Discussion of Auer, Burstein, Lein

"Price and Consumption Responses to Large Exchange Rate Shocks: Evidence from the Great Appreciation in Switzerland"

Oleksiy Kryvtsov (Bank of Canada)

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Summary of the paper

- ▶ Study passthrough of CHF appreciation to consumer prices after the removal of the CHF/EUR floor on Jan 15, 2015

- ▶ Exploit detailed micro data for groceries (Homescan)
  - ▶ P_{it}, Q_{it} – where i identifies hhld/product/retailer/location/ dom-imp
  - ▶ t – monthly from January 2010 to June 2016

- ▶ Key findings:
  - ▶ Aggregate response is small, even one year after the shock
  - ▶ Retailers accelerate price decreases, but scale down their avg size
  - ▶ Some expenditures shift from dom to imp groceries
  - ▶ Shift larger for lower income hhlds or in locations near the border

Main comments

1. Micro price responses across imported products
2. Micro price responses across price spells
3. Aggregation effects
4. Expenditure shifts
5. Retailer and location effects
6. Decomposing the passthrough

1. Micro price responses across imported goods

▶ Further **explore cross-section variation** to understand the nature of slow price response

  ▶ Even with identified shock, sample is short

  ▶ Focus on imported EANs

▶ What is the variation of price responses across 290 products?

  ▶ More price-flexible products respond quicker (food vs semi-durables)?

  ▶ More price-volatile products respond quicker (DVDs vs tobacco)?

  ▶ Products with higher market share respond slower?

  ▶ Products with larger distance to border respond slower?

  ▶ Correlation between frac of decreases and their avg size at micro level?

# 2. Micro price responses across price spells

- ▶ What is the variation of **price responses across price spells**?
    - ▶ Compaare p-spells before, during, after the shock
    - ▶ Shift toward shorter spells during the shock? After the shock?
    - ▶ Size of p-change cond on p-spell? (e.g., *Gopinath-Itskhoki-Rigobon 2010*)

- ▶ **Response of dispersion** price spells and price changes
    - ▶ Dispersion of price spells → weaker selection in time-dependent models
      Carvalho-Schwartzman (2015)
    - ▶ Dispersion of price levels comoves positively with inflation
      Sheremirov (2016)
    - ▶ Synchronization of price changes to gauge pricing complimentarities
      Gorodnichenko et al. (2017)

3. Aggregation effects

► One-sector menu cost model has too few small price changes

► Small price changes may be due to **mix of flex/sticky sectors**
  ► Matching products/sectors could be more useful
  ► Responses at disaggregate level can be stronger
  ► Aggregation effects can contribute to slower response

► *Carvalho-Kryvtsov (2017)*: implications of **price selection**
  ► Prices that adjust to an upward shock tend to be below population avg
  ► Substantial price selection at product level (UK, US, Canada micro data)
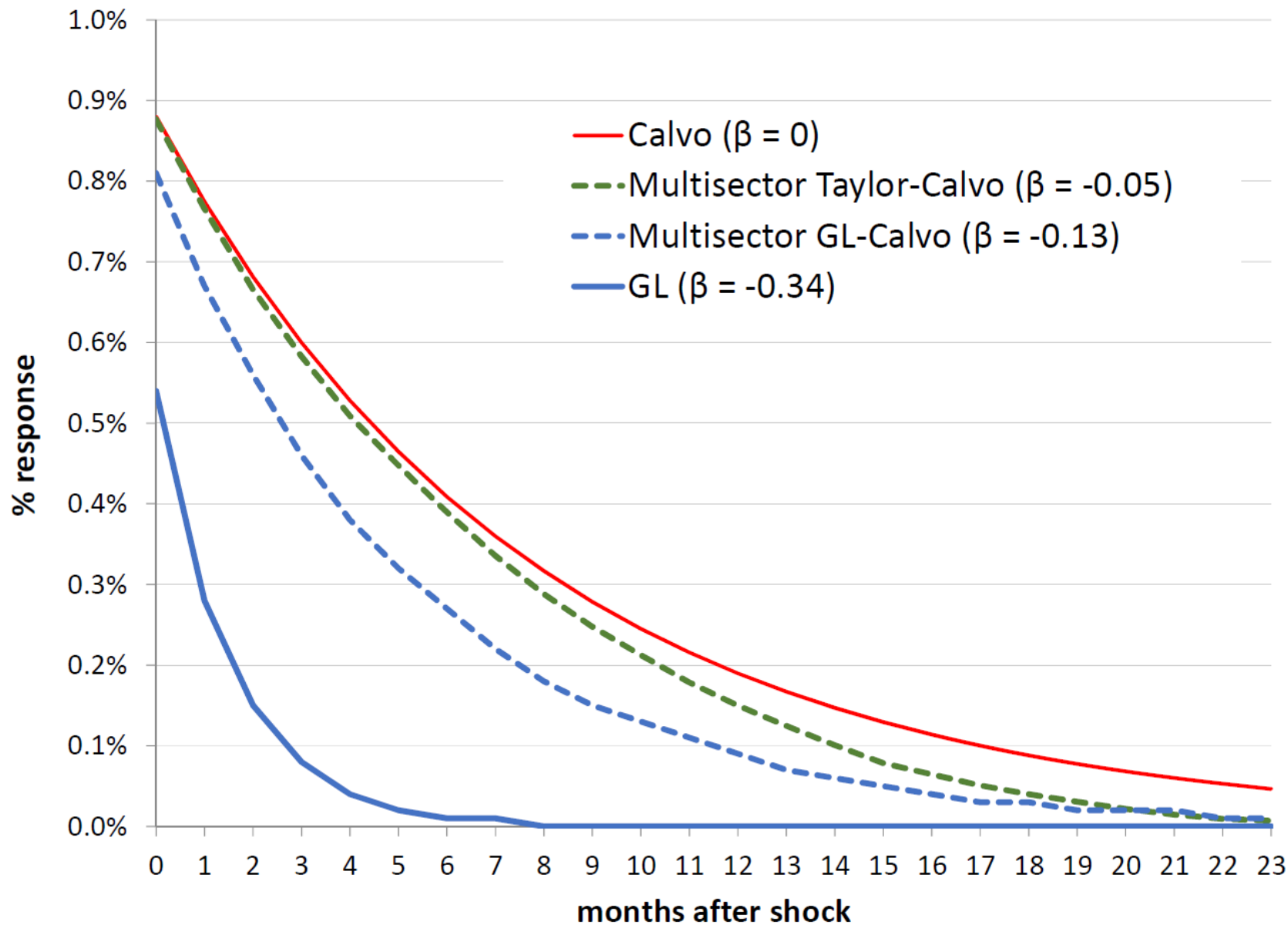 ► Aggregation washes out most of price selection – slower agg response

Output responses to +1% money growth impulse
Carvalho-Kryvtsov (2017)
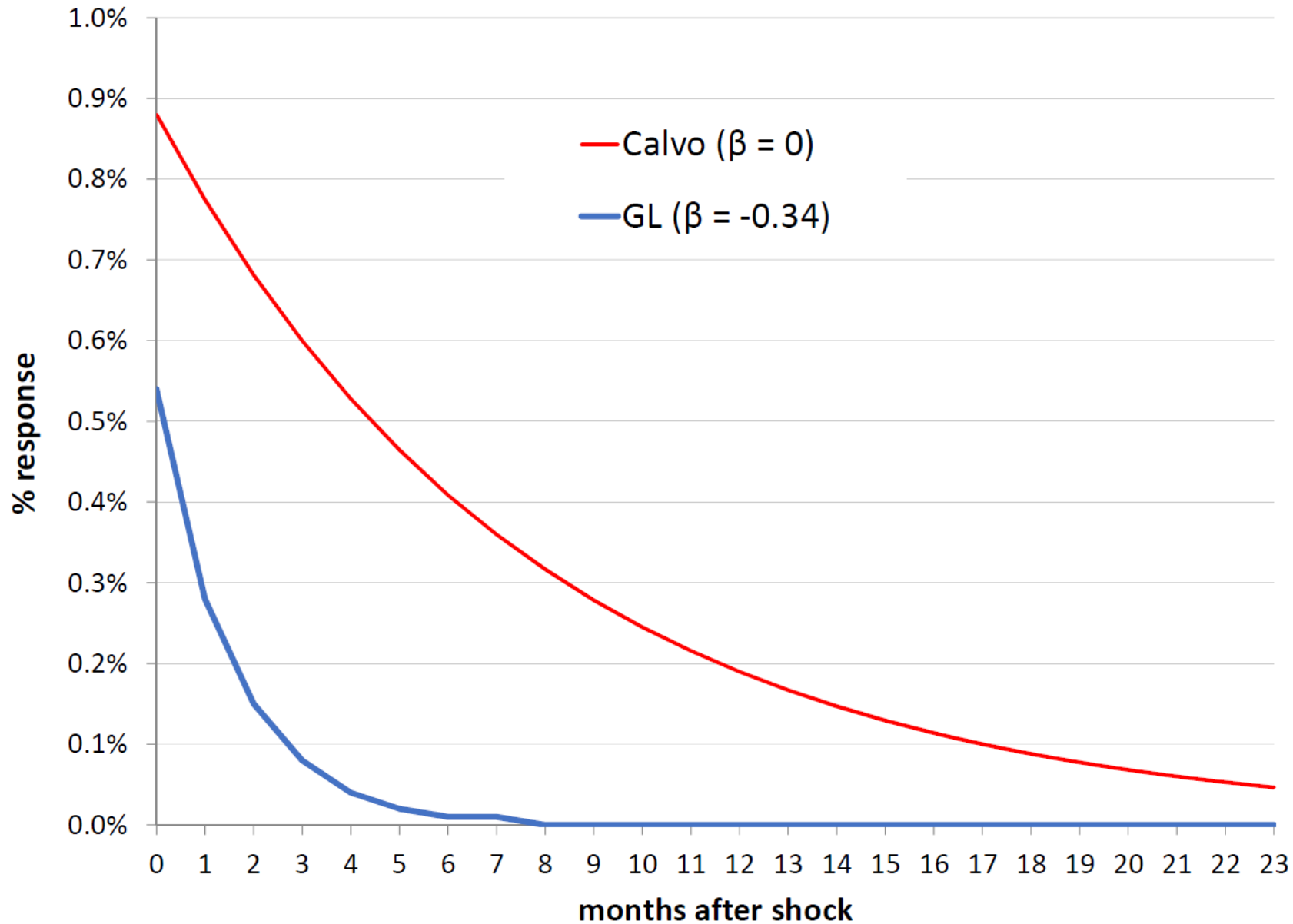
Output responses to +1% money growth impulse
Carvalho-Kryvtsov (2017)

4. Expenditure shifts

▶ Standard price indices do not incorporate high-freq weights

    ▶ Compare fixed-weight price index to expenditure-weighted index
        Coibion-Gorodnichenko-Hong (2011)

▶ **Do not observe prices posted by retailers**–selection effects?

    ▶ Measure passthrough in the absence of switching

    ▶ Is there much dispersion within location? E.g., spatial dispersion
        Kaplan et al (2017)

▶ **Weak link between agg inflation and hhld-level inflation**

    ▶ Hhld prices paid for the same basket vary a lot
        Kaplan and Schulhofer-Wohl (2017)

    ▶ Perceived inflation influence inflation expectations and hhld decisions
        D'Acunto et al. (2017)

5. Retailer and location effects

- **Large retailers** (Migros, Coop, Denner) versus small retailers
  - Larger retailers – smaller passthrough?
  - E.g., chains coordinate prices across their stores/locations

- **Multi-product pricing**
  - Strategic pricing of brands for same products (*Chevalier-Kashyap 2015*)
  - How many reductions are reversed, like sales?

- Compare **variation across locations**
  - Local conditions may affect the passthrough (*Corsetti-Dedola, 2005*)
  - Differences across locations (e.g., product/quality composition)
    Burstein-Jaimovich (2012)

6. Decomposing the passthrough

- ► Total passthrough = border + distribution + retail markup

- ► Add import prices?
  - ► Passthru to import prices 0.298 for Switzerland (*Bussière et al 2017*)
  - ► Fraction of **imports invoiced in foreign currency**? (*Gopinath, 2016*)
  - ► Role of exporter-importer contracts? Transaction costs?

- ► **Distribution**
  - ► Does not vary? (*Berger et al. 2012*)
  - ► Delivery lags, inventories
  - ► Add distance to border

- ► *Kryvtsov-Tomlin (in progress)*: decomposition for Canada
  - ► Import price micro data + CPI micro data
  - ► Wide border (large variation in distance), adding trucking data

Summary

- **Great data! Interesting paper!**

- Contributions due to

  - Unique experience: exogenous large nominal shock

  - Detailed data for final consumption and prices

- Could be useful to

  - Explore cross-section further

  - Separate product-level and aggregate effects

  - Clarify the implications of expenditure switching

  - Can use rich cross-section variation to disect the total passthrough

Other comments

- Compare with more gradual appreciation 2010 – 2012
  - Since passthrough is small, should get comparable results?

- Measurement: follow CPI methodology
  - Construct indices by strata first (location/store type) for each good
  - Aggregate using stratum weights (expenditures)

- Should discuss potential asymmetry (downward vs upward)
  - Gagnon (2008) sharp 1996 mexican peso devaluation lead to increase in both fraction and size of p-increases, no change in p-decreases

- Shift by income may indicate higher quality of imported goods
- Too many overlapping facts: try a unified approach?
- Incomplete long-run passthrough?
- Kurtosis in the model still lower than in the data?