Discussion of

Real Exchange Rate Adjustment In and Out of the Eurozone

by

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Discussion Plan

- Quick Review of Results
- The Model and Trade Structure
  - PCP at the Dock
  - Real Rigidites
  - How Big is this Cost?
- Robustness and Next Steps on Empirics
  - Differences In and Out of the Eurozone
  - Quick Empirical Suggestions
- Corroborative Results from Micro Data
- Summarize and Conclude
Result 1: “Good q and Bad q”

- Consider the Engel (1999) decomposition of the RER:

\[ q = (1 - \varrho) \left( p_N^* - p_T^* - (p_N - p_T) \right) + \left( p_T^* + s - p_T \right) \]

\[ q_n \text{ or “Good q”} \quad q_T \text{ or “Potentially Bad q”} \]

- \( q_T \neq 0 \) captures LOOP violations. What can cause these?:
  1. Transport costs or different sourcing patterns
  2. Non-traded inputs included in price of traded good
  3. Heterogeneity in desired markups across markets
  4. Local currency pricing and NER movements

- 1-2 are innocuous, while 3-4 imply inefficiencies (“bad q”)

- \( q_T \) in floaters reflects all 4, but \( q_T \) for pegs only reflect 1-3.

- \( q_T \) variation much more prominent in \( q \) variation in floaters. Gain from eliminating 4 with peg is quantitatively meaningful.
Result 2

- On its own, doesn’t prove which $q$ movement was better.

- What if $q$ adjustment in Eurozone lacked LOP deviations but was slow/tiny, while $q_n$ and $q_T$ adjusted a lot in floaters?

- Simulations of flexible model shows an increasing relationship between $q$ and $A_T$, a benchmark for efficient adjustment.

- Eurozone exhibits this relationship more strongly than floaters.
Result 3

• If Non-traded inputs matter, we can (with symmetry) write:

\[ q_T = (1 - \tilde{\varrho}) \left( p_N^* - p_T^* - (p_N - p_T) \right) + (\tilde{p}_T^* + s - \tilde{p}_T), \]

where \( q_n \) is the same term as from before.

• Movements in \( q_n \) generate movements in \( q_T \) for Eurozone countries, implying non-tradeds might in fact matter.

• Gives us more confidence that \( q_T \) movement is in fact the “bad” kind
PCP at the dock and Substitutability

• Authors acknowledge that PCP at the dock is commonplace.

• BLS export data shows $>90\%$ of U.S. exports are PCP

• Under what conditions in the model and in the world will this not matter?
• While UK consumer price is fixed, ER doesn’t matter
• Distributor profits/losses are returned with complete markets
• What if we add those non-traded components?
• In model, very low substitutability, so little changes
• What if we add substitutability with local producers?
• Most trade, I believe, is in differentiated manufactured inputs
And what about outside substitutes?
China’s price could be fixed or adjusting
• Consider decentralized structure where importers take PCP trade prices and set LCP retail prices with pricing power

• Again, as LCP price is fixed, nothing happens

• But when LCP price changes, influenced by the PCP price

• What if world is state-dependent, not Calvo? Distributor adjusts stickiness of LCP price as a function of PCP price.
PCP at the dock and Upstream/Downstream Stickiness

- When would this matter most? When trade prices stickier than retail (or retail pricing state-dependent).

- Evidence that Upstream is Stickier than Downstream
  - Nakamura Steinsson (2008)
  - Goldberg and Hellerstein (2008) on beer prices
Real Rigidities?


- If there is some share of traded prices which in fact are sticky and PCP, the benefits of flexibility will be amplified.

- If PCP at dock example from previous slides is correct, FX movement ameliorates concern of distributor that other distributors did not receive shock.

- Charles, over email, felt strongly that consumer-good PCP is very rare in practice. I thought hard and think he’s right. But if pushed, a few possible candidates:
  - Travel services (1/4 of services exports; 7% of merchandise exports; probably higher shares of traded final consumption)
  - Goods over the Internet where repricing is done automatically.
How Big is this Particular Cost?

- LOOP deviations caused by LCP+NER are bad in way analogous to arguments about cost of inflation

- If there’s cost shock but only some prices can change, this produces excess or inefficient relative price changes

- As authors acknowledge, only 1 component of decision to peg

- So, how big is it?
  - Calvo pricing: Probably large. e.g. Levin et al. (2005).
  - State-dependent pricing: Probably small. e.g. Burstein and Hellwig (2008)

- Some examples of evidence of state-dependent pricing, particularly in tradable sector
  - Gopinath and Itsikhoki 2010
  - Gagnon 2009
  - Gopinath, Itsikhoki, and Neiman 2011
Empirics: Differences In and Out of Eurozone?

• Harder to find true matches of products?
  • Chain stores with centralized pricing more prevalent in Eurozone?
  • Eurozone regulations influence production cost (labels, etc.)?
  • Eurozone regulations explicitly influence LOOP deviations?

• Measurement error larger outside the Eurozone?

• Differences in stickiness in and out of Eurozone?

• Why does “mixed” look “somewhere in-between” Eurozone and floaters, instead of just like floaters?

• Perhaps details elsewhere, but little said about the data
Empirics: Quick Ideas

• Can we look to other countries to see if peg or if Eurozone? Denmark would be a good example

• Can compare results for long horizon changes vs. short horizon changes? Large-scale changes vs. small-scale changes?

• Can focus on country pairs which switched regimes in 1999?
LOP Deviations in Internet Prices of Identical Good

- Data from Cavallo, Neiman, and Rigobon (2012) in Asia
- Prices relative to Japan for 1000s of goods
LOP Deviations in Internet Prices of Identical Good

- Data from Cavallo, Neiman, and Rigobon (2012) in Europe
- Prices relative to Germany for 1000s of goods
Summarize and Conclude

• A simple point (here and in their other work) proves powerful and data bears it out with surprising strength.

• Results in Engel (1999) might have been attributed to measurement issues or non-traded costs.

• True LOOP deviations from NER are huge relative to total RER adjustment: A very interesting result!

• Authors are careful about 2 claims worth repeating:
  • More “bad $q$” $\neq$ “worse” – entire GE adjustment changes
  • Many other costs and benefits of pegging