Establishment Heterogeneity, Exporter Dynamics, and the Effects of Trade Liberalization
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New Perspectives on International Trade, Development, and Macroeconomics
Cowles Foundation for Research in Economics
The contribution

- The paper quantifies the effects of a trade liberalization using *dynamic* version of a Melitz model.
My discussion

- Some perspective on the paper
- Some intuition on the economics of the paper
- Quantitative results
- Welfare and relation to ACR
The starting point

- Export decision involves payment of a fixed cost today in exchange for future benefits (i.e. the possibility of exporting at a low cost, Baldwin 1986)
- Similar to an investment/option decision, hence forward looking
- Obviously in static trade models this aspect of export decision is not considered
- Does this omission matter?
The starting point

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- Does this omission matter?
- It depends on the question!
Previous research

- Ruhl (2003): It matters for understanding different responses of firms to temporary (Business cycles) v/s permanent shocks (trade liberalizations)
- Das, Robert and Tybout (2007): It matters for evaluating the effectiveness of export promoting policies
- Alessandria and Choi (2008): It does not matter for aggregate net export dynamics
- Lande Schmeiser (2009), Morales et al. (2011): It matters for firms decision of where to export
This paper

- Dynamic export responses matter for evaluating effect of trade liberalizations
  - Trade responds more (relative to a static framework) to liberalization
  - Consumption overshoots its long run level (as opposed to undershooting in a static framework)
  - Welfare benefits of liberalization larger than in static framework
Export decisions in a two period model

\[ \Pi(t) \]

\[ \Pi(x) \]

Static threshold

\[ \Pi(t+1) \]

\[ \Pi(x) \]

Static threshold
Export decisions in a two period model

\[ \Pi(t) \times \Pi(x) \]

\[ \Pi(t+1) \times \Pi(x) \]

\[ \Pi(t) \times \Pi(x) \times \Pi(x, E) \]

\[ \Pi(t+1) \times \Pi(x) \times \Pi(x, E) \]
Export decisions in a two period model

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Dynamic threshold

\[ \Pi(t) \]

\[ \Pi(x) \]

Dynamic export gains

\[ \Pi(t+1) \]

\[ \Pi(x, E) \]
Lower tariffs increase static entry, but also increases dynamic gains from exporting, hence export response to lower tariff is larger in the dynamic economy.
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Why overshooting?

- Hysteresis implies that exporters in \( t + 1 \) have lower productivity. Upon entry, surge in exports, later on fall in exports due to fall in TFP: overshooting.
Moving to the quantitative part

- What does the papers misses?

• Nothing!!
• General equilibrium
• Capital accumulation
• Comprehensive calibration (matches macro and micro moments)
• Evaluation of welfare using transition
• Extensive sensitivity analysis
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Strong (testable) aggregate implications

- Large (can get in a static model) and persistent (can’t get in static model) increase in trade after liberalization.

![Graph showing the transition dynamics from 8 percent tariff to free trade](image)

Note: The average productivity is normalized with the steady state distribution to have zero-mean and unit-variance.
Strong \textit{(testable)} aggregate implications

- Large (can get in a static model) and persistent (can’t get in static model) increase in trade after liberalization

\begin{itemize}
  \item Overshooting in tradable TFP
\end{itemize}
Welfare evaluation

• If you simply apply ACR welfare formula to compute welfare $1 - \lambda^{-1/\epsilon}$, $\lambda = 0.96$, gains from trade in the economy you get a range $[.41\% - .82\%]$ depending on elasticity.

• Welfare gain in the model with dynamic export decision (No material case) you get a range $[.5\% - .7\%]$ depending on whether you include transitional gains or not.

• Difference in welfare gains from complete tariff elimination between static and dynamic model $< 0.3\%$! (table 6)

• Overall: hard to push quantitative importance of dynamic decisions for welfare.