

Trade and gender: new stylized facts and future analysis using new data



Nadia Rocha
January 10, 2019

New data on gender related variables at the sector/occupation level (work in progress)

- Recollect meta-data from Household sources
 - Using National Systems of Classification for economic activity, educational attainment, and/or occupation classifications
- Processing metadata and computing new variables
 - Building concordance tables from economic activity to sector/industry
 - Integration into other data sources (e.g. GTAP database) to perform analysis
- Applications
 - **Multi-country** and **multi-sector** model of international trade and gender to test how much international trade affects the gender wage gap and the labor allocation pattern per gender for a total of 52 countries
 - Female/male workers have heterogeneous productivities for sectors, and the distribution of productivities depend on their type (education, gender, etc)
 - Based on their productivities, female/male workers endogenously choose a sector to work for

Using firm level data to assess the relationship between trade and female labor participation across countries

- We estimate the following equation (based on factor demand function) using data for **29.000 manufacturing firms** in **64 countries** from **WB Enterprise Surveys** (most recent survey between 2010-17)

$$fem_sh_{isct} = \alpha + \beta_1 \ln Y_{isct} + \beta_2 \ln k_{isct} + \gamma_1 \ln tfp_{isct} + \gamma_2 trade_{isct} + D_{cs} + D_r + D_t + \varepsilon_{isct}$$

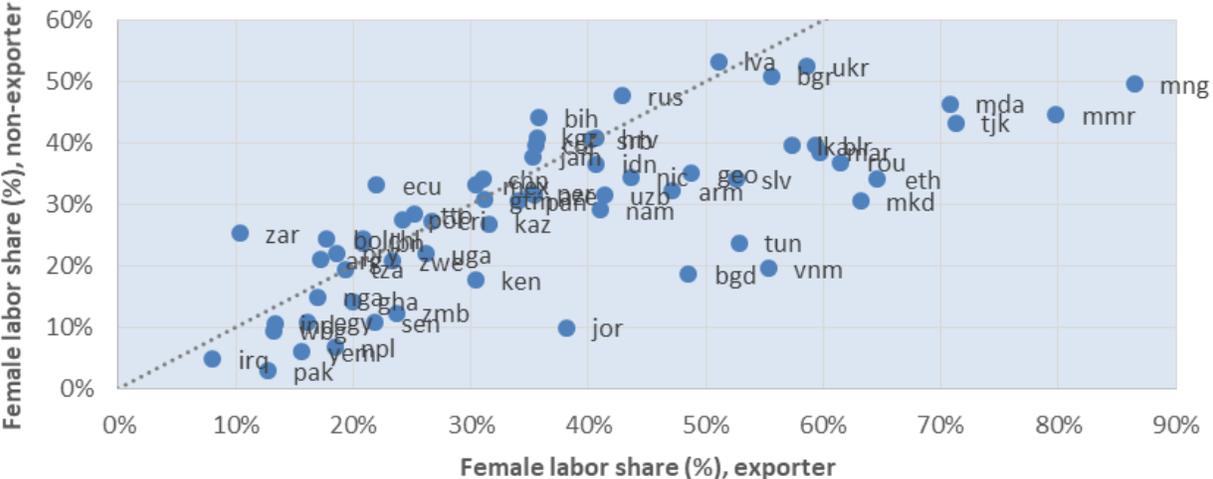
- **Dependent variable:** share of female workers in total workers (assumes $wF = wM = w$)
- **Control variables:**
 - Exporter, $exp = 1$ if direct plus indirect export share as % of sales $\geq 10\%$, and 0 otherwise;
 - Importer, $imp = 1$ if share of imported inputs as % of total inputs $\geq 10\%$, and 0 otherwise;
 - GVC participant, $gvc = 1$ if both $exp = 1$ and $imp = 1$, and 0 otherwise;
 - Output Y (sales), capital intensity k (capital stock per output), and total factor productivity tfp in natural logarithms.

Exporters show a higher share of female labor share than non-exporters in most sectors and countries

Average female share of permanent workers, exporters vs. non-exporters, by ISIC Rev. 3 sector

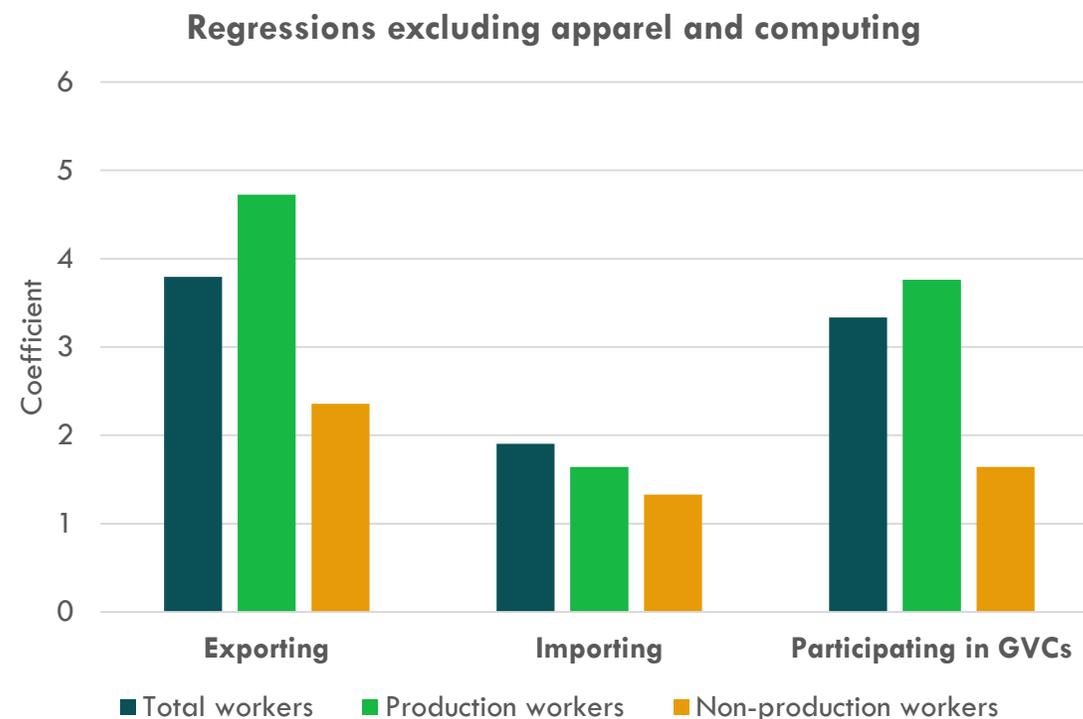
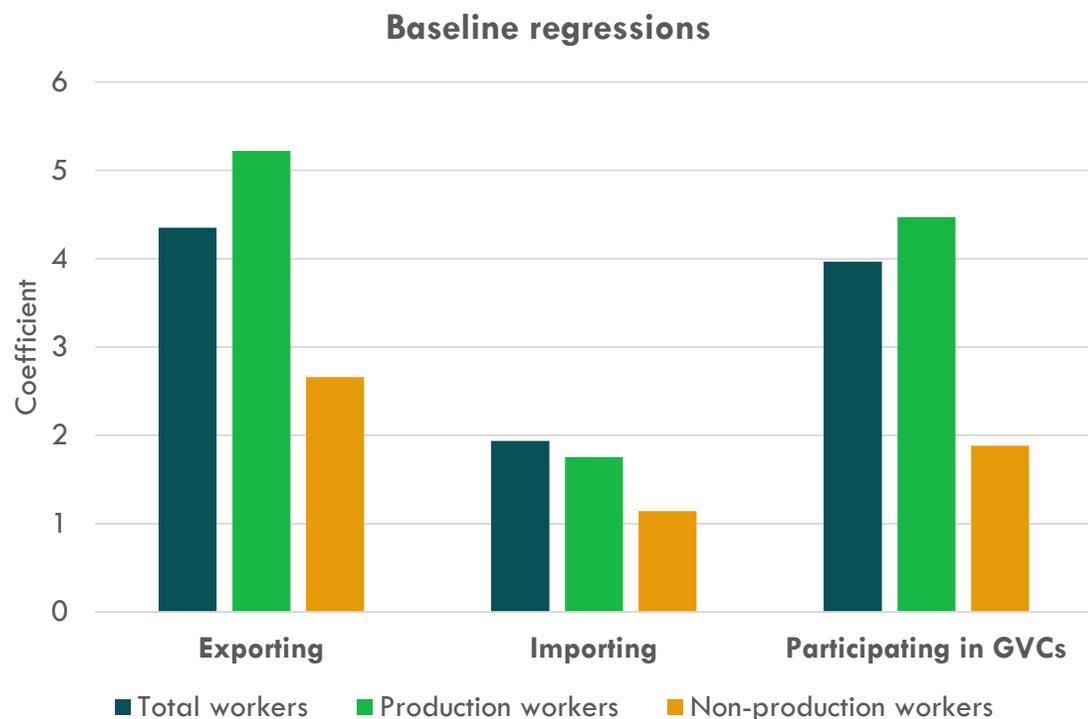


Average female share of permanent workers, exporters vs. non-exporters, by country



Source: Exporters are firms with an export share (direct or indirect) of at least 10% of total sales. Sector numbers relate to ISIC Rev. 3 sectors. The sector office, accounting and computing machinery (ISIC 30) contains only 14 firms.

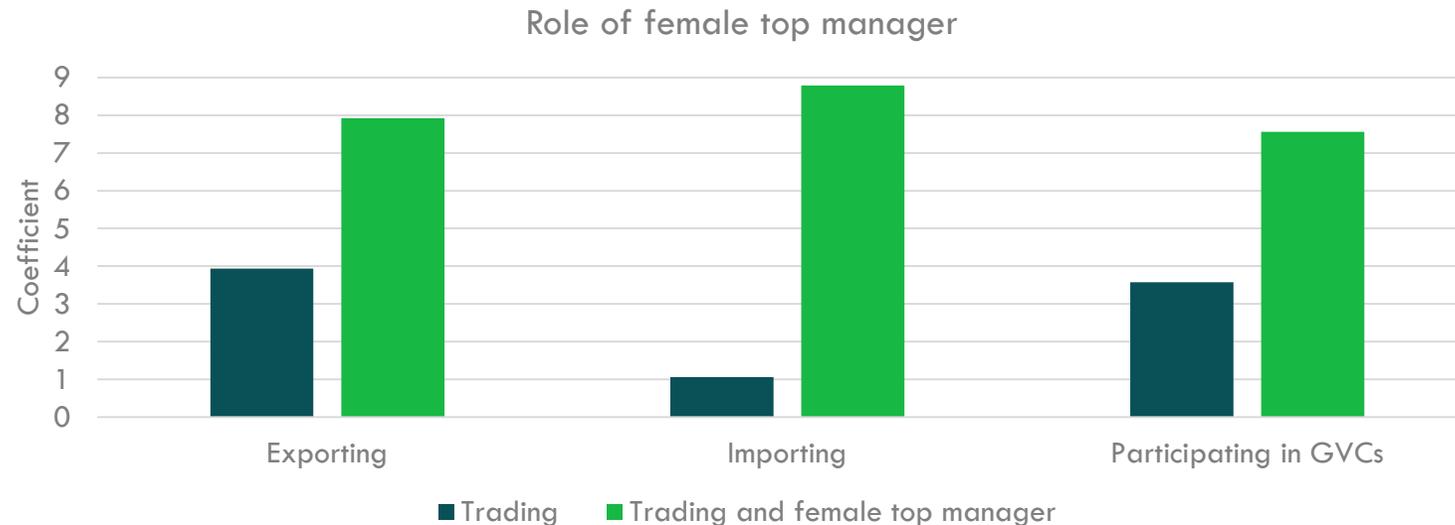
Exporting and GVC participation are positively correlated with female labor shares



Note: All regressions control for output, capital intensity, TFP as well as country-sector, subnational region and year fixed effects. All results shown are significant at the 10% level.

Trading firms with higher female ownership share and female top management show higher female labor shares

- Adding interaction terms between trade dummy and other firm characteristics
- Significant interaction term and joint significance for female ownership share and female top manager dummy



Note: All regressions control for output, capital intensity, TFP as well as country-sector, subnational region and year fixed effects. All results shown are significant at the 10% level.

THANK YOU!