There are **5 country case studies** in the [Household Impacts of Tariffs (HIT)](https://www.worldbank.org/en/research/brief/hit#:~:text=When%20tariffs%20are%20reduced%20(increased,they%20are%20selling%20such%20goods.) report:

1. Mexico
2. Bangladesh
3. Brazil
4. South Africa
5. Sri Lanka

**Methodological profile** of the case studies:

* 3 out of 5 use IV approaches to estimate the impacts of trade
* 2 out of 5 use structural models (CGE and DSGE ones)
* 1 paper uses a pooled OLS using panel (South Africa)
* Paulo Bastos (World Bank) is the author of 2 studies (Brazil and South Africa)

Mexico (Castelan et al. 2020):

* **Method and data:** the authors use a IV approach and data relative to exports by municipality. Data on poverty, inequality and average household income come from IPUMS, while that relative to international trade come from the BACI database covering the period 2004-2014.
* **Methodology details:** the IV combines the initial structure of exports in the municipalities with global trends in exports from developing to developing countries (excluding Mexico) by sector.
* **Outcome variables:** 1) income inequality, 2) poverty headcount ratio, and 3) average household income
* **Result:** a 10% increase in the ratio of exports to workers reduces the Mexican Gini coefficient by 0.17 points, on average. No significant effects on poverty and average household income.
* **Conclusion:** significant growth in exports does not necessarily lead to better average welfare indicators at the local level.

Bangladesh (Robertson et al. 2020)

* **Method and data:** the authors use an IV approach and data relative to trade from COMTRADE covering the period 1990-2016 and to labor market outcomes from the labor force surveys conducted by the Bangladesh NSO. The LFS data refers to 2005, 2010, 2013, and the Q1 of the 2015-2016 edition.
* **Methodology details:** they use third countries’ import (i.e., from the U.S.) demand as an exogenous source of variation for the trade exposure dummy variable (i.e., the regressor of interest).
* **Outcome variables:** 1) average wages, 2) informality, 3) male-female wage gap
* **Result:** labor market responses to export shocks differs across regional labor markets in the short-run — that is, between 2005 and 2010—but seem to dissipate in the longer run, 2005 to 2016, as neoclassical trade theory would predict.
* **Conclusion:** trade shock effects on labor market outcomes differ regionally only temporarily in a country with labor markets in which workers are mobile and with relatively low barriers to migration.

Brazil (Artuc et al. 2021)

* **Method and data:** the authors use an IV approach (reduced-form model) and a DSGE model (structural-form model) using a microregion-year panel data set. They employ the IV strategy to estimate the structural parameters of the DSGE model. The data relative to labor market outcomes comes from RAIS for the period 2003-2015, while that for exports by microregion comes from MDIC for the period 1997-2015.
* **Methodology details:** the endogenous variable isthe log of export revenue originated in each microregion. The exogenous source of variation is the differential exposure of sectors and regions to destination-specific demand shocks. In particular, the IV is the log change of sectoral imports of the initial set of destination countries in each microregion.
* **Outcome variables:** 1) wages, 2) employment, and 3) labor mobility across macro-sectors (agriculture, manufacturing, and services/commerce
* **Result:** labor markets experiencing a positive trade shock attract more workers due to th larger number of job options that are created there, and more job options translate into higher welfare because workers can choose the best job after comparing more options. A 10% change in exports increases the lifetime welfare of a median worker in the formal labor market by 2.99% of the annual wage. Workers in manufacturing on average experience 41.7% larger welfare increases compared to those in agriculture.
* **Conclusion:** reduced mobility frictions across regions have a larger magnification effect compared to the reduced mobility costs across sectors.

South Africa (Bastos and Santos 2021)

* **Method and data:** the authors use a municipal-year panel data set covering the period 1996-2011 and a pooled OLS to estimate the impacts of trade liberalization on local labor markets. The data on municipalities come from the 1996, 2001 and 2011 population census conducted by the South African NSO, and the data on import tariffs come from UNCTAD TRAINS.
* **Methodology details:** the main regressor of interest is the change in municipality’s employment-weighted tariff.
* **Outcome variables:** 1) employment and per capita income growth in the municipalities.
* **Result:** local labor markets that were more exposed to tariff cuts tended to experience slower growth in employment and income per capita than less exposed regions.
* **Conclusion:** although reduced tariff protection may lower relative incomes for workers in locations more exposed to the resulting rise in import competition, it generates broader gains to consumer welfare.

Sri Lanka (Maliszewka et al 2020)

* **Method and data:** the authors use a macro-micro simulation framework that combines a computable general equilibrium (CGE) model with a survey-based global income distribution dynamics model. The data relative to workers’ characteristics comes from the Sri Lanka Household Income and Expenditure Survey (HIES) 2016. The data on trade comes from the GTAP version 9 benchmarked to 2011.
* **Methodology details:** the authors conduct a set of ex-ante trade policy simulations on the Sri Lanka economy with a focus on the impacts at the sectoral and subnational district levels.
* **Outcome variables:** 1) GDP growth in subnational districts and sectors, 2) wage inequality, and 3) poverty headcount ratio.
* **Result:** more ambitious trade reform can result in larger gains in GDP, poverty reduction, and exports, particularly in sectors employing a higher proportion of women. In all simulated scenarios in which the authors assumed that the Sri Lankan economy would grow, the distribution of gains is regressive (i.e., the growth incidence curves indicates a higher income growth for those in the upper tail of the income distribution compared to those in the lower tail).
* **Conclusion:** by understanding the varied impacts across regions and sectors, policymakers can design policies to mitigate negative impacts on selected groups of workers and facilitate the transition of workers across regions and sectors. In doing so, the gains from trade could be distributed more equally.

**-> Trade Liberalization Effects in Brazil**

In summary:

* Most papers use the liberalization episodes in the early 90s and the variation in the intensity of the trade shock and in the employment composition across regions.
* The most comprehensive study is **Dix-Carneiro & Kovak (2015),** which analyses 25 years of effects. Other papers from the same authors and from Ulyssea find that informality seemed to work as a buffer, avoiding non-employment.
* Harder-hit regions experienced higher informality and non-employment, which persisted two decades after. **Dix-Carneiro, Soares and Ulyssea (2018)** relates the deterioration in labor market outcomes with the increase in crime in those regions over the years immediately following the trade shock.
* Concerning heterogenous effects, **Ponczek and Ulyssea (2022)** find that the higher informality and non-employment comes mostly from unskilled workers. **Dix-Carneiro and Kovak (2015)** and **Gonzaga, Menezes Filho, and Terra, (2006)** find a decline in the skill premium associated to the trade shock in the short/medium-term.
* An older paper, **Green, Dickerson and Arbache (2000)** point to a stability/small decline in the income inequality associated to the trade liberalization measures of 90’s (no formal causality established, though).

1. **Ponczek and Ulyssea (2022). Enforcement of Labor Regulation and the Labor Market Effects of Trade: Evidence from Brazil.**

* Regions hit harder by trade liberalization experienced higher informality and non-employment.
* Heterogeneous impacts: adverse effects come mostly from unskilled workers.
* Evidence that informality might have acted as a buffer and increased welfare relative to a stricter labor enforcement scenario.

1. **Dix-Carneiro, Soares and Ulyssea (2018). Economic Shocks and Crime: Evidence from the Brazilian Trade Liberalization.**

* Regions facing greater exposure to foreign competition experienced increases in crime over the years immediately following the liberalization, which eventually receded.
* Evidence suggests that the recovery of the labor market in these harder-hit regions played a key role in reducing crime in the long-run. More lax enforcement of labor regulations and assistance to displaced workers to quickly find reemployment help dampen the increase in crime during hardship times.

1. **Dix-Carneiro and Kovak (2017). Trade Liberalization and Regional Dynamics.**

* Investigate the mechanisms through which harder-hit regions face adverse effects of liberalization even 20 years after - imperfect interregional labor mobility and dynamics in labor demand, driven by slow capital adjustment and agglomeration economies.

1. **Costa, F., J. Garred, and J. P. Pessoa (2016). Winners and losers from a commodities for-manufactures trade boom.**

* In local labour markets experiencing larger growth in Chinese export demand, average hourly wages increased more quickly and the share of employed workers in formal jobs rose between 2000 and 2010.
* Local labour markets more affected by Chinese import competition experienced slower growth in manufacturing wages.
* No robust evidence of an effect of ‘China shock’ on local employment rates, suggesting that Brazilian local labour markets adjusted to these shocks via changes in wages rather than (un)employment

1. **Dix-Carneiro and Kovak (2015). Trade reform and regional dynamics: evidence from 25 years of Brazilian matched employer–employee data.**

* Workers initially employed in harder hit regions face continuously deteriorating formal labor market outcomes relative to workers employed in less aﬀected regions, this gap persists even 20 years after the beginning of trade liberalization (similar as above).
* Negative local trade shocks induce workers to shift out of the formal tradable sector and into the formal nontradable sector.
* Non-employment strongly increases in harder hit regions in the medium run, but in the longer run, non-employed workers eventually ﬁnd re-employment in the informal sector (informality seems to work as buffer).

1. **Dix-Carneiro and Kovak (2015). Trade liberalization and the skill premium: A local labor markets approach.**

* Investigates the heterogeneous effects of trade liberalization.
* Find statistically significant but modest effects of liberalization on the decline of the skill premium between 1991 and 2010.
* Outcomes for skilled and unskilled workers seem to have evolved similarly.

1. **Goldberg and Pavcnik (2007). Distributional effects of globalization in developing countries.**

* Summary of empirical evidence for developing countries during the 1980s and 1990s liberalization episodes.
* Use mostly findings from:

1. **Green, Dickerson and Arbache (2000). A picture of wage inequality and the allocation of labour through a period of trade liberalisation: The case of Brazil.**

|  |  |  |
| --- | --- | --- |
| Brazil | 1980’s | 1990’s |
| Globalization Measures | Partial unilateral trade liberalization (1988 onwards) | Unilateral trade liberalization (ends 1994)  Mercosur 1991  Currency Crisis 1998 |
| Skill Premium | Stable/Slight Increase | Increased |
| Mean log deviation of wage | Stable/Increased | Stable |
| Gini of log wages | Stable | Stable/Small decline |
| Income Inequality | Increased | Stable/Small decline |

1. **Gonzaga, Menezes Filho and Terra (2006). Trade liberalization and the evolution of skill earnings differentials in Brazil.**

* Trade transmission mechanisms were tested, and results are compatible with trade liberalization playing an important role in the reduction of skill premium observed in Brazil from 1988 to 1995.
* Employment shifted from skilled to unskilled-intensive sectors, and each sector increased its relative share of skilled labor.
* Find evidence that relative prices felt in skill-intensive sectors and that tariffs reductions were larger in those sectors.

**-> Possible Policy Solutions**

**(inspired on discussion of Good Econ. For Hard Times)**

* **Incentives to Retraining: examples TAA (US), EGF (EU)**

**Benjamin Hyman (2018). “Can Displaced Labor Be Retrained? Evidence from Quasi-Random Assignment to Trade Adjustment Assistance”.**

* Analyzes 20 years of worker-level earnings and re-employment responses to the Trade Adjustment Assistance (TAA), the oldest and largest public incentive for retraining in the US.
* TAA design: workers can extend unemployment insurance for up to three years if they receive training to work in other sectors (up to $10,000/year). They may also get financial help to relocate, to search for jobs, or to get health care.
* Problems: workers have to petition the Department of Labor, which assigns a caseworker to evaluate if the job loss was due to trade shocks (cause some disincentives and discretionary).
* The author finds large initial returns to TAA. „Ten years out, TAA-trained workers have $50,000 higher cumulative earnings, driven by both higher incomes and greater labor force participation. Yet annual returns fully depreciate after ten years.“

**Claeys and Sapir (2018). The European Globalization Adjustment Fund: Easing the pain from trade?**

* European Globalization Adjustment Fund (EGF) was established in 2007 to co-fund, together with EU member states, policies to help workers negatively affected by trade to find new jobs (current discussions about extending it to include automation).
* Similar scope and problems to TAA.
* According to the authors “the economic effectiveness of the EGF programme is more difficult to evaluate, mainly because the available data is insufficient. Estimates, however, suggest that only a small proportion of EU workers who lost their jobs because of globalisation received EGF financing. Unfortunately, it is impossible at this time to assess whether workers who received EGF assistance did better in their job searches than those who did not receive EGF assistance.”

**Card, Kluve and Weber (2010). “Active Labour Market Policy Evaluations: A meta-analysis.”**

* Meta-analysis of 97 job training program evaluations (not necessarily related to trade effects), from 1995 to 2007, that more frequently employ experimental variation and higher quality data. Authors conclude that ”...training programmes are associated with positive medium-term impacts, although in the short term they often appear ineffective”.
* **Subsidize older workers (less willing/likely to be retrained) in affected firms**
* Suggestion of Duflo & Banerjee: “A tax reduction... by being more specific about the sector and the areas, and by restricting the program to already employed workers between the ages of fifty-five and sixty-two (when they can claim social security and retire), it would be possible to spend much more money on each person, possibly compensating the firm for more than the cost”.
* Comes from the reference paper **Austin, Glaeser and Summers (2018) Jobs for the Heartland: Place-Based Policies in 21st-Century America**, that brings as policy proposals to the adverse and heterogeneous impacts of trade an employment subside for regions highly affected by nonemployment.