

Discussion of
**Conditional exchange rate pass-through:
evidence from Sweden**

by V. Corbo and P. Di Casola

Alessandro Notarpietro

Banca d'Italia

ESCB Research Cluster on Monetary Economics
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The views expressed here are those of the author and should not be
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Overview

- ▶ Interesting and timely paper
- ▶ Recent strand of literature on conditional, shock-dependent ERPT (Forbes et al. 2018)
- ▶ What is the *conditional* ERPT into *consumer* prices in Sweden? What about *import* prices
- ▶ Conditional on a number of *structural* shocks. Identification
- ▶ Results: exchange rate shocks have a small pass-through and explain little of exchange rate fluctuations. Domestic and global demand shocks have negative CERPT

Road map

- ▶ Estimation exercise:
 1. Baseline VAR model specification: setup
 2. Identification: baseline and alternative (import prices) model
- ▶ Role of monetary policy

Setup

- ▶ Build on Forbes et al. (2018): identification via sign, short-run and long-run restrictions
- ▶ Variables selected: NEER, CPI, policy rate *relative* GDP, *global* CPI, *global* GDP Relative GDP
- ▶ Structural shocks to be identified: Swedish demand, Swedish supply, Swedish monetary policy, nominal exchange rate, global demand, global supply
- ▶ Alternative model: NEER, CPI, interest rate, *domestic* GDP, foreign CPI, *import prices*

Identification: domestic supply shock (baseline)

- ▶ Positive domestic supply shock: given identifying restrictions, GDP \uparrow and CPI \downarrow
- ▶ Monetary policy response? No restrictions. Intuitively: $R \downarrow$ if central bank responds more to CPI movements. This would make the NEER *depreciate*, ceteris paribus
- ▶ However...

Identification: domestic supply shock (baseline)

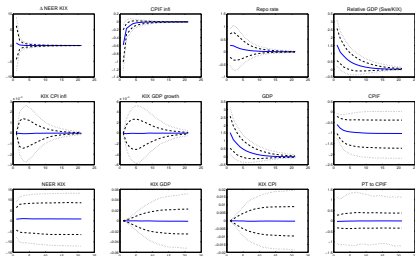


Figure B-4: Impulse responses to a Swedish supply shock based in the benchmark model. The graphs report the median impulse response (solid line) with the 68 percent interval (dashed lines) and the 90 percent interval (dotted lines). The responses are rescaled to cause an appreciation of the Swedish Krona by 1 percent after 4 quarters in the median case. The relative GDP is not expressed in percentage terms.

- ▶ $R \uparrow$ (wide bands). NEER should appreciate (UIP) but it does not
- ▶ Central bank seems to stabilize GDP more than CPI

Identification: domestic supply shock (alternative)

- ▶ Now supply shock is *negative*: GDP ↓, CPI ↑ and R ↑
- ▶ $|\Delta GDP|$ roughly equal to baseline, but $|\Delta CPI|$ 3 times larger \implies R ↑. [Remember: in baseline R responds to GDP more than CPI]
- ▶ Why such difference in relative responses? Is this the same shock?

Identification: exchange rate shock

- ▶ Baseline: *relative* GDP \downarrow (wide bands)
- ▶ Alternative: *domestic* GDP \uparrow
- ▶ Intuition: depreciation \implies expenditure switching effect: \uparrow exports and \downarrow imports. If \uparrow net exports $>$ \downarrow domestic aggregate demand (due to higher CPI), then GDP can \uparrow
- ▶ Differences across specifications: use of different GDP measures? Identification problem?
- ▶ Perhaps use of relative GDP not ideal. Could use a "relative" interest rate measure. Potential advantages:
 1. Avoid detrending
 2. Provide info on global vs domestic monetary policy
 3. Indirectly introduces a UIP condition \implies helps identification/interpretation of exchange rate and global shocks

Estimation: ERPT on import prices

- ▶ Responses of import prices are in general uncertain (wide bands), except for exchange rate and global supply shock, restricted by construction!
- ▶ Exchange rate FEVD: baseline results almost completely overturned

Table 2: Forecast error variance decomposition (FEVD) of the the nominal effective exchange rate for the benchmark model

| | Exog ER | Swe D | Swe MP | Swe S | Global D | Global S |
|------|---------|-------|--------|-------|----------|----------|
| NEER | 22 | 32 | 13 | 13 | 9 | 11 |

Note: The numbers represent percentages of the forecast error variance due to each shock.

Table 4: Forecast error variance decomposition (FEVD) of the the nominal effective exchange rate

| | Exog ER | Swe D | Swe MP | Swe S | Global D | Global S |
|------|---------|-------|--------|-------|----------|----------|
| NEER | 16 | 21 | 8 | 10 | 27 | 18 |

Note: The numbers represent percentages of the forecast error variance due to each shock.

- ▶ Historical decomposition: large role to global supply shocks when they are irrelevant in baseline

Role of monetary policy

- ▶ Ongoing research: monetary policy stance seems and ERPT
- ▶ Burlon et al. (2018), estimated DSGE model for euro area: expansionary demand shock under alternative responses of monetary policy
- ▶ Domestic demand $\uparrow \implies R \uparrow$ to stabilize CPI \implies NEER appr.
- ▶ Less aggressive response: smaller $\uparrow R$, NEER can *depreciate*, large \uparrow import prices. ERPT \uparrow . Caveat: FG puzzle (see also Gali 2018 on "exchange rate puzzle")
- ▶ How to take these effects into account in VAR framework? Expectation shocks?

Conclusions

- ▶ Very nice paper: powerful framework, interesting application. Robustness needed
- ▶ Results to be taken with some caution. Domestic supply and exchange rate shock identification not uncontroversial
- ▶ Role of import prices seems to deserve special attention (measurement, identification)

Thanks

Relative GDP

- ▶ Relative GDP enters VAR in levels, but is non-stationary

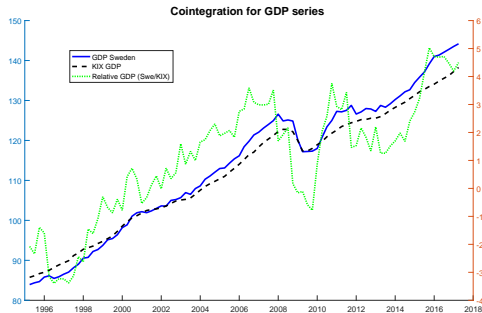


Figure A.2: GDP data series used for estimation. The GDP series are rescaled so as to equal 100 in the year 2000. The relative GDP is the log difference of Swedish GDP and KIX GDP.

- ▶ If identification is ok, relative GDP only reflects domestic GDP response to domestic shocks [back](#)