SEWING SUCCESS: EMPLOYMENT AND WAGES OF THE END OF THE MULTI-FIBRE ARRANGEMENT
Motivation

- Apparel and Poverty
  - 70% of world apparel exports came from low income countries in 2008
  - Apparel provides entry to formal employment for the unskilled, the poor and women
- The Multi-fibre Arrangement (MFA) was a Global System of Quotas
  - Controlled apparel and textile trade
  - Phased out with final end in December 2004
- Implications of the MFA end
  - Reallocation of production across countries
  - Increase in exports
  - Decrease in apparel prices
Characteristics of the Apparel Industry (T&G)

- In nearly all countries, most workers in apparel sector are women
- Vertically Integrated (Value Chains)
- Buyer Driven
- “Good” Jobs
  - Higher wages than alternative (agriculture)
  - Better working conditions than alternatives
  - Gateway for women into manufacturing
- Very Wage Sensitive
The T&C sector employs a large share of unskilled workers and women.

Female intensity is larger for firms in the textile and clothing sectors compared to the overall average.

Source: Enterprise Surveys.
The sector is very wage sensitive, but wages explain only 30 percent of export variation.
Our Approach

- Analyze global change in apparel production
- Identify key countries
- Use available data to examine employment and wages following the end of the MFA
- Identify policy implications
Country Selection

- **Nine Countries:**
  - **South Asia:** Bangladesh, India, Sri Lanka, and Pakistan;
  - **East Asia and Pacific:** Cambodia and Vietnam;
  - **Latin America and the Caribbean:** Honduras and Mexico;
  - **North Africa:** Morocco.

- **Criteria for selection:**
  - Significance of apparel in overall economy
  - Regional coverage
  - Position in global value chain
  - Data availability

- **China is not included**
Methodology and Data

- Trade data: changes in exports and unit prices
- Household and Labor Force Surveys
  - Wage premia in apparel
  - Male-female wage differentials
  - Working conditions
- Firm-level and Industry-level data
  - Expansion/contraction of industry (employment)
  - Evidence of change in industry structure
    - Vertical Integration
    - Shifts between textile and apparel
  - Change in female intensity (demand for women)
Increased total exports:
- from US$41.4 billion in 2004 to US$58.7 billion in 2008 in 9 country studies
- Significant increase in Bangladesh, Cambodia, India, Vietnam; moderate in Honduras, Morocco, Pakistan and Sri Lanka; decline in Mexico

Reallocation of production:
- increase in market share - Bangladesh, Cambodia, India and Vietnam;
- decline - Mexico, Honduras and Morocco

Decline in apparel prices due to
- increased global supply;
- highly cost-competitive exports from China
Within Country Changes

- Employment changes over 2004-2008:
  - Increased: Bangladesh - 40%, Cambodia - 20%, India - 48%, Pakistan - 8%, Vietnam - 50%
  - Declined: Honduras - 3%, Mexico - 35%, Morocco - 8%, Sri Lanka - 12%

- Wage premia changes, in general, coincided with employment changes:
  - Increased in Bangladesh, India, Pakistan, Vietnam
  - Declined in Honduras, Mexico, Morocco, Sri Lanka
  - Only in Cambodia wage premium declined while employment went up

- Change in value chain position:
  - Upgrading or moved up: Bangladesh, India, Morocco, Pakistan, Sri Lanka, Vietnam
  - No change: Cambodia, Honduras, Mexico
Closing of Female-Male Wage Gap

- Decrease in wage gap in Bangladesh, Cambodia, India, Pakistan and Sri Lanka (countries that gained after 2004)
- Increase in wage gap in Honduras and in Vietnam

### Impact of Female dummy on log wages

<table>
<thead>
<tr>
<th>Country</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>-0.373***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.158</td>
</tr>
<tr>
<td>Cambodia</td>
<td>-0.120***</td>
<td></td>
<td>-0.128***</td>
<td>-0.133 ***</td>
<td>-0.115**</td>
<td></td>
</tr>
<tr>
<td>Honduras</td>
<td>-0.307***</td>
<td></td>
<td>-0.324**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>India</td>
<td>-0.489**</td>
<td>-0.400***</td>
<td></td>
<td>-0.403***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pakistan</td>
<td>-0.721***</td>
<td></td>
<td></td>
<td>-0.473***</td>
<td>-0.630***</td>
<td></td>
</tr>
<tr>
<td>Sri Lanka</td>
<td></td>
<td>-0.553***</td>
<td></td>
<td>-0.443***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vietnam</td>
<td>-0.138***</td>
<td>-0.135***</td>
<td></td>
<td>-0.215***</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Several rounds of household surveys. Preliminary numbers.
Changes within industry are important for employment

<table>
<thead>
<tr>
<th>Employment</th>
<th>Upgrading</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>decline</td>
<td>limited</td>
<td>Sub-Saharan Africa, Caribbean, Honduras, Mexico*, Romania*</td>
</tr>
<tr>
<td></td>
<td>substantial</td>
<td>Hong Kong, Korea, Taiwan, Malaysia, Singapore, Thailand, Turkey, Sri Lanka, Mauritius, Tunisia/Morocco**</td>
</tr>
<tr>
<td>increase</td>
<td>Cambodia, Indonesia/Pakistan*</td>
<td>China, India, Bangladesh, Vietnam</td>
</tr>
</tbody>
</table>

* No upgrading within apparel and textile sectors but upgrading to other sectors.
** Upgrading not as substantial as in other cases.
*** Upgrading more substantial than in other case.
Conclusions

- Export and employment patterns did not necessarily match the predictions
  - Only 30% in export variation explained by wages
  - Upgrading, ownership, domestic policies were important in explaining changes in exports
- Changes in exports are usually, but not always, good indicators of changes in wages and employment.
- Wage premia rise in countries that were proactive in adapting to the MFA phase-out (increased their market share), and fall in countries that failed to respond timely to the changing environment.
- Promoting “upgrading” seems to be necessary for sustainable competitiveness in the apparel sector but does not necessarily help the poor.
THANK YOU!
Framework: across countries changes

- Changes in Total Exports
- Changes in Countries’ Market Shares
- Changes in Global Apparel Prices
Framework: within country changes

- Income can be defined as the product of employment \((l)\), hours \((h)\), and wages \((w)\):

\[
income = y = lhw
\]

- The change in income can therefore be decomposed into changes in each component:

\[
\%\Delta y = \%\Delta l + \%\Delta h + \%\Delta w
\]

- \%\Delta l capture changes *between* apparel and other sectors

- \%\Delta h represent changes *within* sector that reflect the evolution of the apparel sector itself

- \%\Delta w represent changes in *wage levels* that can be attributed to different characteristics
### Change in Apparel Wage Premia

<table>
<thead>
<tr>
<th>Country</th>
<th>2004</th>
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<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>0.343***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.545***</td>
</tr>
<tr>
<td>Cambodia</td>
<td>0.287***</td>
<td>0.354***</td>
<td>0.374***</td>
<td>0.13**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Honduras</td>
<td>0.275***</td>
<td>0.14**</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>India</td>
<td>-0.046**</td>
<td>-0.124***</td>
<td>0.084***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pakistan</td>
<td>0.076***</td>
<td></td>
<td></td>
<td>-0.085***</td>
<td>0.019</td>
<td></td>
</tr>
<tr>
<td>Sri Lanka</td>
<td></td>
<td>0.05***</td>
<td></td>
<td></td>
<td>0.082**</td>
<td></td>
</tr>
<tr>
<td>Vietnam</td>
<td>-0.340***</td>
<td>-0.092</td>
<td></td>
<td></td>
<td>-0.076***</td>
<td></td>
</tr>
</tbody>
</table>

Several rounds of household surveys. Preliminary numbers.
The Apparel Sector and Value Chain
## Countries Have Different Positions in the Value Chain

<table>
<thead>
<tr>
<th>Functional Categories</th>
<th>Capabilities</th>
<th>Country Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMT (Assembly)</td>
<td>Marginal supplier; low-cost volume production</td>
<td>Cambodia, Vietnam, Sub-Saharan Africa, Caribbean, Honduras</td>
</tr>
<tr>
<td>FOB (OEM) Full Package Provider</td>
<td>Preferred supplier; scale economies in volume production</td>
<td>Bangladesh, Pakistan, Morocco, Indonesia</td>
</tr>
<tr>
<td>ODM: Full Package with Design</td>
<td>Niche supplier; specialize in specific product areas</td>
<td>Sri Lanka, Mexico</td>
</tr>
<tr>
<td></td>
<td>Strategic supplier; export: high-value, complex products or volume. Brand development (OBM) for domestic market</td>
<td>India, China, Turkey</td>
</tr>
<tr>
<td>Global Lead Firm</td>
<td>Global brand owners; marketing and retailing</td>
<td>EU-15, USA</td>
</tr>
<tr>
<td>Full Package Service Provider</td>
<td>Coordinate supply chain and OEM or ODM activities; contract out manufacturing or invest in production in foreign countries</td>
<td>Hong Kong, Korea, Taiwan (1980); Malaysia, Singapore (1995); Thailand (2010)</td>
</tr>
</tbody>
</table>
Future Work

- Impact of post MFA changes in the apparel labor and product markets on employment and wage opportunities in other sectors and the overall structure and welfare of the economy
- Impact of China safeguard removal in 2008 and world financial crisis on wages and employment in global apparel sector
- How changes in domestic policies affected workers and which policies were the most efficient in improving workers’ welfare in short and long term