Poverty and the WTO:
Impacts of the Doha Development Agenda

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ODI, London, 24th January 2006
Motivation

• World Bank’s mission
• Key goal of the Doha Development Agenda
• Trade reform is also one of the avenues for reaching the Millennium Development Goals
• Largest trade distortions remain in agriculture, which is also critical for the poor:
  – Poorest households are heavily dependent on agr
  – Poor spend large share of income on food
Methodology

• Establish new “policy benchmark”:
  – Post-UR, including ATC quota elimination
  – Post-WTO accession for China and others
  – Post-EU enlargement

• Define a DDA scenario

• Assess implications for world markets

• Communicate them to national models

• Implications for poverty in individual countries: 12 case studies in Latin America, Africa and Asia

• Near term vs. long run impacts

• Supplement with 2 global studies
An Ambitious DDA Scenario based on July Framework Agreement

• Agriculture (Anderson and Martin, chp. 2):
  – Extensive binding overhang:
  – For developed: marginal rates (45, 70 and 75%) change at 10, 90% tariffs
  – For developing: marg rates (35, 40, 50, 60%) change at 20, 60, 120% tariffs
  – LDCs: no cuts
  – domestic support: tiered formula: cuts of 60% and 75% developed, 40% developing, 0% LDC
  – Export subsidies abolished

• NAMA: 50% cuts in tariffs (33% developing, 0% LDC)
Variants on the DDA Scenario

Doha-All: fully reciprocal cuts in tariffs by developing and least developed countries

• Special and sensitive products:
  – 2% of tariff lines permitted (4% developing)
  – Chosen based on tariff/trade flow combination
  – Subjected to minimal (15%) tariff cuts
  – Erodes two-thirds of the cuts in developed country agriculture protection
Assessing Global Impacts

• GTAP data base, supplemented by CEPII/ITC protection data base: MAcMap
  – Comprehensive treatment of preferences
  – Estimation of a.v. equivalent of specific tariffs

• Build up tariff cuts from HS-6 level:
  – Bound vs. applied rates

• Assess impact in modified version of GTAP model: GTAP-AGR (Keeney and Hertel)
  – Comparative static analysis
Impact Of Trade Reforms On World Exports

(percentage change in volume)
Impact Of Trade Reforms On World Prices

(percentage change in average price)
Country Case Studies

Price Transmission:
• Mexico: Nicita
• Mozambique: Arndt

Disaggregated HHld Incidence:
• Brazil: Ferreira-Filho and Horridge
• Zambia: Balat and Porto
• China: Kuiper and van Tongeren

Labor Markets:
• Brazil: Bussolo et al.
• China: Zhai and Hertel
• Indonesia: Robilliard and Robinson

Tax Replacement:
• Cameroon: Emini et al.
• Philippines: Cororaton et al.

Trade, Growth and Poverty:
• Russia: Tarr et al.
• Bangladesh: Annabi et al.
• van der Mensbrugghe et al. (global)

Cross-country Comparison:
• Ivanic (15 countries)
Incomplete price transmission yielded unequal gains from Mexican trade reforms in 1990’s

Doha impacts on poorest rural households in Mexico also influenced by price transmission (Nicita, 2005)

\[ \text{Doha} = \text{Doha and Productivity enhancement} \]
\[ \text{Doha++} = \text{Doha+ and enhanced price transmission} \]
Marketing institutions can be key: Cotton reforms in Zambia

• Prior to 1994, cotton sector was heavily regulated
• In 1994, marketing board privatized; entry of firms:
  – Initially, market segmented geographically
  – Introduced out-grower schemes: have gradually been refined to get credit, seed and fertilizer into the hands of poor farmers
  – As a consequence, cotton has become a more important source of income for the poor
• Balat and Porto examine the potential for gains as a result of higher world prices for cotton
Av. share of income derived from cotton has increased for poor in wake of marketing reforms

Figure 1
Dynamics of Cotton Income Shares

Solid line = 1998, Dashed line = 1996
Complementary reforms can greatly enhance poverty gains

- Consider subsistence households with same characteristics as cotton growers; consider gains from switching to cotton as opportunities improve
- Switch boosts income 20%
- Higher cotton prices add 1%
- Improved extension services boost productivity by 8.4%
- Total income gains to household could be nearly 30%
- Also improved LR nutritional status of children

Real income gains to farm households in Zambia
Brazil: Methodology

• National CGE model with a regional “top-down” extension:
  – Tradeable output shared out across regions
  – But some services commodities are “local”
  – Regional employment adjusts to activity level

• Micro-simulation model linked to CGE

• Two models communicate in a consistent way, such that both results agree with each other
Dimensions of analysis

• **CGE Model:**
  – 42 industries (1 agriculture)
  – 52 commodities (11 agricultural)
  – Agricultural output mix varies by region;
  – 10 wage classes (skill levels)
  – 27 Brazilian regions
  – 10 household types grouped by total income;

• **Micro-simulation model:**
  – 263,938 adult members of 112,055 hhlds
  – Households diversified in earners and employment – account for impact of job gains/losses on poverty
  – Data sources: Brazilian Agr Census, PNAD and POF
Poverty Headcount by Region in Brazil

<table>
<thead>
<tr>
<th>State</th>
<th>Proportion below poverty line</th>
</tr>
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<tbody>
<tr>
<td>Amazonas</td>
<td>0.14 (minimum)</td>
</tr>
<tr>
<td>Para</td>
<td>0.24</td>
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<tr>
<td>MtGrosso</td>
<td>0.35 (median)</td>
</tr>
<tr>
<td>Maranhao</td>
<td>0.51</td>
</tr>
<tr>
<td>Ceara</td>
<td>0.58 (maximum)</td>
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<tr>
<td>RioJaneiro</td>
<td></td>
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</tbody>
</table>
Broad Impacts of Doha for Brazil

• Decline in manufacturing employment
• Increased agr employment: 253,000 new jobs filled by
  – 56,000 workers coming from contracting non-agr sectors
  – 197,000 workers coming from unemployment: 78% drawn from lowest 3 income classes
• Increased returns to farm land
% income changes by employment and income decile

<table>
<thead>
<tr>
<th>Status/10th</th>
<th>First</th>
<th>Fifth</th>
<th>Tenth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-agric.</td>
<td>8.52</td>
<td>0.13</td>
<td>-0.38</td>
</tr>
<tr>
<td>Permanent</td>
<td>1.22</td>
<td>0.04</td>
<td>0.49</td>
</tr>
<tr>
<td>Temporary</td>
<td>1.37</td>
<td>0.52</td>
<td>0.28</td>
</tr>
<tr>
<td>Self-employ</td>
<td>1.68</td>
<td>0.55</td>
<td>0.12</td>
</tr>
<tr>
<td>Employer</td>
<td>5.59</td>
<td>5.88</td>
<td>8.25</td>
</tr>
</tbody>
</table>
Doha boosts employment in relatively poorer regions thereby reducing poverty

National headcnt falls by 236,000

(Proportion of pop.)

(Percentage change in headcount)
Brazil: Summary

• Doha reforms benefit Brazilian agriculture and landowners, but:
  – Agr also employs largest share of low skill workers
  – This employment is relatively more important to poor households and poor regions
  – Bulk of new jobs in agr go to previously unemployed

• So national poverty falls, as does inequality
Country Studies Summary: Near Term Poverty Impacts of Trade Reform are Mixed
Long Term Poverty Impacts of Trade Reform are Uniformly Favorable:
(these studies add impact on investment)

Note: LR results only available for 3 countries and world
Insights from Cross-Country Analysis

• Maros Ivanic’s cross-country study (chapter 15):
  - Brazil, Chile, Colombia, Mexico, Peru, Venezuela, Uganda, Malawi, Mozambique, Zambia, Bangladesh, Thailand Indonesia, Philippines, Vietnam

• Single global model with households disaggregated (7 strata * 20 vingtiles = 140 hhlds/country)
Impacts of Doha and Full-Lib Compared

- Doha is less poverty friendly than Full-Lib
- Operate on same instruments, but differing degrees
- DDA eliminates export subsidies, but developing country applied tariffs will be barely reduced
- Poverty focus requires the opposite
- Engagement by developing countries in liberalizing their trade regimes would make Doha more poverty friendly
Conclusions I

- DDA must be ambitious to affect development
- Near-term poverty impacts mixed; on balance poverty reduced under DDA; more so in LR
- Admitting special and sensitive products in agriculture (2%) would effectively eliminate any poverty reducing potential from the DDA
- Poverty impacts could be enhanced with deeper cuts in developing country bound tariffs
Conclusions II

• To have a significant near term poverty impact, complementary domestic reforms are required -- enabling hhlds to take advantage of new market opportunities

• Sustained long term poverty reduction depends on economic growth:
  – Impact of the DDA on investment is critical
  – Trade reforms need to be far reaching -- reducing barriers to services trade and investment, in addition to merchandise tariffs