Discussion of "Open economy, redistribution, and the aggregate impact of external shocks" by Haonan Zhou

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  - Focus on capital outflow (depreciation) shocks in Uruguay

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- With **heterogeneous agents**: *individual* wealth effects matter!
  1. Who gains and who loses from the depreciation?
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Here: a sufficient statistic approach+a structural model to tackle this Q

The paper's approach

1. Derive general sufficient statistics for the response of aggregate spending to one-time depreciation
2. Compute these statistics in the data
3. Guided by qualitative findings, set up a state-of-the art HANK model
4. Compare sufficient statistics in data vs model steady state
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The gold standard of heterogeneous-agent macro research.

Main findings

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2. Valuation effects from dollar balance sheets ("FC Fisher channel") matters quantitatively, but not qualitatively, for this result
   - Directly driven by data: rich (low MPC) own dollar assets, poor (high MPC) own dollar liabilities, covariance negative but not huge

Variable/Statistic	**Baseline**	**No illiquid dollar**	**High dollar liability**
Aggregate dollar wealth	0.220	0.220	0.220
$\text{Cov}(MPC_{i,b}, \text{Liquid Saving}_i^{\$})$	-0.137	-0.085	-0.472
$\text{Cov}(MPC_{i,a}, \text{Illiquid Debt}_i^{\$})$	0.003	0	0.020
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   - Relative to de Ferra-Mitman-Romei: "Uruguay is not Hungary"
3. Unequal consumption baskets are essentially irrelevant
   - Similar to Auclert-Rognlie-Souchier-Straub; less directly tied to data

My assessment

- Great approach to a very important question!
  - Wealth effects on household balance sheets can clearly be relevant, largely ignored by the international macro literature to date
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  - Wealth effects on household balance sheets can clearly be relevant, largely ignored by the international macro literature to date
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- Literature on this topic has become a little crowded recently

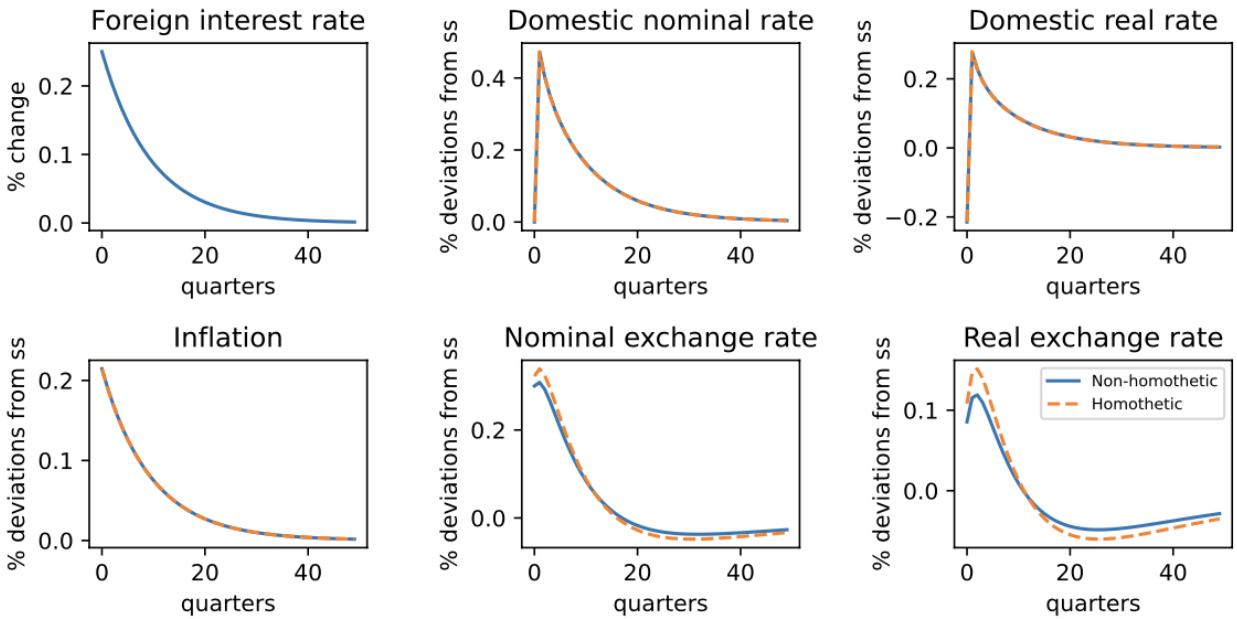
  [de-Ferra-Mitman-Romei, Cugat, Oskolkov, Auclert-Rognlie-Souchier-Straub, Guo-Ottonello-Perez, Hong, Ferrante-Gornemann,...]
  - Unique to the paper: sufficient statistic approach
  - My discussion: how to build on this strength

Outline

1. Is the aggregate contraction suprising?
2. Broadening the sufficient statistic result
3. Using this to guide model building
4. Improving the micro measurement

1. Is the aggregate contraction suprising?

- Paper considers shocks to capital outflows, $i_t^* \uparrow$
- Headline result: RER depreciates, non-tradable consumption falls
- Could this be due to the monetary policy rule?



- **Suggestion 1**: benchmark this against the **rep agent** response

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$$\begin{aligned} \widehat{c_t} &= -\frac{1}{\sigma} R_t \\ \widehat{q_t} &= R_t^* - R_t \\ \widehat{c_{Nt}} &= \alpha\eta \widehat{q_t} + \widehat{c_t} \end{aligned}$$

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- Suppose monetary response is $R_t = \gamma R_t^*$ then

$$\widehat{c_{Nt}} = \left(\alpha\eta\left(1-\gamma\right) - \frac{\gamma}{\sigma}\right) R_t^*$$

in paper $\frac{1}{\sigma} = 0.5, \alpha = 0.4, \eta = 0.5$, so $R_t^* \uparrow \Rightarrow \widehat{c_{Nt}} \downarrow$ whenever

$$\gamma \geq \frac{\alpha\eta}{\alpha\eta + 1/\sigma} \simeq 0.26$$

Role of expenditure switching

- Upshot: low expenditure switching elasticity (η) and more aggressive mp response (γ) make contractionary devaluation more likely
- Paper has a limited discussion of γ, but essentially no mention of η
- Prop 1 is derived under $\eta = 1$, quantitative model uses $\eta = 0.5$

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- **Suggestion 2**: expand the sufficient statistic result beyond $\eta = 1$
- **Suggestion 3**: discuss the range of outcomes as a function of η, γ
  - No agreement that capital outflow shocks are contractionary, both data and central bank polls point in different directions
  - Not clear that η is a structural parameter (e.g. short vs long-run)
  - Main result that FC Fisher channel pulls down spending will survive irrespective of the sign of the baseline level effect

2. Broadening the sufficient statistic result

- Two more aspects of Prop 1 surprised me:

1. Sufficient statistics for nonhomotheticity effect is derived as

$$Cov\left(MPC_i, TradableExpenditure_i\right) \qquad (< 0)$$

This covariance mixes level and share effects. Would have expected:

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- Side note: is the dynamic solution to the nonhomothetic model correct? The price index (so real rate) differs across agents.

3. Using sufficient statistics to guide model building

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  1. T/NT model (both produced, export and import only T)
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which one is the better benchmark to think about the paper's Q?

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- Benefits of 2: richer pattern of expenditure switching
- **Suggestion 5**: use sufficient statistics to determine which to pick!
  - Limited evidence that composition of income varies across MPCs
  - So, maybe T/NT margin isn't important for aggregate C?

4. Improving the micro measurement

- MPCs are not observed directly, but inferred from balance sheets
  - Kaplan-Violante: *MPC* is high if liquid assets are low
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- **Suggestion 6**: exploit the panel component of the data to build alternative measures of MPCs (eg Blundell-Pistaferri-Preston)

Final words

- Great paper on an important topic!
- Sufficient statistic is key contribution
- Follow my suggestions to make this shine even more