Housing Consumption and Macroprudential Policies in Europe: An Ex Ante Evaluation

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Motivations of the paper

- LTV/LTI proposed as housing macro-prudential policies in the aftermath of Great Recession
    - Objective:
        - to reduce over-leveraging in household portfolio
        - to prevent housing market bubble from resurfacing
- Majority of Western European countries w/o such regulations
- Need for understanding micro level impacts of such policies on household finance and welfare

Research questions

- How do European households make housing consumption decisions?
- What will be the consequences of specific policy implementation?

- it provides empirical evidence of the housing demand of European households in the period 2010-2014
    - Data: Household Finance and Consumption Survey (HFCS) of the ECB
    - Sample: 7449 households in two waves (2008/2010 and 2014) for Belgium, Cyprus, Germany, Italy, Malta, and the Netherlands
    - Major findings:
        - over time, 60 percent of HH adjusted housing consumption at the *intensive margin* without changing tenure status
        - over time, R-O transition and housing adjustment of owners experienced by high-wealth, high-income and married HH
        - R-O movers more likely to trade up housing consumption, O-R movers more likely to trade down
        - significant share of housing size adjustment without changing primary residence

- it builds a life-cycle housing decision model in partial equilibrium

- it structurally estimates parameters of housing preference of HH
    - Estimation strategy: two-step process as in Bajari et al. (2007)
    - Utility: $u(C, H) = ((1 - \zeta)C^\varphi + \zeta H^\varphi)^{\frac{1}{\varphi}}$
        - elasticity of substitution between housing and non-durable goods $\zeta \sim -0.064$ (0.013)
        - housing consumption share $\varphi \sim 0.489$ (0.002)

- it conducts counter-factual experiments on LTV/LTI policies
    - LTV from 80% to 60%:
        - $2 - 5\%$ decline in home-ownership
        - no significant decline in HH welfare
    - LTI cap at 4.5 on top of LTV:
        - $0 - 2\%$ decline in home-ownership (no difference for low-wealth HH)
        - welfare increase for young HH

Continuation value in the last period

- Necessary to estimate HH preference parameters
- Utility function estimation procedure:
    - select 100 households in the sample of the first wave
    - simulate forward
    - compute the discounted present value of all the periods
- How is it computed and/or estimated?
- How is it identified?

Identification of HH preference parameters

- What are the moments used in the estimation? How well the model matches the targets?
- Can ζ and φ be separately identified? How?
- Estimates are function of relative risk aversion $\gamma = 4$ (calibrated). Are estimates robust to different degree of RRA?

Non-targeted moments

- The model is able to replicate increase in home-ownership over age and wealth, and captures the heterogeneity across countries observed in the data
    - can the model reproduced non-targeted moments? this can be useful to validate the estimation strategy
    - what about all the stylized facts?
    - missing links between empirical evidence and quantitative model

Major comments: counterfactuals

Partial equilibrium framework

- housing prices and mortgage rates are assumed exogenous and stochastic - estimated using a VAR(1)
- no effects of LTV/LTI policy implementation on prices and rates
- what if they could adjusts?

Welfare analysis

- counter-intuitive results of welfare increase under *tighter* regulations
  - equilibria in standard models with asset accumulation and incomplete markets are typically inefficient (Aiyagari, 1994)
- housing is means of saving and hedging against future consumption fluctuation
- stricter LTV/LTI limit access to insurance at cost larger wealth (non-housing) accumulation and lower housing consumption than the optimal $\rightarrow$ drop in welfare
- what makes welfare improve in this model? is this a feature arising under PE? how does the efficient allocation look like?

Empirical evidence

- Large list of stylized facts documented in the paper
  - Which one is novel to the literature?
  - Which one is relevant for the quantitative analysis?

- Housing consumption: size adjustment
  - Puzzling evidence: several households that remain in the same property in the period 2010-2014 report they have a different level of housing size
  - How should we interpret this fact? Is it simply measurement error? how does it affect the structural estimates?

Possible follow-ups

- *General equilibrium framework:*
    - extend your framework to a setting where prices and rents react to policies, and agents endogenously adjust their optimal choices

- *Housing bubble and monetary policy:*
    - incorporate your framework into a more general monetary model where the likelihood of housing bubbles justifies the implementation of housing macro-prudential policies

- *Endogenous labor supply:*
    - helpful to micro-found stylized facts on R-O transition and income levels
    - different welfare implication if workers are allowed to respond to tighter regulation by changing labor supply