“Liquidity Constrained Exporters” by Thomas Chaney
Discussion

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The Paper

- **International Elasticity Puzzle (IEP):**
  - why does trade react so little to Exchange Rate (ER) fluctuations?

- **a new explanation:**
  - because some firms are financially constrained!
    - fixed export cost in foreign currency
    - no bank lending → use domestic profits + liquidity shock
  - ER depreciation
    - domestic exporters more competitive → revenues ↑ → some entry
    - higher fixed export cost → some exporters exit
  - overall trade volumes increase by less or fall

- **simple idea, neat model**
Comments: Outline

- explaining the IEP:
  - key assumptions and mechanism
  - a competing explanation
  - existing empirical evidence
  - new tests

- robustness and alternative modelling
  - liquidity
  - alternative models of financial development and trade
Key Assumptions & The Mechanism

- Melitz (2003) model of heterogeneous firms $x \sim F_x(\cdot)$
- firms need to self-finance the fixed cost of export $C_f$
- currency mismatch:
  - foreign-currency denominated fixed cost of export $w^* C_f$
  - domestic-currency denominated self-financing $wA + \pi(w, x)$
- ER vs tariff shocks
  - with financial constraints → International Elasticity Puzzle
    - depreciation → export revenues ↑ + exporters entry/exit → trade ↑↓
    - tariffs ↓ → export revenues ↑ + limited exporters entry → trade ↑
    - trade reacts less to a 1% depreciation than to a 1% drop in tariffs
Ruhl (2008) = extensive margin of export in a dynamic model:

- firms become exporters if PDV of expected profit flow is high enough
- ER fluctuations have little persistence
- firms do not react to the ER \(\rightarrow\) little effect on trade participation
- firms do react to tariffs \(\rightarrow\) large effect on trade participation

Fitzgerald and Haller (2015) evidence on Irish firms

- extensive margin reacts less to ER
- consistent with both models
Tests

- specific predictions of Chaney (2015)
  - after depreciation, the extensive margin increases less if
    - the country of origin has less developed financial markets
    - sector-level external finance dependence is higher
    - sector-level competition is lower
    - the destination country has higher fixed export costs

- possible tests: interaction analysis
  - cross-country panel à la Manova (2013) with (double) interaction
    - financial variables*ΔER
Robustness and Alternative Modelling

- how to interpret $A$ and its distribution?
  - what’s the source of this liquidity?
  - country- or sector-specific distribution of $A$? empirically relevant

- alternative to $A$
  - firms cover a share $\phi$ of the fixed export cost with domestic profits
    
    \[ \pi_d(x) \geq \phi C_F w^*, \]
  - obtain a $\bar{x}(\phi)$ schedule analogous to your $\bar{x}(A)$
  - gauge $\phi$ from the data and test your mechanism
  - may consider $\phi \equiv \lambda \delta$
    
    \[ \lambda \] captures financial constraints, specific to firm, sector or country
    \[ \delta \] accounts for local distribution cost, denominated in foreign currency
    \[ \text{Campa and Goldberg (2010): } \delta \in [0.3, 0.5] \text{ in 21 OECD countries} \]
    \[ \delta \] may be specific to sector or country of destination
Manova (2013)

- similar assumptions:
  - Melitz + financial constraints to cover the fixed cost of export
- similar theoretical result
  - financial frictions hinder trade (both extensive and intensive margin)
- empirical evidence from sector, country-pair panel data
  - better financial development spurs trade (volume + # markets)
  - more so in sectors with higher external financial dependence
  - more so if the destination country has high fixed costs/bad institutions

- are financial constraints binding only (or mainly) for exporters?
Financial Development and Trade

- alternative view based on Bonfiglioli, Crinò and Gancia (2015)
- the idea
  - financial constraints bind at the entry stage (before knowing $x$)
  - entering firms chose innovation intensity
    - lower intensity $\rightarrow$ smaller innovations $\rightarrow$ lower variance of $x$
  - financial frictions $\rightarrow$ higher innovation cost
    - firms choose lower innovation intensity
    - lower variance of $x$
    - ex-post, fewer firms become exporters $+$ lower export revenues
- no need to assume exporters are (more?) financially constrained
Conclusions

- novel explanation for a long-standing puzzle
- neat model
- need empirical test against main alternative explanation
- open debate on financial constraints in trade models