Discussion of "The Micro Anatomy of Macro Consumption Adjustments" by Guntin, Ottonello and Perez

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This paper

- Insight: leading theories of crises have different distributional implications
  - even though they generate the same aggregate Y and C dynamics

- Data on the consumption response to aggregate shocks in the distribution
  - can discriminate between leading theories

- Find support for view that crises are shocks to trend growth
  - consistent with permanent income hypothesis

My assessment

- Very clever idea, I wish I had come up with it!

- Testing workhorse models is important work
  - understand limitations, identify avenues for improvement

- This discussion:
  - permanent income hypothesis
  - measurement
  - comments on framework and measurement

The permanent income hypothesis

- Special case: quadratic utility, $\beta(1+r)=1$, no borrowing constraint

- Consumption equals permanent income

$$c_t = \frac{r}{1+r}a_t + \frac{r}{1+r}\sum_{j=0}^{\infty}\left(\frac{1}{1+r}\right)^j \mathbb{E}_t y_{t+j}$$

- Consumption dynamics

$$\Delta c_t = \frac{r}{1+r}\sum_{j=0}^{\infty}\left(\frac{1}{1+r}\right)^j \underbrace{\left(\mathbb{E}_t - \mathbb{E}_{t-1}\right) y_{t+j}}_{\text{revision in expected earnings}}$$

The permanent income hypothesis

- Income process: $y_t = \bar{y} + \rho y_{t-1} + \varepsilon_t, \quad$ where $\mathbb{E}\varepsilon_t = 0$

- Consumption response to income shocks: $\Delta c_t = \frac{r}{1+r-\rho}\varepsilon_t$

- Special cases

  1. $\rho = 0$: $\Delta c_t = \frac{r}{1+r}\varepsilon_t$

  – consume annuity value of transitory shocks

  – if constrained consumption responds one-to-one to transitory shocks

  2. $\rho = 1$: $\Delta c_t = \varepsilon_t$

  – consumption responds one-to-one to permanent shocks

  – also true if constrained

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Measurement

- Here, low income used as proxy for being borrowing constrained

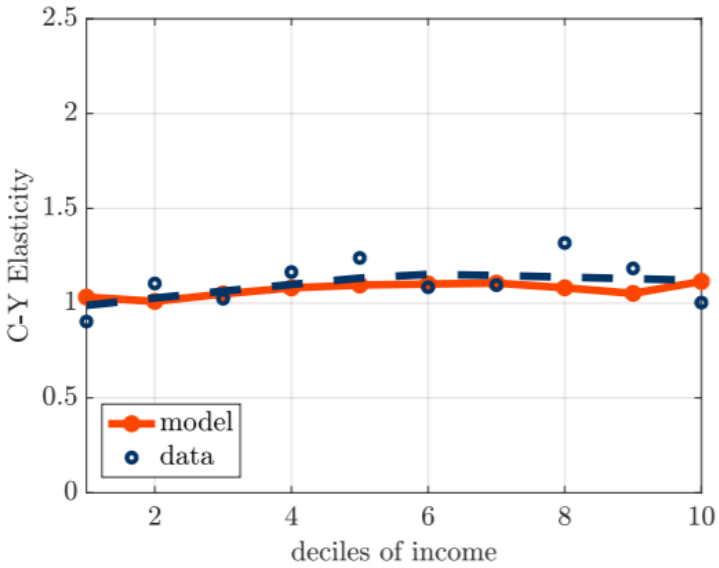
- Elasticity of consumption to aggregate income, by income group j

$$\frac{\Delta \log \bar{c}_j}{\Delta \log \bar{y}_j}, \quad \text{where } \Delta \log \bar{y}_j = \log \bar{y}_j^{\text{peak}} - \log \bar{y}_j^{\text{trough}}$$

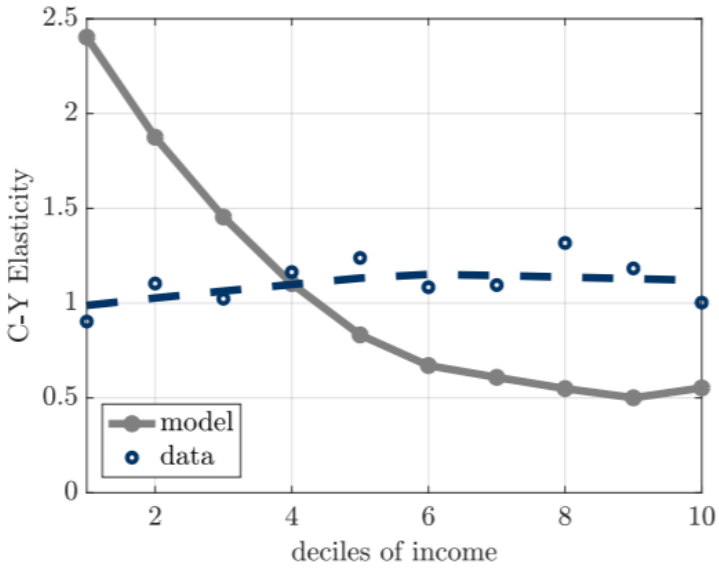
  - $\bar{c}_j$ and $\bar{y}_j$: average residualized consumption and income for group j
  - elasticity calculated using two observations for average c and y

Findings – Italy

(a) PI-view Experiment



(b) CT-view Experiment



Consistent with *permanent income view* of crises

Comments – framework

- How do agents smooth consumption in response to an *aggregate* shock?
  - closed economy: aggregate shocks are not insurable
  - small open economy: can borrow from abroad
  - do agents hold foreign bonds in their portfolio?
  - or redistribution from government: what is the mechanism?

Comments – measurement

- Constrained households
  - tradition is to proxy constrained with low assets (liquid or net-worth)
  - why use income?
- What are assumptions on income process so that averaging across j is ok?
  - does this preclude income process that is the same for everyone?
- Why not use entire time series of c and y to compute elasticities?
  - mechanism does not rely on large negative shocks (crises, sudden-stops)

Conclusion

- Excellent paper!
  - the exercise is a service to this line of work
  - neat example on how micro data is useful for macro models of aggregates
  - all done within the confines of one of my favorite theories, the PIH