Discussion: How Important are Trade Prices for Trade Flows?

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discussed by Philip Sauré, SNB*

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Summary: motivation and question

Observation: the value of trade flows respond little to exchange rate changes (in the short run).

Suspect: sticky prices - if prices do not respond to exchange rates, trade values will not.

Objective: match response of US import and export values with a model that accounts for adjustment frequencies of nominal border prices.

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The US as a special case:

The fact that 90% (97%) of US imports (exports) are priced in dollars (Gopinath and Rigobon 2008) generates a fundamental asymmetry:

- local currency pricing (LCP) for imports
- producer currency pricing (PCP) for exports

Strong nominal price rigidities thus imply that exchange rate changes induce...

- ...no immediate change in border prices of US imports
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Summary: Theory

Model ingredients:

- For partial pass-through: variable markups, complementarities in price setting, imported intermediates

  Kimball-type demand

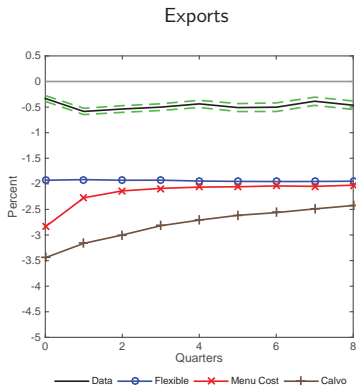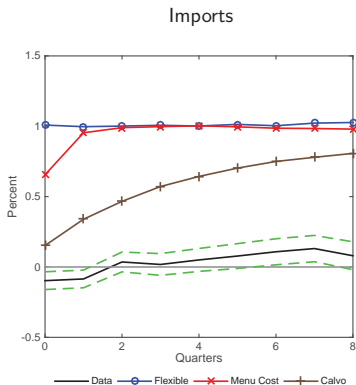 $$q(p) = [1 - \varepsilon \ln(p/P)]^{\theta/\varepsilon} \tag{1}$$

  Production costs

  $$c(e, a) = e^{\phi}/a \tag{2}$$

- For transition period: menu costs, Calvo calls

Summary: regression results

The value of US trade flows in response to a 1 % exchange rate appreciation; estimated (pooled regressions) and modelled

Summary: regressions result

Disaggregation along the model's key dimensions

- strategic complementarities (market shares)
- elasticities (Broda-Weinstein; Rauch)
- share of imported intermediaries
- differences in price stickiness

reveals that the data (or the model) does not deliver what it should.

This is discomforting: the factors that we know matter for the ERPT do not seem to matter for volumes.

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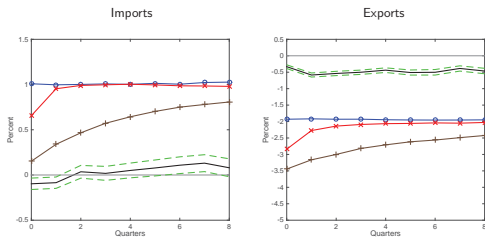reveals that the data (or the model) does not deliver what it should.

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Assessment

Next,...

- ...take a fresh look at the puzzle.
- ...consider two possible explanations:
  - difference between border prices and consumer prices.
  - possible biases of estimates.

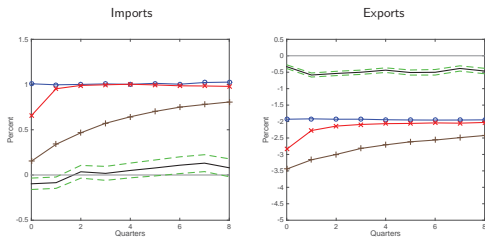# Assessment: fresh look at main result

Is the main concern really the transition period?

Any price rigidity with only transitory effects will have problems in matching levels.

Changes that fix the long-run (flex price equ.) level may make the short-run look better.
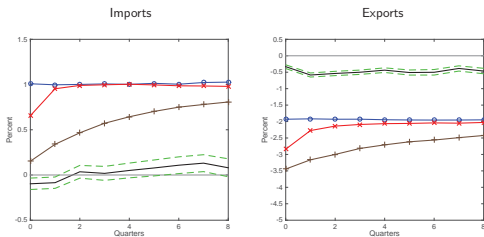
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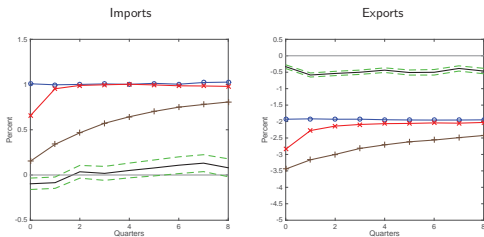
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Assessment: border vs consumer prices

HOW?

The paper tacitely assumes that border prices are consumer prices (ultimate buyer prices).
But the price chain is longer.

$$P^{producer} \rightarrow P^{border} \rightarrow P^{consumer}.$$

- there are more layers of nominal rigidities than the one affecting border prices.

- consumer prices are denoted in local currency.

- alternative benchmark: *total* stickiness to all nominal prices (Gopinath 2015: "prices in their currency of invoicing are not very sensitive to exchange rates at horizons of up to two years.")

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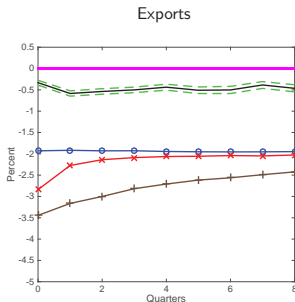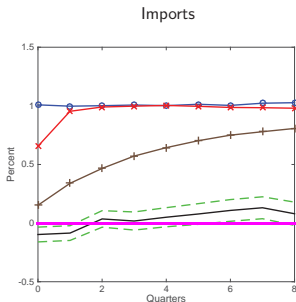But the price chain is longer.

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Sticky consumer prices in local currency.
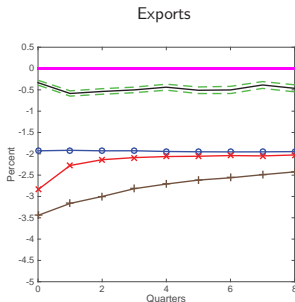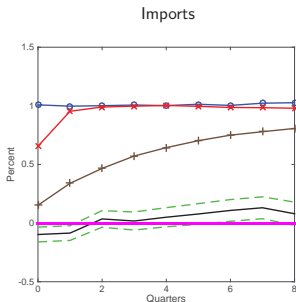
Totally rigid *consumer* prices

Brainless! But: every effect that mutes reaction of consumer
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Assessment: border vs consumer prices

Wedges between border and consumer prices.

- Local distribution costs.
    - Burstein et al 2003: "distribution costs are very large [...] more than 40% of the retail price in the US and roughly 60% [...] in Argentina.
    - Lewis 2016: "local distribution costs cannot sufficiently explain [that] import prices at the dock do not pass through changes in the exchange rate". But they may nevertheless be important for **volumes**.

Assessment: border vs consumer prices

Once the level is fixed, turn to transition...

- The nature of prices rigidities differs.
    - Cross-border contracts specify prices *and* quantities.
    - Consumer price rigidities affect prices only (leaving quantities to adjust).
- Other factors of transition dynamics:
    - Consumers' habits / inattentive purchasers can mute initial quantity effects and delay pass-through to consumer prices.
    - Time-intensive costs of entry generate delayed responses.

Assessment: estimated exchange rate elasticities

Potential biases in the standard ERPT regression at the monthly levels:

$$\Delta(tv_{k,t}) = \alpha_k + \sum_{m=0}^{T} \beta_m \Delta(e_{t-m}) + X_{k,t}\gamma + \varepsilon_{k,t}, \qquad (3)$$

- standard attenuation bias due to measurement of exchange rate (end of month, average monthly, forward?)
- Fundamental endogeneity of the exchange rates (Corsetti et al 2008, Gopinath et al 2010, Forbes et al 2016).

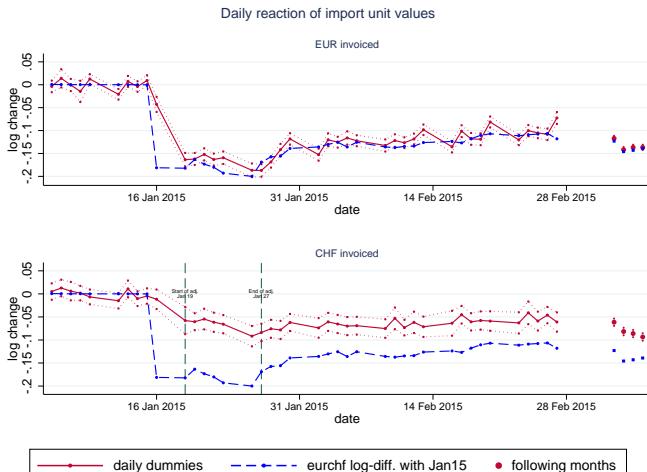My guess: not likely to solve the puzzle.

Estimated exchange rate elasticities: Swiss view

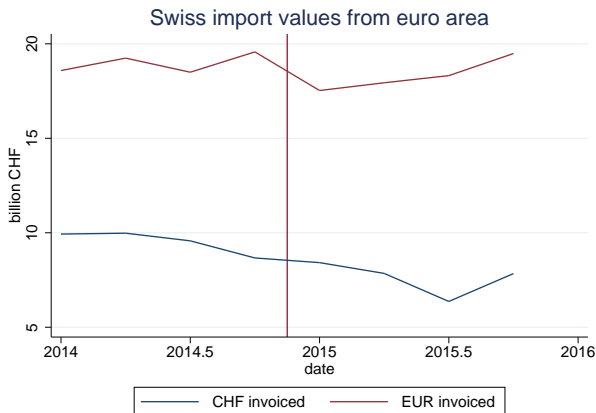EURCHF shock in January 2015: unanticipated and exogenous to firm pricing.
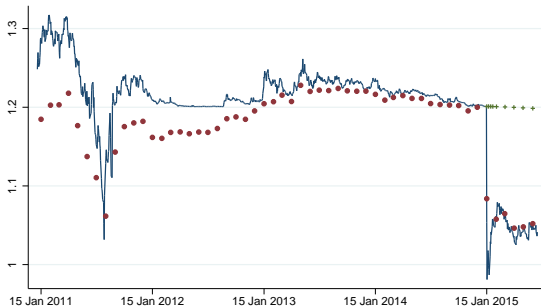
Estimated exchange rate elasticities: Swiss view

Fast ERPT into on import unit values (daily scale!).

Daily reaction of import unit values

Estimated exchange rate elasticities: Swiss view

Nevertheless, the response in import flows was weak.

Swiss import values from euro area

Overall, this paper...

- is well-written with a "we have a problem" message: sophisticated models for pricing don't match volumes.

- should account for the step $P^{border} \rightarrow P^{consumer}$ to strengthen its focus.

- reminds us that there is action behind the border, which may actually impact cross-border pricing strategies.

- shows us that we should think about reasons of sluggish quantity response to prices adjustments (J-curve literature).

- should strengthen the disaggregated regression results (currently like robustness checks): are effects of border prices offset by differences in distribution costs; relation of stickiness at border / in shop;....

THANK YOU!