While primary agriculture accounts for only about 6 percent of total GDP in Latin America, agricultural and food exports combined represent well over 20 percent of the region’s total merchandise exports.¹ This share of exports is considerably higher in some countries, such as Nicaragua (85 percent), Argentina (48 percent), Ecuador (43 percent), Chile (34 percent), and Brazil (32 percent). Table 1 shows that the region as a whole has a strong “revealed comparative advantage” in trade of agricultural and food products. Even in Mexico, which does not have a revealed comparative advantage in agricultural trade, exports as a share of agricultural GDP has roughly doubled (to over 30 percent) since the early 1990s, largely due to the huge growth in high-value fruit and vegetable exports under NAFTA. The current situation of high prices and short supplies in agricultural markets presents an excellent opportunity for the Latin America and Caribbean region to help keep the world fed while reaping significant economic benefits.

Because trade clearly has the potential to play a major role in increasing agricultural growth and reducing rural poverty in Latin America and the Caribbean (LCR), creating external and domestic policy environments that support agricultural export is important to both sectoral and national interests. In this light, the 2008 World Development Report (WDR) examines the potential gains from global trade liberalization (and how the Doha Round negotiations could best reach a “pro-development” outcome) as well as domestic policies and investments to better integrate the agricultural sector into the global economy. While negotiations in the WTO broke down in July 2008, the parties have declared their intentions to continue to try to conclude an agreement, and as World Bank president Zoellick has noted, “There was a good package of results left on the table. It would be a mistake for the world economy and harmful for developing countries not to retrieve it.” In the mean time, and especially in light of the food price crisis, it is more critical than ever that countries follow sensible unilateral trade policies to ensure that the trade system does not backslide while waiting for the conclusion of the Doha Round.

Table 1: Index of Comparative Advantage in Agriculture and Processed Food (World = 1.0)

<table>
<thead>
<tr>
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</thead>
<tbody>
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<td>4.9</td>
<td>5.4</td>
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<tr>
<td>Brazil</td>
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<td>3.2</td>
<td>3.6</td>
<td></td>
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<tr>
<td>Chile</td>
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<td>3.4</td>
<td>3.9</td>
<td></td>
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<tr>
<td>Colombia</td>
<td>3.6</td>
<td>3.2</td>
<td>2.6</td>
<td></td>
</tr>
<tr>
<td>Dominican Republic</td>
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<td>1.2</td>
<td>4.7</td>
<td></td>
</tr>
<tr>
<td>Ecuador</td>
<td>3.2</td>
<td>5.5</td>
<td>4.9</td>
<td></td>
</tr>
<tr>
<td>Mexico</td>
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<td>0.7</td>
<td>0.6</td>
<td></td>
</tr>
<tr>
<td>Nicaragua</td>
<td>6.1</td>
<td>7.4</td>
<td>9.5</td>
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<tr>
<td>Other countries</td>
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<td>n.a.</td>
<td></td>
</tr>
<tr>
<td>Caribbean</td>
<td>0.9</td>
<td>1.5</td>
<td>n.a.</td>
<td></td>
</tr>
<tr>
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<td>5.4</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>South America</td>
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<td>1.6</td>
<td>1.6</td>
<td></td>
</tr>
<tr>
<td>All Latin America</td>
<td>2.1</td>
<td>2.2</td>
<td>2.2</td>
<td></td>
</tr>
</tbody>
</table>

Note: The index of comparative advantage is the share of agriculture and processed food in the merchandise exports of a country (or region) relative to the share of world agriculture and processed food in world merchandise exports. Index value greater than 1 indicates comparative advantage in production of agricultural and food products. Source: Sandri, Valenzuela, and Anderson (2007).

**Multilateral Trade Policy Reform**

Using global computable general equilibrium models, the World Development Report 2008 finds that the costs of current agricultural trade policies are high for both industrialized and developing countries, so reform offers significant potential welfare gains. It is estimated that by 2015 the annual global costs of current trade tariffs and subsidies would be between $100 billion and $300 billion, about two-thirds of which would be from agricultural policies. This far exceeds the share of agriculture and processed food in global GDP (6 percent) or international trade (9 percent). In both agricultural and nonagricultural trade it is estimated that half the tariff and subsidy costs to developing countries are caused by their own policies and half by the policies of industrialized countries. In the agriculture sector, the policies of the industrialized countries currently cost developing countries about $17 billion per year—roughly five times the amount of total overseas development assistance to agriculture. It is estimated that full trade liberalization would increase international commodity prices by an average of 5.5 percent for primary agricultural products and 1.3 percent for processed foods (Figure 1). Developing countries would increase their rate of annual growth in agricultural output from 3.9 percent to 4.2 percent and their share of world agricultural exports from 54 percent to 65 percent. This is an 8 percent increase in the growth rate and a 4.3 percent increase in agricultural output over 10 years. The gains would be greatest in Latin America and the Caribbean, where the annual rate of growth in agricultural output would increase by 2 percentage points (Figure 2), due mainly to the region’s strong comparative advantage in these products (Table 1).

![Figure 1. Estimated Real International Commodity Price Increases following Complete Trade Liberalization (%)](image)

- Cotton: 20.8%
- Oilseeds: 15.1%
- Dairy products: 11.9%
- Coarse grains: 7.0%
- Wheat: 5.0%
- Processed meat: 4.3%
- Rice: 4.2%
- Fruit and vegetables: 2.8%
- Other crops: 2.6%
- Sugar: 2.5%
- Livestock: 2.5%
- Vegetable oil and fats: 1.9%

**Figure 2. Impact of Global Trade Reform on Agricultural Output Growth**

Represents the difference between 2005 baseline without liberalization and the estimated average annual agricultural growth rate in 2015 under full liberalization

![Figure 2](image)

Source: Derived from Anderson, Martin, and van der Mensbrugghe (2006).

Abbreviations: SSA—Sub-Saharan Africa, SA—South Asia, EAP—East Asia and Pacific, MENA—Middle East and North Africa, ECA—Europe and Central Asia, LAC—Latin America and the Caribbean.

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1 Anderson and Martin 2005; Bouët 2006a; Polaski 2006.
2 The $17 billion cost is a conversion to 2005 GDP and prices of the static share of the $26 billion in 2015 estimated by Anderson, Martin, and van der Mensbrugghe (2006).
3 Anderson, Martin, and van der Mensbrugghe 2006.
While full liberalization is an unlikely outcome of the negotiations, the Doha Round is an opportunity to realize at least part of the potential gains of full trade liberalization. While all three “pillars” of the agricultural negotiations are important—market access (mainly tariffs), export subsidies, and domestic subsidies—tariff reduction is expected to have the greatest impact on global welfare and poverty reduction. A “development friendly” Doha agreement would (a) significantly reduce tariff bindings, (b) lower the industrialized countries’ subsidies for the commodities that matter most for developing countries, such as cotton, and (c) tightly limit exemptions under “sensitive products” for industrialized countries and “special products” for developing countries.

Multilateral trade reform is also possible in a regional or bilateral context. Since trade between developing countries is a growing share of their overall trade, improving the access of developing countries to one another’s markets through South–South regional agreements can have a significant effect. On average, countries in Latin America are already involved in seven regional trade agreements, which often lower not only tariffs but also barriers associated with regulations, standards, and border crossings. However, trade agreements with low barriers between members but high barriers for nonmembers may increase trade within the group but actually reduce the members’ total trade. A recent World Bank review of regional agreements concluded that the ones most likely to increase national incomes are those with low external “most-favored nation” tariffs, few sectoral and product exemptions, nonrestrictive rule-of-origin tests, measures to facilitate trade, rules on investment and intellectual property that are appropriate to the development context, and implementation schedules put into effect on time.

Domestic Agricultural Trade Policies

A large-scale study in the late 1980s concluded that agricultural policies in most developing countries discriminated heavily against the agriculture sector. The study found that without government trade and pricing policies (including those carried out via state-owned marketing enterprises) farmers would have received higher prices. More importantly, in many countries this anti-agricultural bias was magnified by policies that either granted high protection to other sectors or lowered returns to exports in general (such fixing exchange rates to overvalue currency).

A recent study revisited this earlier work and found that current policies in much of the developing world have greatly improved incentives for agricultural production. Figure 3 shows that the average “relative rate of assistance” for agriculture in Latin America—that is, the extent to which government interventions improve or deteriorate returns in agricultural production relative to other activities—improved from negative 40 percent in the 1970s to almost zero in 2000–04. These averages obscure important variations between countries, but the overall conclusion, that policies have improved a great deal, is correct.

An appropriate trade policy for countries in Latin America, which generally have relatively low trade barriers, is to continue pursuing greater integration into world markets. But to take full advantage of these policies and also reduce the burden on those who lose from liberalization, a host of “behind the border” measures must be addressed. It is important to examine the distinct demographic and geographic characteristics of adversely affected groups and analyze the magnitude of their potential losses and gains. Transitional support might include grants to facilitate production shifts (as was done in Turkey) or cash transfers and social safety nets (as in Mexico).

Figure 3: Relative Rates of Assistance for Asia, Africa, and Latin America (1965 to 2004)

Five-year weighted averages with value of production at undistorted prices as weights. RRAs for China (for 1965-81) have been extrapolated back assuming they were the same as the average for years 1982-99. Source: Chapters 2-9 of this volume and Chapter 1 of Anderson (2008).

1 Anderson, Martin, and Valenzuela 2006; Hertel and Keeney 2005.
2 World Bank 2004b.
6 The LCR countries included in this study were Argentina, Brazil, Chile, Colombia, Dominican Republic, Ecuador, Mexico, and Nicaragua.
7 World Bank 2004a.
However, cash transfers to compensate for losses are insufficient to induce a supply response. Targeted investments, such as infrastructure investments and extension services, are needed to improve productivity or education and to facilitate transition.\textsuperscript{12} In particular, the supply response of smallholders depends on rural infrastructure (irrigation, roads, transport, power, and telecommunications), markets, finance, research, and extension.\textsuperscript{13}

Public spending has often been diverted away from these much needed long-term investments and into various types of agricultural input subsidies, price supports, or other direct payments. One recent study in LCR showed that shifting public spending away from these subsidies and into true public goods can increase rural incomes, lower poverty rates, and reduce environmental impacts.\textsuperscript{14} It found that a reallocation of just 10\% of the subsidy expenditures to supplying public goods instead may increase per capita agriculture income by about 5\%.

One increasingly important area of public expenditure in LCR is support for coping with sanitary and phytosanitary (SPS) standards in trade, as discussed in Chapter 5 of the WDR. In recent years many countries have tightened their SPS standards, expanded their coverage, or introduced rules to ensure fair competition, reduce information costs to consumers (organic foods), and promote competition based on quality.\textsuperscript{15} In parallel, the private sector has expanded its own standards and supplier protocols.\textsuperscript{16} There is concern that developing countries—and especially smaller countries, enterprises, and farmers—will be excluded from export markets because they LCRk the administrative and technical capacity to comply with SPS standards or cannot afford the costs of compliance. Anecdotal cases and research lend some support for this “standards as barriers” perspective.\textsuperscript{17} But an alternative view highlights the opportunities in the evolving standards environment and the scope for capitalizing on them.\textsuperscript{18} Common standards across international markets can reduce transaction costs. Standards can also provide incentives for modernizing supply chains and help clarify the proper risk management functions of government. Greater attention to good practices may improve export competitive-ness and generate spillover benefits for domestic consumers. Although there will inevitably be winners and losers, this view suggests that enhanced capacity to comply with stricter standards can provide sustainability and profitability in the long term.

Suppliers rarely face all-or-nothing choices when making changes and investments to conform to emerging standards and they need to weigh the costs and advantages for different products and market segments.\textsuperscript{19} In some cases, there may be better opportunities to serve domestic, regional, or industrial markets that impose less stringent standards or allow more time to implement them. In any case, addressing the export challenges of SPS standards requires joint public and private efforts.

\textbf{References}
Adapted from the World Development Report 2008 Agriculture for Development with additional information from regional studies and anecdotal evidences.

\textbf{About the Authors}
John Nash is the Lead Economist with the World Bank’s Latin America and the Caribbean Region Agricultural Sustainable Development Department.

\textbf{The 2008 World Development Report (WDR) “Agriculture for Development” characterizes agriculture as vital development tool for achieving the Millennium Development Goal that calls for halving by 2015 the share of people suffering from extreme poverty and hunger. The report provides guidance to governments and the international community on designing and implementing agriculture-for-development agendas that can make a difference in the lives of hundreds of millions of rural poor. This brief is part of a series prepared by LCSAR that summarizes and interprets the principal messages of the WDR 2008 and discusses region-specific implications for Latin America and the Caribbean (LCR). The series comprises the following topics: (i) Agricultural Innovations in Science and Technology, (ii) Value Chain Development and Integration of Small Farmers, (iii) Agricultural Trade Policy, (iv) Land Administration and Access, and (v) Territorial Development.}