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

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

- Consumption dynamics

$$\Delta c_t = \frac{r}{1 + r} \sum_{j=0}^{\infty} \left( \frac{1}{1 + r} \right)^j \underbrace{(E_t - E_{t-1}) y_{t+j}} \quad \text{revision in expected earnings}$$
The permanent income hypothesis

- Income process: \( y_t = \bar{y} + \rho y_{t-1} + \varepsilon_t \), 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
The permanent income hypothesis

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

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

• Special cases

1. \( \rho = 0 \): \( \Delta c_t = \frac{r}{1+r} \varepsilon_t \)  \textit{credit tightening view}
   - consume annuity value of transitory shocks
   - if constrained consumption responds one-to-one to transitory shocks

2. \( \rho = 1 \): \( \Delta c_t = \varepsilon_t \)
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The permanent income hypothesis

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Measurement

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

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

\[ \frac{\Delta \log \bar{c}_j}{\Delta \log \bar{y}_j}, \]  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

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)
• 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