Discussion: “Trade and Volatility at the Firm and Plant Level” (Chris Kurz and Mine Senses)

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The views expressed here should not be interpreted as reflecting the views of the Federal Reserve Board of Governors or any other person associated with the Federal Reserve System.
Many channels through which trade could affect volatility (or vice versa)
- Exposure versus diversification
- With U.S. data, generally trading partners are more volatile in aggregate

Multiple potential measures of volatility (employment, sales, profits, hazard rate)
Mixed evidence in the literature, though most papers show openness being positively associated with volatility

- Tend to use domestic sales as the measure of volatility (e.g. Vannoorenberge 2011, Nguyen and Schaur 2011, Buch et al. 2009)
- Sometimes combine imports and exports to measure openness (e.g. di Giovanni and Levchenko 2009)
This paper

- Primary estimation strategy:
  - Using plant fixed effects to estimate using time variation generally yields small and statistically insignificant results.

- Second estimation strategy:
  - Bottom line: only exporting tends to be associated with less employment volatility relative to non-traders, only importing with more
Primary estimation strategy:

\[ \ln \sigma(\text{employment}) = \alpha_E \mathbb{1}_E + \alpha_I \mathbb{1}_I + \alpha_B \mathbb{1}_B + \text{Plant controls} + \text{Industry controls} + \epsilon \]

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Primary estimation strategy:

\[
\ln \sigma(\text{employment}) = \alpha_E I_E < 0 + \alpha_I I_I > 0 + \alpha_B I_B + \text{Plant controls + Industry controls + } \epsilon_{\text{mixed}}
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Second estimation strategy:

\[
\ln \sigma(\text{employment}) = \alpha_E \%E + \beta_E \# \text{ countries } E + \alpha_I \%I + \beta_I \# \text{ countries } I + \ldots
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Classification of exporter-only, importer-only, or both is limited; replace or combine with continuous measures akin to openness (exposure)
  - Exports/Sales, Imports/Sales, Imports/(Imports + Exports), etc

Diversification:
  - Make use of covariance information with major trading partners (i.e. it matters with whom a plant trades as well as to how many partners)
  - Use sector-level trade with the world, or simply aggregate GDP correlations with the U.S.
Try domestic or overall sales volatility for comparison to the previous literature

Exporters are large, older, and more productive
  - Each of these also tends to be correlated with lower volatility.
  - In addition to employment and age, add a measure of (labor) productivity
Concluding thoughts

- Nice paper which uses fantastic data to provide interesting new results
- Use of employment volatility relatively novel, separating imports and exports appears very important
- Surprising mixed results for the large fraction which both import and export (20% of all firms, 43% of trading firms)
  - Generally non-traders look very different from plants/firms which both import and export.
  - Results for importers only based off of a small group (2% of all firms, 7% of trading firms)
  - U.S. perhaps has atypical firm pattern: In Portugal among trading manufacturing firms, 28% only import, 31% only export, 41% do both.