Discussion: The Effects of Diagnostic Expectations in a Small Open Economy

Diego Bohórquez

Universitat Pompeu Fabra

12th PhD Student Conference
on International Macroeconomics

This Project

▶ **Questions:**

* How do deviations from RE affect macro outcomes in a SOE?
* Can certain international macro puzzles be rationalized using DE?

▶ **Approach:** Introduce DE into a dynamic SOE model that focuses on real exchange rates.

▶ **Contribution:**

1. First look at Diagnostic expectations in a SOE.
2. Connects to the literature on ER disconnect puzzle.

▶ **Main Result:** economy under DE is broadly more volatile than its rational counterpart, especially the nominal ER.

#1: Potential benchmarks

▶ Instead of comparing the results to a standard SOE with RE, two interesting options:

1. **Other deviations from RE**
    * How do DE compare to adaptive expectations, sticky information, rational inattention or learning?
   * **Learning**: Du, Eusepi & Preston (2021) explain persistence and volatility of exchanges rates.

2. **Traditional amplification in a SOE**
    * Are deviations from RE better in explaining macro volatility compared to other amplification mechanisms?
    * Popular in DSGE models: **financial accelerator** (Bernanke, Gertler & Gilchrist (1999), Christensen & Dib (2008), Gertler & Kiyotaki (2010)).
    * Relevant for SOEs, which tend to be more financially constrained than AEs (Gertler et al. (2007), Elekdag, Justiniano & Tchakarov (2017).)
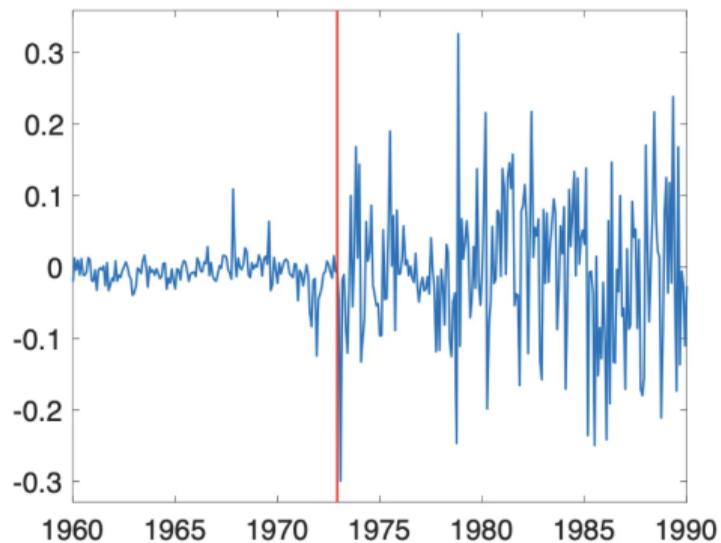
#2: Exchange rate disconnect
Nominal and Real exchange rates for G7 countries
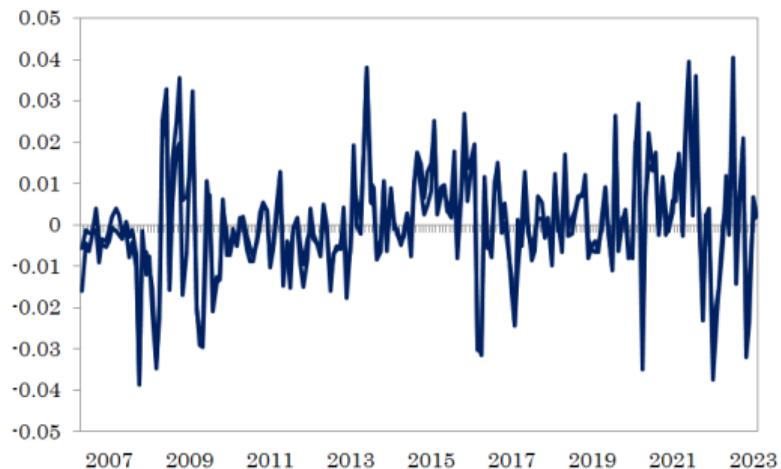
(a) Nominal exchange rate
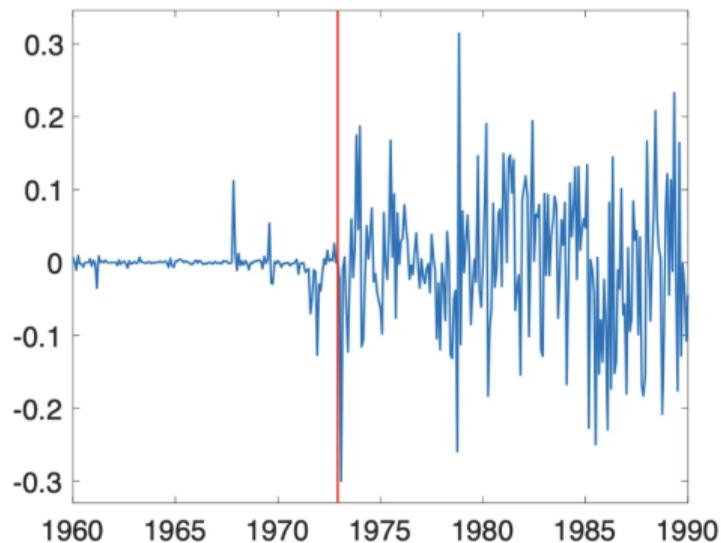
(b) Real exchange rate

Note: monthly log changes, US vs the rest of the world (defined as G7 countries except Canada plus Spain), with the red vertical line identifying the end of the Bretton Woods system of fixed exchange rates. **Source:** Itskhoki & D Mukhin (2022)
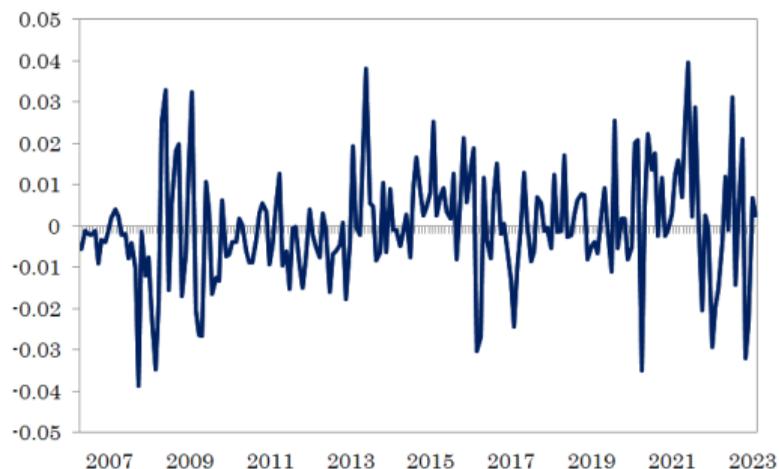
#2: Exchange rate disconnect
Nominal and Real exchange rates for an EM country (Peru)

Nominal exchange rate

Real exchange rate

Note: monthly log changes. **Source:** Central Bank of Peru.

#2: Exchange rate disconnect

▶ **In the model:** volatility of nominal ER increases by 91.6%, while real ER only by 9.9%

▶ Large volatility in domestic and imported inflation is smoothing the response of the RER.

$$Q_t = s_t \frac{P_t^*}{P_t}$$

▶ Perhaps a recalibration or estimating the model could fix this.

#3: Policy implications

▶ How should monetary policy be conducted under diagnostic expectations?

▶ DE opens the door to a more forward-looking approach to central banks' actions.

* What is the cost of ignoring DE when setting MP?
* Is a Taylor rule still the optimal way of implementing MP?

▶ Benchimol & Bounader (2023)

* Form of bounded rationality is key in the choice of the optimal MP regime.
* When agents are myopic regarding inflation, simple Taylor rules are not optimal.