Exchange Rates, Prices, and Trade

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Exchange Rate Passthrough and PPP in Data

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PPP fails even for traded goods

- Engel (99) RER decomposition
- CPIs & PPIs from 6 countries, and split sectors into traded (eg. food) and non-traded (non-shelter services)

\[ q_t = x_t + y_t, \]
\[ q_t = s_t + p_i^* - p_t, \]
\[ x_t = s_t + p_i^{T*} - p_i^T, \]
\[ y_t = \beta(p_i^N - p_i^{T*}) - \alpha(p_i^N - p_i^T). \]
PPP failures are not due to price stickiness alone

- Gopinath and Rigobon (2008) showed that at-the-dock passthrough conditional on price change still incomplete
  - Micro data from US Import/Export Price Indices
  - ERPT only 22% for imports at the dock

- Cavallo, Neiman and Rigobon (2014, 2015) showed that even RER at time of product introduction co-moves with NER (...next session...)
  - Online data from global retailers

- Blanco and Cravino (2019) focus on CPI reset prices, providing a new decomposition of the RER:
  - Micro data from CPIs in 5 countries
  - Show that the reset RER co-moves closely with the NER

\[ rer_{in,t} = \underbrace{\hat{p}_{i,t} + e_{in,t} - \hat{p}_{n,t}}_{\equiv rer_{in,t}} + \underbrace{[p_{i,t} - \hat{p}_{i,t}] - [p_{n,t} - \hat{p}_{n,t}]}_{\equiv rer_{in,t} - rer_{in,t}}. \]
Currency of invoicing really matters

- Gopinath, Itskhoki & Rigobon (2010) found that there is a large difference in the exchange rate passthrough for US imports priced in dollars (25%) versus non-dollars (95%).

- Dominant Currency Pricing (US Dollar) → passthrough varies across countries depending on the share of imports priced in dollars (Boz, Gopinath, & Plagborg-Moller (2019))
Amiti, Itskohki & Koning (2014) use data from Belgian exporters to show that large firms with high import shares have lower ERPT on export prices.

- Custom's firm-level data on imports by source country and exports by destination + domestic cost data → import intensity as a share of variable cost

Amiti, Itskohki & Koning (2019) show that large Belgian manufacturing firms exhibit strong strategic complementarities and have a lower cost-passthrough, which lead into lower exchange rate passthrough.

- Firm-Level data domestic price, marginal cost, competitors prices
Local Distribution Costs Matter at the Consumer Level

- Burstein, Neves,& Rebelo (2003) → wholesale/retail surveys to estimate distribution margins (40% in US, 60% in Argentina), and CPIs to study RER dynamics

- Goldberg and Campa (2010) show CPI passthrough is reduced by 1/3rd when distribution margins are taken into account (dampening effect), but also note that local distribution services often use imported inputs (enhancing effect).
  - Input-Output tables and CPIs from 21 developed countries
The datasets have improved a lot over the years

- No just in size or coverage, but also with details needed to test alternative mechanisms

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- Retail micro data → the Billion Prices Project (more on this after the break...
References