The Effects of Trade Policy:
A Global Perspective

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The majority perceives aggregate benefits from trade

Source: Pavcnik (2017), based on 2014 Pew Global Attitudes Survey and WDI.
Less agreement on trade’s impact on livelihood of workers

Trade and Labor Markets: Old Ideas

• Economists have long predicted that international trade generates winners and losers in developing and developed countries alike.

• Most economic models of international trade, even the ones without any frictions in labor or credit markets, such as the Hecksher-Ohlin model (HO), predict changes in the income distribution with trade-induced changes in prices.

• In a simple version of the HO model, trade was predicted to benefit the less educated and hurt the more educated in developing countries.
  ○ Generates aggregate gains
  ○ Simultaneously reduces poverty and inequality.

• Cumulative evidence based on 25 years of research on the effects of trade on labor markets in developing countries is more nuanced.
Evidence based on Four Decades of Trade Integration

- Many large-scale trade liberalizations implemented by developing countries or by their trading partners since the 1980s and the integration of China

- Policy changes ranged from import liberalization to increased access to export markets
  - settings to study how increased trade —through exporting and importing—has shaped earnings and employment in developing countries
  - Most studies in developed countries focus on importing shocks.

Percentage of world exports by 1987 WB income group

Source: Pavcnik (2017), based on WDI data
Trade and Labor Markets: The News is the Evidence

- Increased international trade is not the main reason for increased wage inequality in developing countries (Goldberg and Pavcnik 2007, 2017, Helpman 2016)

- But trade policy matters for worker earnings, employment opportunities, poverty, and inequality

- The answers to the questions “Is trade good for the poor?” and “Does trade increase inequality?” depend on
  - Type of changes in trade policy or trade patterns & economic mechanisms
  - Mobility of workers and capital across firms, industries, and locations
  - Position of affected individuals in the income distribution of a country
Worker Firm Affiliation Matters

- Firms differ in performance within narrowly defined industries.

- Better-performing firms tend to pay more (fair wages, efficiency wages, profit sharing).

- Better-performing firms are better positioned to withstand and adjust to import competition and to take advantage of exporting opportunities.

- International trade exacerbates the initial earnings differences for workers across better and worse performing firms.
Worker Firm Affiliation Matters, as does Worker Education

- Declines in industry employment from import competition are concentrated in less-productive firms (Menezes-Filho and Muendler 2011)

- Exporting increases wage inequality between firms in an industry
  - Better-performing firms tend to pay more
  - Exporting further increases the relative wages of workers employed in these firms (Yeaple 2005, Bustos 2011a, 2011b, Verhoogen 2008)

- Exporting increases the wage gap between more and less educated workers within firms
  - Consumers in high-income countries demand high-quality products
  - Production & marketing of high-quality requires skill (Verhoogen 2008, Brambilla, Lederman, Porto 2012)
Workers in formal registered manufacturing firms

• Benefit: Simultaneously show how firms are adjusting production and how this affects workers.

• But workers that lose employment in this process are not observed after the loss of employment.

• Data representative of formal registered firms in manufacturing (or medium and large publicly listed firms)
  o 70 percent of manuf. workers in Brazil (Dix-Carneiro and Kovak 2017)
  o 20 percent of manufacturing workers in India (Nataraj 2011)
  o 42 percent in Vietnam (McCaig and Pavcnik 2015)

• more educated workers are more likely to select into formal sector (Goldberg and Pavcnik 2003, McCaig and Pavcnik 2015)
Looking beyond formal registered firms in manufacturing

- Informal sector accounts for a large share of employment in developing countries.

- International trade can contribute to economic development and poverty reduction if it promotes reallocation of workers out of agriculture and out of microenterprises to formal firms.

*Source: World Development Indicators. See online Appendix for countries.*
China’s WTO Accession and Structural Transformation

Composition of Employment

WTO accession reduces uncertainty about U.S. trade policy

NTR Gap by county: local exposure to tariff uncertainty prior to 2001

Source: Erten and Leight (2017)
China’s WTO Accession and Structural Transformation

- Counties in China more exposed to the reductions in U.S. tariff uncertainty experience relative:
  - Increase in exports and FDI
  - Expansion of employment in manufacturing and mining
  - Contracting of employment and investment in agricultural sector
  - Increase in total and per capita GDP

Source: Erten and Leight (2017)
Informal sector plays a role in the adjustment to trade

- The 2001 U.S. Vietnam Bilateral Trade Agreement reduced import taxes on Vietnamese exports to the U.S.
- U.S. import tariffs are more binding for better performing firms in Vietnam
- Reductions in these tariffs provide an impetus for job expansion in the formal sector

Growth in exports to the US as a share of total VN exports

- Overall: 5.1% in 2000 to 20.2% in 2004
- Manufacturing: <5% to 25%

Source: McCaig and Pavcnik 2018
Informal sector plays a role in the adjustment to trade

• General equilibrium effects of trade at work
  o Exporting influences labor market outcomes of workers beyond formal manufacturing
  o Export opportunities promote the reallocation of workers out of microenterprises to the formal sector in Vietnam

• Shift to formal sector changes how a worker is attached to the labor force
  o Work longer & more regular hours
  o Less likely to hold multiple jobs
  o Higher earnings, more likely to receive benefits
  o Stable jobs are characteristic of a middle-class (Banerjee and Duflo 2007)

Source: McCaig and Pavcnik 2018
Trade has Geographically Concentrated Effects

- Effects of trade on earnings and employment are geographically concentrated and unequal within a country, depending on the region’s exposure to import and export shocks
  - Individuals in regions with a high concentration of industries benefiting from lower export costs fare better than individuals in less exposed regions
  - Individuals in regions with high concentration of industries subject to import competition fare worse than individuals in less exposed regions
- In part driven by imperfect inter-regional worker mobility, especially lack of outmigration even 5-9 years after large adverse trade shocks.
Concentrated benefits: Vietnam’s Export Liberalization

• The 2001 U.S.–Vietnam Bilateral Trade Agreement: Exporting to the U.S. becomes cheaper

• Aggregate poverty declining in Vietnam during this time period

• Individuals in provinces with a high concentration of exporting industries experience relatively larger
  ○ Increases in wages (especially for less educated workers)
  ○ Reallocation out of informal microenterprises to the formal sector
  ○ Declines in household poverty
  ○ In-migration from other provinces

• Young population and higher education might have aided the reallocation
  ○ Younger and more educated face lower adjustment costs (Dix-Carneiro 2014)

Source: McCaig 2011, McCaig and Pavcnik 2018
Concentrated losses: India’s 1991 Import Liberalization

- India’s 1991 reform reduced import barriers

- Aggregate poverty in India declining during this time period

- Families living in harder-hit districts experience relative
  - Declines in industry wages, declines in agricultural wages
  - Increases in poverty

- Low inter-district mobility for employment 9 years after onset of reform
  - Less that 1% of rural individuals move within 10 years (less than 5% urban)
  - People do not out-migrate from hard-hit regions
  - Mobility particularly low for the poor
  - Rigid labor market regulation (Topalova 2010) and reliance on informal social networks within castes generates a disincentive to move away (Munshi and Rosenzweig 2016)

Source: Topalova 2007, 2010
Trade has long-lasting inter-generational consequences

- Trade’s adverse impact on local labor markets can have longer-lasting effects through children’s schooling/child labor

- Trade affects schooling/child labor through family income (Edmonds and Pavcnik 2005; Edmonds, Pavcnik, Topalova (2009, 2010))

- Indian families in hard-hit regions experienced a relative negative income shock after 1991 import liberalization (Edmonds, Pavcnik, Topalova (2009, 2010))

- School-age children, especially girls, in families living in harder-hit districts experience relative
  - Declines in school attendance
  - Declines in school completion rates and literacy
  - Declines in life-long income

- Families at subsistence are saving on schooling costs
The adverse effects of import competition are persistent and can amplify with time

- Brazil’s domestic import liberalization in early 1990s

- Using matched employee-employer data that covers formal sector (and Census of Population that includes informal workers), can follow individual workers 20 years after trade liberalization

- Adverse effects on earnings and employment are magnified over time in the formal sector

- Lack of mobility across regions

- Negative agglomeration economies

Source: Dix-Carneiro and Kovak (2017)
Slow adjustment of capital

Source: Dix-Carneiro and Kovak, 2017
Conclusion

- Trade generates aggregate gains, but these gains are unequally distributed in developed and developing countries

- Employment losses from import competition are concerning

- Even more striking findings from recent literature from the U.S. and developing countries
  - Geographically concentrated losses that are persistent over time
  - Lack of adjustment of displaced workers, even 10-20 years following the initial trade policy change
  - Labor market consequences have spillovers to other community outcomes, including education of next generation