

Gendered Labor Market Responses to Increased Import Competition

Leoni Alewell and Pia Heckl

Key Messages

- Increased globalization has led to major transformations of labor markets in developed and developing countries.
- Analyses focusing on aggregate effects of increased import competition and ignoring the structure of the labor market miss important developments.
- Higher exposure to import competition affects male and female workers in Mexico differently.
- Displaced workers partly move into informal employment which attenuates negative employment effects.
- Entrance into the labor market through informal work in periods of lower labor demand can lay the foundation for the inclusion of women in the labor force.



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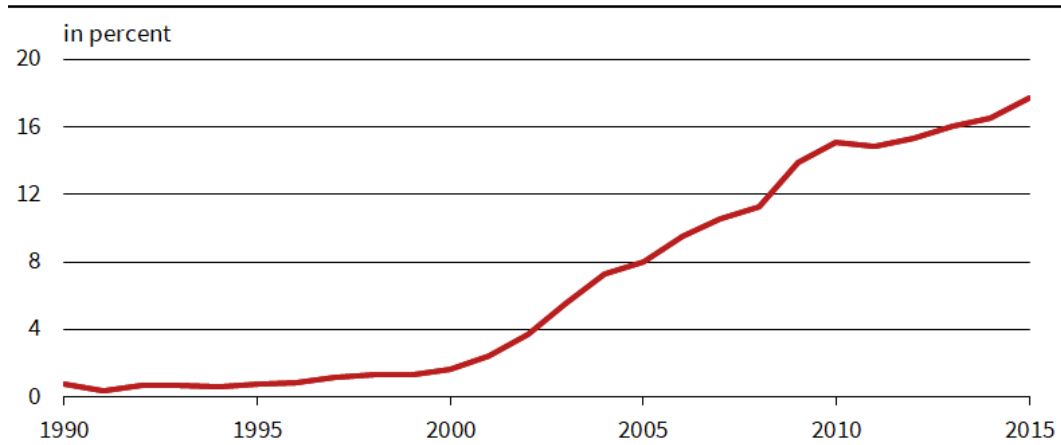
Over the last decades, globalization has led to more integrated markets which fostered the transformation of economies around the world. How do domestic labor markets react to increased competition from abroad? Previous studies have highlighted the importance of the labor market structure (Dix-Carneiro et al. 2021). It is crucial to move beyond aggregate effects to understand the full dynamics examining more vulnerable groups, such as women and informal workers. China's accession to the World Trade Organization (WTO) in 2001 was one of the most important trade liberalization episodes in the past decades, which led to stark increases of exports from China to the rest of the world.

This Policy Brief highlights the findings of a recently published article (Heckl 2024) which examines the effect of an import shock on the Mexican labor market focusing particularly on gender differences. The Mexican context is interesting for three reasons. First, a large share of workers is employed informally, which may lead to a different response to labor market shocks compared to developed economies. Second, shifts in labor demand may affect women and men differently which is particularly important to understand in the context of low female involvement in the labor market like in Mexico. Third, while other Latin American countries have also seen increasing exports to China, Mexico has only faced higher import competition without a simultaneous rise in export demand. These developments are summarized in Figure 1. Figure 1a shows the change in imports from China to Mexico as a share of total imports to Mexico over time and portrays the rising importance of Chinese products and inputs over time. Further, Figure 1b presents changes in Mexican exports to and imports from China. As can be seen, exports to China did not change to the same extent as imports, while other Latin American countries also experienced an export shock to China (e.g., Brazil (Gaddis and Pieters 2017; Connolly 2022)).

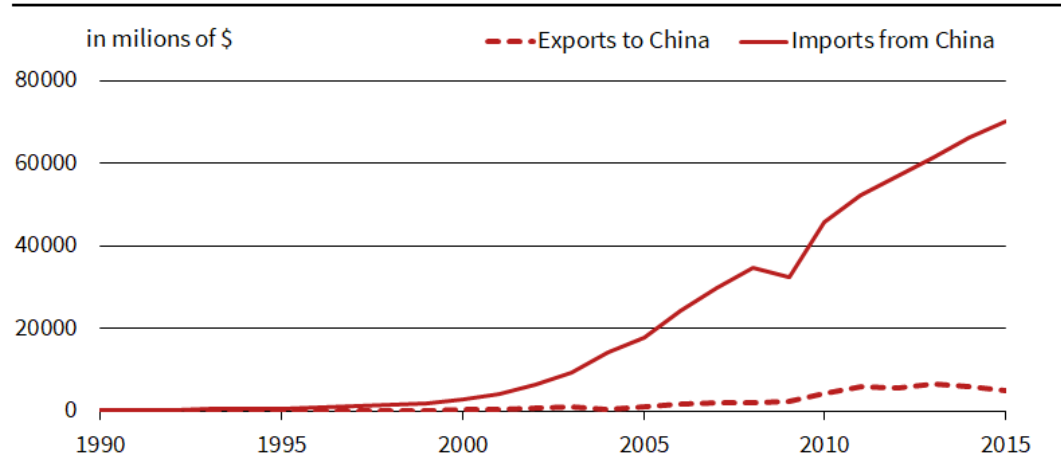
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Figure 1
Trade Flows for Mexico from 1990 to 2015

a. Imports, China and overall



b. Trade flows of China and Mexico



Source: UN Comtrade Database.

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Regional Focus: Local Labor Markets

The analysis focuses on the local labor market level, which is defined as clusters of municipalities with high internal labor mobility but limited mobility between clusters. This allows us to capture flows in and out of employment based on the assumption of imperfect labor mobility. Thus, to analyze the impact of increased import competition on the labor market, we focus on roughly 1800 local labor markets across Mexico (Faber 2020).

To capture information on people's activity status, type of work, region, and other characteristics, we use Mexican census data from the Instituto Nacional de Estadística, Geografía e Informática (INEGI). This includes rich individual-level demographic and labor

market information for the years 1990, 2000, 2010, and 2015. We further rely on industry-level trade data from the UN Comtrade database to measure changes in imports across these years.

Import Competition Varies Within Mexico Based on a Region's Industry Structure

The main explanatory variable captures the change in import competition over time in a region. Following Bartik (1991), we build an instrument that maps national changes in trade flows to the local labor market level based on their initial industry structure. Simply put, if a local labor market, for instance, initially employs a large share of workers in textile production and imports from China of textiles increase, that region will face high competition.

Since the sectoral composition of labor markets varies by region and sectors face different levels of import competition, we observe variation across Mexican labor markets in their exposure to Chinese imports. In the 1990s, regions in Mexico experienced little change in import exposure. Once China joined the WTO in 2001, the picture changes drastically. From 2000 onwards, the change in import exposure increased immensely across all local labor markets in Mexico. The median region faced an increase in import exposure from 25\$ between 1990 to 2000 to 187\$ from 2000 to 2010.

How Can We Identify the Causal Impact of Rising Import Competition on Labor Market Outcomes of Women and Men?

We study how changes in import competition affect women's and men's labor market outcomes based on changes in their labor force participation, employment, and unemployment rates over time. Importantly, we want to capture the causal effect of increased import competition on labor markets. If we simply focus on the effect of changes in Mexican imports from China, this may measure changing domestic market conditions in Mexico that lead to a higher demand for goods from abroad.

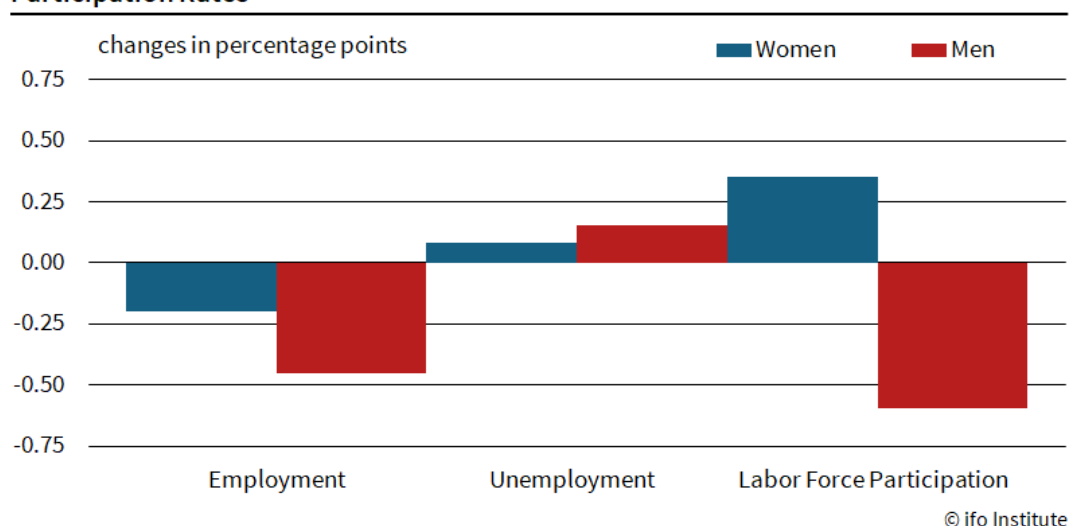
Instead, the exposure measure should capture the supply-driven nature of the import shock and isolate the impact driven by China's growing comparative advantage and declining costs. Thus, instead of relying on direct exports from China to Mexico, we rely on

the industry-level export structure of China’s exports to the rest of the world. We use the world exposure measure as an instrument for the Mexico-specific flows in a first stage. Additionally, we control for local labor market characteristics that are constant over time as well as for period specific trends to capture any unobserved developments.

Increased Import Competition Affects Women and Men Differently

The paper shows that increased import competition leads to lower growth in employment shares relative to the national average. As shown in Figure 2, this negative development is observed for male and female workers alike and also mirrored in higher growth in unemployment rates¹. However, only male labor force participation rates experience lower growth, while female labor force participation rates show higher growth as a response to higher import competition from China. An average increase in import exposure per worker (increase of 1007.9\$) leads to a higher growth of 1.83% relative to baseline female labor force participation. Further results provide suggestive evidence that this development can be explained by the so-called *added worker effect* which describes women entering the labor force to offset lost income within a household when men are displaced.

Figure 2
Negative Effect on Employment Rates and Heterogeneous Effect on Labor Force Participation Rates

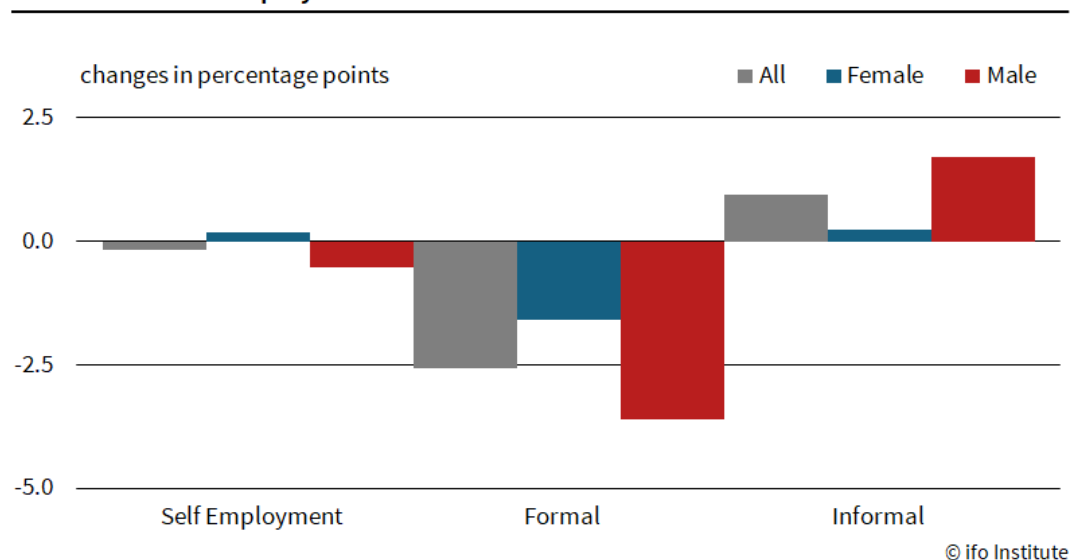


¹ Figure 2 and 3 show the difference in outcomes between a highly exposed (75th percentile of exposure) and a slightly exposed (25th percentile of exposure) local labor market.

Informal and Self-Employment Act as a Buffer to Attenuate Negative Employment Effects

The results further reveal that the negative employment responses are concentrated in formal employment (as can be seen in Figure 3). To be more precise, formal employment in both tradable and non-tradable industries see lower growth due to the import shock. On the contrary, informal employment of both women and men grows at a higher rate in regions exposed to higher import competition. Women further experience higher growth in self-employment shares. Thus, the findings highlight that informal employment and self-employment act as an important alternative for displaced workers and attenuate negative employment effects of increased import competition.

Figure 3
Formalization of Employment slows down for Women and Men



The shift in employment from formal to informal work is initially surprising in the light of previous research. For example, Ben Yahmed and Bombarda (2020) show that trade liberalization during the NAFTA free trade agreement between Mexico, Canada and the USA has led to a formalization of work for men and women. However, this result can be explained by the fact that NAFTA has not only increased Mexico's imports, but also their exports. As a result, large, export-oriented companies have increased their demand for labor and thus contributed to an increase in employment in formal employment relationships. Since Mexico recorded an enormous increase in Chinese imports after China's accession to the World Trade Organization but no comparable increase in exports to China, this second channel is not at play. Instead, informal employment relationships act as a "buffer" to compensate for the decline in employment in formal employment relationships due to import competition. However, informal employment relationships

do not only offer less security for workers, but the general working conditions are also usually precarious (Dix-Carneiro and Kovak, 2023).

Policy Implications

The findings of this paper highlight the importance of taking into account the structure of the labor market when assessing the impact of globalization on the workforce. While the formalization of labor markets proceeds in developing countries, the flexibility of the informal sector plays an important part in counteracting short-run labor market frictions. Thus, the reliance on the informal sector in times of increased competition highlights the importance of improving conditions for informal workers. Although periods of lower labor demand pose a challenge for affected industries, they can attract new groups (women) to enter the labor force. This could shift norms towards more acceptance of women in the workforce and lead to lasting labor market attachment and lower gender gaps in the labor market.

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