The micro anatomy of macro consumption adjustments
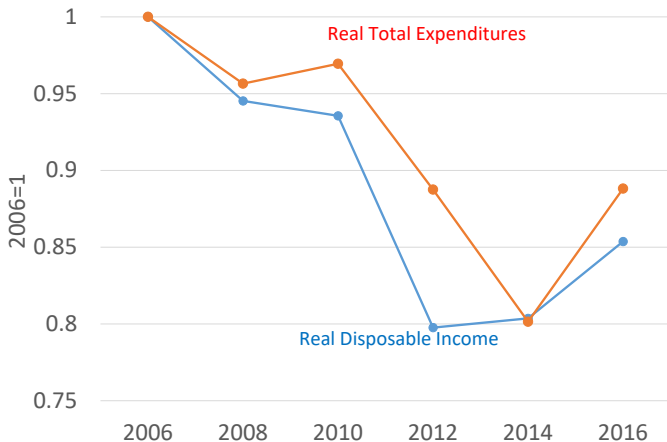## by Rafael Guntin, Pablo Ottonello and Diego Perez

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Motivation: The Italian Lost Decade

- Source: SHIW micro-data, all households with head 25-60
- In many other crises episodes (Spain Euro crisis, Mexico Tequila and Great Recession, Peru Great Recession) large decline in income also associated with similar consumption expenditure declines

What drives the large aggregate expenditure response?

Two views:

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- **Permanent** income shock across income distribution, no change in borrowing constraints
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- **Mean reverting** income shock across income distributions plus tightening of borrowing constraints
  - ▶ Expenditures should fall more for constrained (low income) than unconstrained (high income)

Key idea and findings

- Measure elasticity of C changes to Y changes along the income distribution to discriminate among the two views
- If for all households (including the rich/unconstrained) elasticity is similar and close to 1: Strong evidence in favor of recession as permanent income shocks

Italy

Remarkable finding!
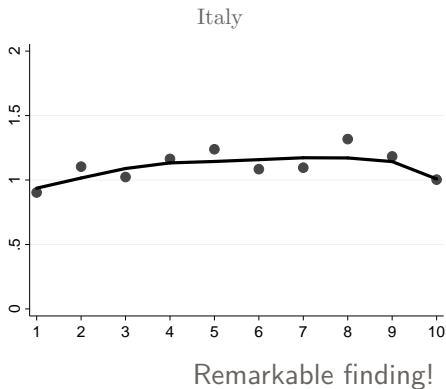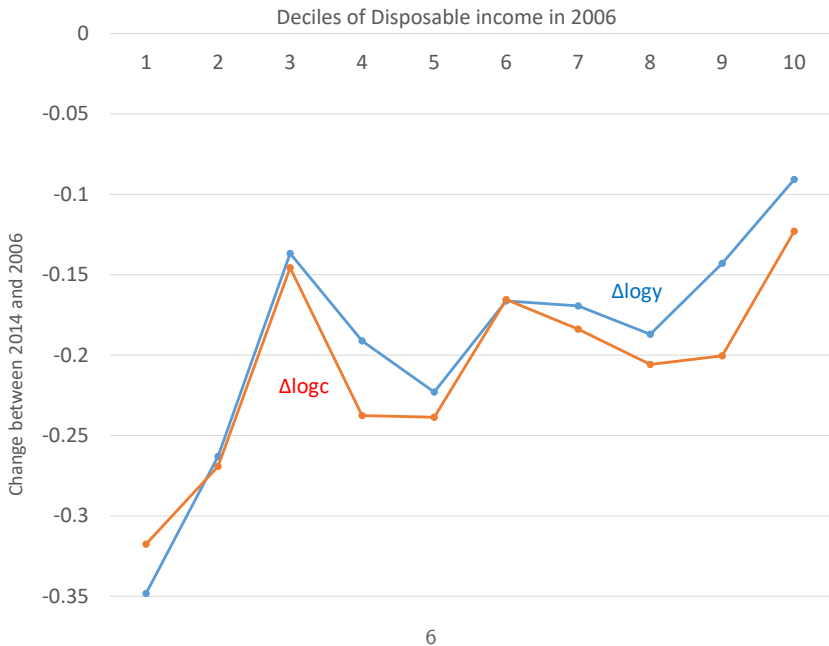
Key challenges

- Identifying response to aggregate shock separately from idiosyncratic shocks
    - ▶ Model: recessions are a log additive shock to idiosyncratic income
    - ▶ Data: recessions potentially affecting income *and* consumption, of different groups separately
        - ▶ Employment loss: stronger impact for income of constrained households
        - ▶ Higher uncertainty: stronger impact on consumption of unconstrained households
- Identifying constrained households

Reconstructing the results

- Focus on Italian households over the period 2006-2014
- Rank households by deciles of total disposable income (non residualized) in 2006 and 2014
- Plot $\Delta_{14-06}log(\bar{y}_i)$ $\Delta_{14-06}log(\bar{c}_i)$ where $\bar{y}_i$ and $\bar{c}_i$ denote avg. disp. income and total exp of the ith income group in 2006 and 2014
- Use residualized measures of income and consumption (similar finding for raw measures)

The Italian lost decade: a cross sectional view

6

The Italian lost decade: a cross sectional view

Deciles of Disposable income in 2006

Change between 2014 and 2006

Δlogy

Δlogc

Δlog C -Δlog Y

Deciles of Disposable income in 2006

6

Key facts

- Large decline in income and consumption across all deciles (lost decade)
- Bigger decline at lower deciles (increase in inequality)
- Similar % decline in C and Y (bottom right box) at all deciles
- Evidence in favor of persistent income shock hitting all deciles?

My main comment

- Households in, say, the first decile in 2006 are not the same as households in the first decile in 2014
- This makes it difficult to interpret ΔY as income shock
- Since data has a panel dimension it is possible (and more natural) to construct the change in income of each decile in 2006

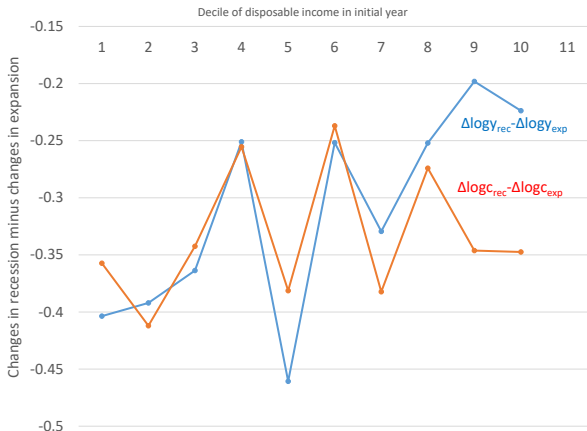# The Italian lost decade: a panel view
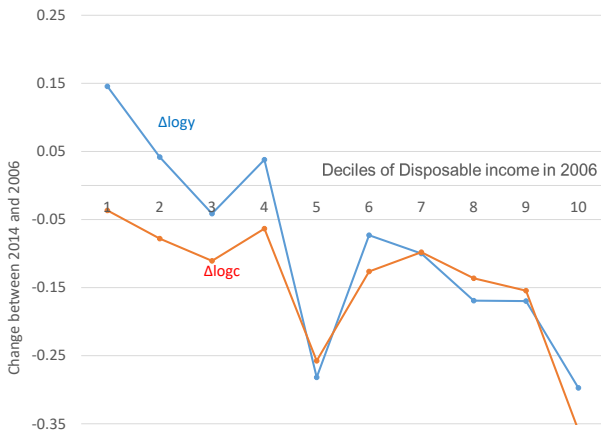
- Slope of income changes is now very different
- Bottom deciles: positive Y growth. Top: negative Y growth.
- Reason is mean reversion in individual income
- ΔY depends both on individual (decile specific) and aggregate shocks: hard to separate the two
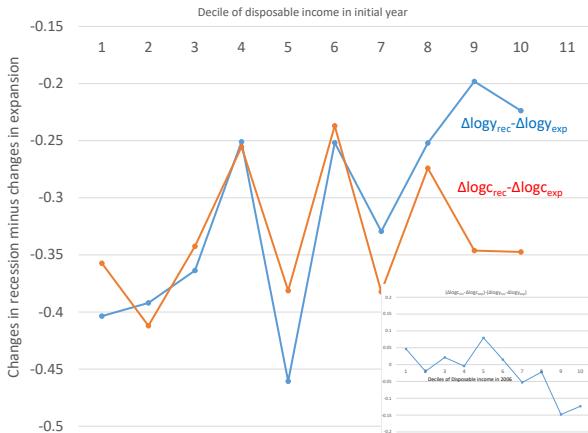
9

A possible solution

- Consider an expansion period of similar length (1998-2006)
- Take differences in ΔY_i and ΔC_i between recession and expansion
- Differencing takes out decile specific dynamics and isolate aggregate shocks

The Italian lost decade: a panel + first difference view

The Italian lost decade: a panel + first difference view

- Easier to interpret: bottom deciles see Y growth fall the most in recession relative to expansion
- Top deciles experiencing smaller Y loss
- Top deciles reduce C more than the fall in Y (bottom right box)

Is this consistent with permanent shocks?

- Maybe (with some twists)?
- Potential alternative explanation
- Bottom deciles $\sim$ hand to mouth: consumption and income move in lockstep (regardless of the shocks)
- Top deciles have access to financial markets
- In recession financial markets access tightens, this leads to C dropping more than Y

Conclusions

- Great paper
- Love the idea to use micro data (at the decile level) to distinguish theories of recession

Conclusions

- Great paper
- Love the idea to use micro data (at the decile level) to distinguish theories of recession
- More work needed to show that micro data is identifying response of different groups to aggregate shock
- Possible role for financial frictions at the top of the Y distribution
- Are the patterns highlighted in the recessions in this paper different for other (and more temporary) recessions?