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

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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)

\[ \text{fem\textunderscore sh}_{isct} = \alpha + \beta_1 \ln Y_{isct} + \beta_2 \ln k_{isct} + \gamma_1 \ln \text{tfp}_{isct} + \gamma_2 \text{trade}_{isct} + D_{cs} + D_{r} + D_{t} + \varepsilon_{isct} \]

- 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 >= 10%, and 0 otherwise;
  - Importer, imp = 1 if share of imported inputs as % of total inputs >= 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!