Discussion of:

Menu Costs, Trade Flows, and Exchange Rate Volatility

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Motivation of Paper

• Recent sticky price models explain FX-induced price dynamics

• But we generally care about prices to learn about quantities

• So, instead of running:

$$\Delta \ln P_{Imports}^{ijt} = \beta_0 + \sum_{k=0}^{8} \beta_{e,k}\Delta e_{jt-k} + \sum_{k=0}^{8} \beta_{y,k}\Delta y_{jt-k} + Z_{ijt} + \epsilon_{ijt},$$

he runs:

$$\Delta \ln \text{Imports}_{ijt} = \beta_0 + \sum_{k=0}^{8} \beta_{e,k}\Delta e_{jt-k} + \sum_{k=0}^{8} \beta_{y,k}\Delta y_{jt-k} + Z_{ijt} + \epsilon_{ijt},$$
Motivation of Paper

\[ \Delta \ln \text{Imports}_{ijt} = \beta_0 + \sum_{k=0}^{8} \beta_{e,k} \Delta e_{jt-k} + \sum_{k=0}^{8} \beta_{y,k} \Delta y_{jt-k} + Z_{ijt} + \epsilon_{ijt}, \]

- What are key benefits of doing this?
  - Nice re-focusing onto object of deeper interest
  - Better variation to exploit (Entire universe vs. sampled data)
  - Less data quality issues

- Paper then compares IR to 1% USD appreciation in sticky price models vs. cumulative sum of \( \hat{\beta}_{e,k} \)

- Asks: “How well do pricing models match data?”

- Answers: Very poorly.
Motivation of Paper

• In other words, the existing literature is about:

  Passthrough, Stickiness → Demand elasticity, Super-elasticity

  FX Shocks → Price Changes

• and he wants to explore implications for:

  Passthrough, Stickiness → Demand elasticity, Super-elasticity

  FX Shocks → Price Changes → Trade Changes
General Assessment

• A clear, well-written, and interesting paper!
• Nicely nests many models, interacts well with literature
• Careful and thoughtful empirics, slices data many ways

• My main critique: Is this a fair fight?

Once we have $\hat{\beta}_{e,k} \approx 0$, don’t we know models with high LR elasticities have no chance? True for any passthrough rate.

Even if we could get very short-run dynamics to match, given they miss terribly in long-run, would this be success?
IR in Closed Economy
(e.g. money shock)

IR in Open Economy
(e.g. FX shock)

Model 1 with rigidities

Model 2 with rigidities

Flexprice model

Data
IR in Closed Economy
(e.g. money shock)

Model 1 with rigidites
Flexprice model

Model 2 with rigidites

IR in Open Economy
(e.g. FX shock)

Model 1 with rigidites
Model 2 with rigidites

Data
Macro vs. Micro Elasticity

- Paper smacks into Armington elasticity debate

- Eaton and Kortum, Broda and Weinstein: $\sigma \in (4, 8)$
  Estimates from relative import shares vs. relative prices

- Harberger, Heathcote and Perri: $\sigma \in (0.5, 1)$
  Estimates from time-series variation in aggregate import series

- Once author gets $\hat{\beta}_{e,k} \approx 0$ for imports, it’s clear models with high implied elasticities have no chance.

- Price rigidities become a side show. Even if there’s overlap for 1-2 quarters, wouldn’t be compelling.
What’s the Latest on Armington Elasticity Debate?

• Feenstra, Obstfeld, and Russ (2012):

$$C = \left( (C_H)^{\frac{\sigma_B-1}{\sigma_B}} + \left( \int_{i \in \Omega} (C_{F_i})^{\frac{\sigma_W-1}{\sigma_W}} \frac{\sigma_W}{\sigma_W-1} \frac{\sigma_B}{\sigma_B-1} di \right) \right)^{\frac{\sigma_B}{\sigma_B-1}}$$

Use data on domestic varieties to distinguish $\sigma_W$ from $\sigma_B$

• Leibovici and Waugh (2012)
  - Document a price elasticity $\approx 0.3$ and income elasticity $> 1$
  - Fit U.S. import dynamics very well by imputing SDF
  - Suggests problems with some estimates of macro elasticity
Back to this Paper’s Estimates

- **Macro vs. Micro debate**
  - Can author use this rich data, available since 1989 to weigh in?
  - Are categories narrow enough to reproduce high $\sigma$ from cross-section?

- **Import vs. Export Asymmetry is Interesting (New?)**
  - Is this new?
  - Any ideas on why this is (in LR)?

- **In sum:** Figure out LR stuff first (vs flexprice model), and then worry about SR dynamics
Fruitful Next Steps?

- A disconnect between model and data on strategic complementarities. Potential gains from working on it.

- Model
  - 2 countries, complementarity set via elasticity and super-elasticity parameters
  - Firms forecast of impact of FX on aggregate price index

- Data
  - All countries treated symmetrically (logs)
  - All bilateral exchange rates treated symmetrically

- But this doesn’t seem right. Depreciation against all trading partners seems different for Costa Rican exports than a depreciation against just Costa Rica.
Conclusion

- Nice and clearly written paper. Elasticities/super-elasticities that match pricing patterns are too large.

- Too much focus on SR dynamics in model. If trade values don’t vary with FX, we need a LR price elasticity near one.

- Strength of complementarities vary a lot in the data in a way they don’t in the model.

- Potential future dividends from:
  - Exploring those complementarities in the data
  - Adopting model (2 exporters and 2 exchange rates?)