animal feed. Sorghum production fell about 25% from 1994-2005.

Maize—Rising imports, Stagnant Production

The case of dry beans was similar, with imports growing from 8% of consumption in 1990 to 31% in 2005, with imports from Honduras and Nicaragua growing significantly after 2000. Tariffs on red beans were cut from 40% to 15%.

El Salvador’s coffee production, a key peasant cash crop, fell as well, not from import pressures but from the prolonged price crisis affecting coffee markets. Of the country’s 23,000 coffee farming families, 84% are smallholders, and they produce 23% of the country’s coffee. They saw production decline as international prices fell and costs rose. Credit became more expensive with structural adjustment, with interest rates jumping from 8% to 20% in the early 1990s. Producers also lost market share with the devaluation of the local currency with dollarization. The costs of imported inputs also rose significantly.

Rivera notes that there has been some growth in markets for fruits, vegetables, honey and other non-traditional agricultural products. Production of such crops grew slightly, from 16% of national agricultural production in 1990 to 19% in 2005. But many peasant farmers found it difficult to enter these markets, often because their land was not well suited to the crops or because export companies controlled access to the markets.

What will CAFTA mean for El Salvador? Continued decline, according to Rivera, unless the government adopts new policies to help stimulate peasant production. For maize and sorghum producers, he recommends closer management of import levels, which might necessitate a review of the terms of CAFTA. He also calls for improved research and technological support for native seed varieties, to improve productivity, and higher levels of organization for peasant producers to allow them to better negotiate prices with buyers. Improved access to affordable credit is also needed. The government will also have to closely monitor the impacts the growing demand for biofuels is having on local producers.

Conclusions and Recommendations

It is not surprising that smallholders in Latin America have struggled in an era of liberalized trade and neoliberal government policies. The prevailing economic model has seen small-scale farmers as inefficient, incapable of achieving economies of scale, unlikely to raise yields to levels that can compete in the global economy. The case studies in this project confirm the symptoms—smallholders in El Salvador, Mexico, Bolivia and Brazil have struggled to compete with liberalized imports as state support has been simultaneously withdrawn. Our studies, however, do not support the diagnosis that they are inherently inefficient.

Our research argues that with adequate support, access to credit, improved infrastructure, and technology, small farmers can increase their yields. In some cases, they can be as efficient, if not more efficient, than bigger producers.

The case studies presented here also highlight the limitations of an economic model that equates efficiency with yield. The underlying assumption is that there are more efficient uses for the land and the labor involved in smallholder agriculture. Yet precious little land farmed by smallholders has proven suitable for conversion to higher-value exports. The tomatoes and strawberries going to the U.S. market under NAFTA come from vast tracts of irrigated lands, not rain-fed hillside plots traditionally planted in maize. Over generations, farmers' bred that native maize to grow on those hillsides, and it is difficult to argue, with rural poverty rates stubbornly high, that there is a more efficient use for that land.

Nor is it clear that there is a more efficient use for smallholders' labor, at least not within the countries from which it is being displaced. As our case studies show, where export agriculture has expanded, it has been relatively capital intensive, offering limited employment opportunities. Not surprisingly, in conditions of chronic unemployment and underemployment the new jobs as agricultural workers often pay even less than they did before the expansion. Outside of agriculture, neoliberal economic policies offer a disappointing track record in generating formal-sector employment, in either manufacturing or services. Thus, there is limited evidence that the economy as presently structured offers a more efficient use of smallholders' labor than growing food on their own lands.

In this context, the World Bank's World Development Report 2008 "Agriculture for Development" represents a welcome shift in perspective, with its emphasis on the development potential of agriculture in general and smallholders in particular. The findings of this report are entirely consistent with these goals.

We begin with six overarching conclusions, then follow with recommendations related to trade liberalization and the soybean boom. We conclude with some observations about U.S. policies and those of the World Bank and other international financial institutions. Our broad conclusions, with an emphasis on smallholder agriculture:

- 1 Agriculture and rural development remain important economically.
- 2 Export agriculture, through expanded access to global markets, is not alone a reliable engine for broad-based development that benefits the rural population.
- 3 Smallholder agriculture can be made more productive and can serve as the catalyst for integrated rural development and poverty reduction.

With adequate support, access to credit, improved infrastructure, and better technology, small farmers can increase their yields, and can be as efficient as larger producers.

- 4 The state needs to play an active role that emphasizes productivity and breaks from the prevailing focus on anti-poverty programs.
- 5 It is critical to recognize, enhance, and reward smallholders' role as stewards of the rural environment.
- 6 Smallholders need government support and organization to ensure they benefit from new demand in niche markets and from the growing supermarket sector.

On Agricultural Trade Liberalization

The studies in our project demonstrate that sustained rural development and poverty reduction in Latin American societies with strong agricultural sectors cannot be achieved under a framework of indiscriminate liberalization. Unfortunately, if not surprisingly, the recent World Bank report continues to call for deeper and faster liberalization in agriculture. While recognizing that liberalization creates winners and losers, the Bank reverts to calls to compensate the losers (i.e. through anti-poverty programs) while speeding liberalization. Market access, to developed and developing country markets, remains the goal, with exports continuing to serve as the supposed engine for development. Smallholders who produce staple crops that compete with imports should shift to more efficient activities and enjoy the benefits of cheaper food.

Our findings do not support this approach. Our case studies suggest that the most important policy reform needed for Latin America now is a much more selective and careful management of international trade, particularly in agriculture.

As our studies of the South American soy sector and of Mexico show, while there is great potential to expand agricultural exports, the development impacts of such export growth can be vastly overstated. Even for these undeniable “winners” in global agricultural trade, the benefits are narrowly concentrated. Employment growth is limited and wages often fall. The extractive agricultural model exhausts the land and destroys important natural assets. What's more, it is difficult to argue that the shift back toward primary production for semi-industrialized countries such as Brazil represents a step up the development ladder.

Perhaps most important, when the export boom is over, when global supply—from new land being brought under cultivation and from increasing yields—catches up to and surpasses global demand and prices fall back below their pre-boom levels, these supposed winners from agricultural liberalization may find that they have little to show for their trade success other than vast tracts of exhausted land with little profitable use.

We find that for most developing countries with a significant smallholder agricultural sector, regulating exports and imports is more important than expanding exports. If smallholder agriculture is to serve as a catalyst for broad-based rural development, it will need the economic space to find that dynamism, and the state will need the time, resources, and policy space to help it play that role. Surely, that policy space must include the right to regulate imports that compete with sensitive agricultural sectors as well as those at the center of the government's rural development strategy. Similarly, regulating and controlling exports can allow governments to ensure that domestic needs, particularly for food, are being met before exporters can profit from international trade. With commodity prices so high, we now see activist governments step in to regulate exports in the public interest, either through export taxes or outright bans.

Sustained rural development and poverty reduction cannot be achieved in Latin American societies with strong agricultural sectors under a framework of indiscriminate liberalization.

Our principal recommendations on trade liberalization are:

- 1 **Developing countries must retain the right to regulate imports**—This is particularly important in the areas of food security, rural livelihoods, and rural development, criteria for crops eligible for possible designation as special products exempt from some tariff reductions under Doha. Only an expansive definition of special products, in line with developing country proposals, can promote rural development. It must also include strong special safeguard mechanisms to control import surges.
- 2 **Developing countries should be wary of agreements that limit their ability to support national industrial development**—Given the limited development impacts of export agriculture, developing countries should not trade away the right to implement industrial policies that protect nascent or critical industrial sectors in order to gain greater market access for primary products. In the long run, this is a poor trade, the current commodity boom notwithstanding. Governments need to retain the right to protect and promote economic activities that advance just and sustainable economic development.
- 3 **Winning reductions in tariff escalation for processed goods may be more important than winning greater market access for primary agricultural commodities**—If one of the keys to rural development is building agriculture-based clusters and rural industries, it is important for developing countries to gain market access for processed products. Reducing the prevailing high tariffs on value-added goods is a development-friendly liberalization measure.
- 4 **Given the dominance of transnational firms in the agro-food sector, it is important to develop meaningful anti-trust enforcement and promote performance requirements across countries to limit firms' undue market power, enhance development impacts, and ensure that transnational firms, their subsidiaries, and their contractors comply with high labor, social, and environmental standards**—Commodities markets and retail chains are both highly concentrated, distorting global markets.
- 5 **Farmers' rights to seeds must be protected against restrictive intellectual property regimes, such as those in recent U.S. trade agreements**—CAFTA, for example, includes intellectual property rules that can limit farmers' ability to use and exchange seeds, one of the foundations of traditional agriculture.

On Export Agriculture and the South American Soy Boom

As noted earlier, there are gains to be won with the development of export agriculture. Our studies of three South American soy sectors document the unique competitive position in which Brazil, Argentina, and, to a lesser extent, Paraguay and Bolivia find themselves. They are the lowest cost producers of an agricultural commodity that has shown growing global demand. With strong demand-growth projected to continue, they have the capacity to expand production to meet that demand, in the process capturing both higher prices and higher global market share.

In the long run, of course, primary production of agricultural commodities will not pay the rising costs of increasingly sophisticated imported inputs. Half of Brazil's value-added in manufacturing derives from resource-intensive sectors. Under such conditions, the country may even have difficulty maintaining a positive trade balance. In the long run, governments need to reduce resource-intensive and energy-intensive exports, which leave lasting environmental damage while harming the poorest sectors of society. In the meantime, attention should be paid to international efforts to address commodities issues at a global scale by promoting and funding diversification away from commodity dependence, reducing volatility in commodities markets, and addressing the problem of corporate concentration.¹⁸

In the short and medium term, though, the soy boom represents an undeniable economic opportunity for all four countries. Still, the boom will not last forever. The challenge is to take advantage of the current market opportunity in a way that promotes sustainable, equitable economic development and puts these countries in a stronger economic position when the boom inevitably ends. The current extractive approach to the land needs to be replaced with a more forward-looking strategy that emphasizes diversification and structural transformation of these commodity-driven economies. Key to that process are measures to stimulate the domestic market and raise levels of domestic investment. In South America as a whole in 2006, a remarkable 2.7% of GDP was repatriated in profits to transnational firms outside the region, up from 0.6% in the 1990s.¹⁹

The three case studies done for this project suggest there is much room for improvement, both in government policies and in regional coordination of the soy sector.

Research and development should be redirected away from industrial monoculture farming and toward sustainable production on smaller farms.

- 1 **The current model for monoculture soybean exploitation is unsustainable, leaving a lasting ecological footprint**—Expansion is based on an extractive model. Just as unregulated mining can exhaust finite resources for short-term private gain, so too can large-scale industrial agriculture. Greater government regulation is needed to promote better soil-management practices and protect these countries' rich natural assets. Mandated crop rotations with maize, wheat, or other food crops, for example, could limit extractive practices and enhance food security.
- 2 **The precautionary principle should guide the adoption of new agricultural technologies.** The legalization and broad use of transgenic seeds should be reconsidered in light of the various risks they present. Among them, it is worth highlighting: environmental degradation, challenges to biodiversity, reduction in employment, and control of production by transnational oligopolies. There is also a market risk. Thus far, resistance to the acceptance of transgenic crops has affected soybean markets little because the products are not destined for direct human consumption. That could change, causing tremendous disruption to countries such as Argentina that are so fully invested in transgenic monoculture.
- 3 **There is untapped potential for regional integration, not just of infrastructure but of standards and policies**—There is an opportunity to harmonize standards upwards, led by government policy.
- 4 **Given the prominence of transnational capital in the sector, there is potential to improve sustainability by enacting performance requirements**—If applied on a regional level, they would be legal and would not produce capital flight. There is also a great need for increased anti-trust enforcement, one of the weaknesses in all three countries studied.
- 5 **Smallholders can still play an important role in soybeans with appropriate government support**—Small producers still exist in soy, especially in Bolivia. They can play an important role, particularly in a transition to a more sustainable agricultural model. Government support is needed to shift soybean cultivation from large plantations to small and medium-sized farms, integrating them into broader programs of land reform and crop diversification. Support is also needed to help regions affected by climate change.
- 6 **To stimulate more broad-based rural development, Brazil and Bolivia need to develop value-added processing of soybeans**—Argentina processes oil and meal from its soybeans, capturing greater value from its agricultural production. The emphasis should be placed on stimulating value-added production, such as meats, while encouraging more ecologically sustainable production.
- 7 **Research and development should be redirected away from industrial monoculture farming and toward sustainable production on smaller farms.** Given the market failures in this area, public investment will be needed.

Conclusion: The Promise and the Peril

Taken together, these case studies offer a wealth of diverse but related experiences about promoting agriculture for development. As our studies of export agriculture have shown, the promise of agro-exports is often overstated. As our analyses of the impacts of trade liberalization on smallholders hardly needed to show, the perils of unregulated exports and imports for small-scale farmers are very real.

Agriculture-led development is incompatible with the wholesale liberalization of agricultural trade. Recent work by the FAO documents that liberalization is not always the economically optimal policy, that different levels of import protection are appropriate at different levels of development.²⁰ In fact, recent research suggests that many countries could benefit from “food first” policies that give priority to domestic food production and internal market development over the pursuit of export markets.²¹ Such policies seem even more urgent in light of the current food crises in developing countries.

As the more reasoned sections of WDR2008 suggest, policies to promote agriculture for development will not be one-size-fits-all. Policies—including trade policies—must be tailored to individual countries’ economic and social conditions. National governments will need to maintain the policy space to pursue strategies appropriate to their agro-export opportunities as well as their smallholders’ capacities and food security needs.

Fortunately, as the limitations of the neoliberal development model have become well documented, national governments and international institutions are actively evaluating the policies that can promote agriculture-led growth. It is clear that the prevailing orthodoxy, in Washington and in the international financial institutions, has failed to promote sustainable and broad-based development. Trade liberalization, a focus on agro-export crops, and decreased support for smallholder agriculture are policies that have been embraced by Latin American governments themselves, and the policy recommendations contained in this report call on Latin American governments to re-evaluate and to change those policies.

These policies have also been actively encouraged by international financial institutions, such as the World Bank. Over the past two decades, the Bank, along with the Inter-American Development Bank, and the International Monetary Fund, have linked loans needed by Latin America governments in order to address balance of payment problems or to finance development, to governments’ adoption of neo-liberal policies. Our studies suggest that these neo-liberal policies have failed to generate broad-based growth, and that the banks, which have begun to focus once again on smallholder agriculture, need to take the next step and reconsider their commitment to neo-liberal policies.

The United States too has played a role in promoting these policies, which run counter to the long-run interests of the United States precisely because they have failed to promote equitable development. Development can bring political stability to U.S. hemispheric neighbors, reduce the push factors that contribute to uncontrolled immigration, and offer alternatives to poor rural farmers who might otherwise turn to cultivation of illegal narcotics. Broad-based growth can also stimulate demand for U.S. goods and services.

The United States has a number of policy levers at its disposal if it chooses to make this shift in policy. Pending trade agreements (including those for Colombia and Panama) could be re-evaluated and re-negotiated. While current trade agreements, such as NAFTA, are unlikely to be officially re-opened, some of the most troublesome aspects could be re-evaluated as part of a broader dialogue with Latin American partners. Recent efforts in the U.S. Congress to establish

Many countries could benefit from “food first” policies that give priority to domestic food production and internal market development over the pursuit of export markets.

clear criteria for trade agreements are welcome, as are proposals by some candidates for the U.S. presidency to evaluate NAFTA and other trade agreements. Under a new administration committed to pro-development trade policies, U.S. Executive Directors at the World Bank, IDB, and IMF should be charged by the Treasury Department, which oversees them, to press the institutions' boards to re-consider the policies that the banks advocate and often link to loans. USAID, which has often provided technical assistance and grants to help Latin American governments make neo-liberal policy changes, should shift away from this kind of assistance and provide more aid directed toward strengthening rural economies, infrastructure, etc.

These and other measures could help ensure that U.S. policy supports smallholder agriculture and rural development as central strategies in fighting poverty and generating development in Latin America. The European Union, which has been aggressively pursuing trade agreements with Latin American countries, should also reconsider its policies. Hopefully our project can contribute to a new approach to Latin America, one that recognizes the limited promise and the real perils of agricultural trade liberalization for developing countries.

Endnotes

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The Working Group on Development and Environment in the Americas

This report is the product of a three-year international collaboration. The report is based on detailed studies by members of the Working Group on Development and Environment in the Americas, which was coordinated by Mamerto Pérez (Bolivia), Sergio Schlesinger (Brazil), and Timothy A. Wise (U.S.). Other members included Nelson Delgado (Brazil), Fernando Rello (Mexico), Rene Rivera (El Salvador), and Miguel Teubal (Argentina). The collaborators' more detailed studies are available on the Working Group web page (<http://ase.tufts.edu/gdae/WGOverview.htm>) and in a forthcoming book to be published in Spanish.

This is the third such report of its kind from the Working Group Project. Founded in 2004, the Working Groups brings together researchers from several countries in the Americas who have carried out empirical studies of the social and environmental impacts of economic liberalization to contribute to the ongoing policy debates on national economic development strategies and international trade. The project also brings more prominently into U.S. policy debates the rich body of research carried out by Latin American experts. Hosted by Tufts University's Global Development and Environment Institute, the Working Group Project has four initiatives: the environment, agriculture, foreign investment, and intellectual property regimes.

The first, "Globalization and the Environment: Lessons from the Americas," was published in 2004. The policy report was later published in Spanish by RIDES in Chile, which also published the group's full papers in book form under the title, *Globalización y Medio Ambiente: Lecciones desde las Américas*. A second report, "Foreign Investment and Sustainable Development: Lessons from the Americas," was published in May 2008. A third project, on intellectual property regimes and their impacts on development in Latin America, is in the planning stages.

All of these reports, and the background papers they are drawn from, are available in PDF form at: <http://ase.tufts.edu/gdae/wgoverview.htm>.

