Homeownership and Portfolio Choice Over the Generations

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This (very interesting) paper:

- Builds a heterogenous-agent life-cycle model with discrete housing choice, augmented with stock market participation.

- Investigates the contribution of changes in earnings process to changes in early-life homeownership across generations.

- Considers three generations (1940s, 1960s, and 1980s cohorts)

- Finds that changes in earnings dynamics account for a large part of early-life homeownership across generations.

The model:

- Households maximize expected lifetime utility from consumption and quality-variant shelter, face idiosyncratic earnings shocks. Shelter can be owned or rented.

- Make portfolio choice (risk-free assets, stocks, housing, mortgages). Stock market participation s.t. entry participation costs.

- Borrow to purchase housing s. t. DTI and LTV constraints. Homeowners can borrow against the value of their home through home equity lines of credit.

The model (cont'ed):

- Households face correlated aggregate asset price (stock and house prices) and labor market risks governed by a Markov-switching process.

  - Persistent idiosyncratic earnings risk also reflects the state of the aggregate economy. Rents fluctuate, as they are proportional to house prices.

- Additional bells and whistles:

  - Moving shocks, mortgage default s.t. utility penalty, taxation, housing aid to income-poor households.

- Age-dependent taste-shifter controls for changes in family size across generations.

Experiments:

- Calibrates the model to the 1940s' cohort.

- Simulates behavior of the model with:

  - Estimated earnings and family size processes of the 1960s and 1980's cohorts.

  - House price and stock market return dynamics match those experienced by the younger cohorts. In particular, house price to income ratios increase over time.

  - Loosening of mortgage underwriting during 2000-2010.

  - Reduction of stock market participation costs.

Findings:

- Simulated counterfactual homeownership profiles of the 1960s' and 1980s' cohorts fit data well. Similarly, the baseline 1940s model fits.

- Also roughly captures increases in stock market participation (declines in participation cost are shown to be key).
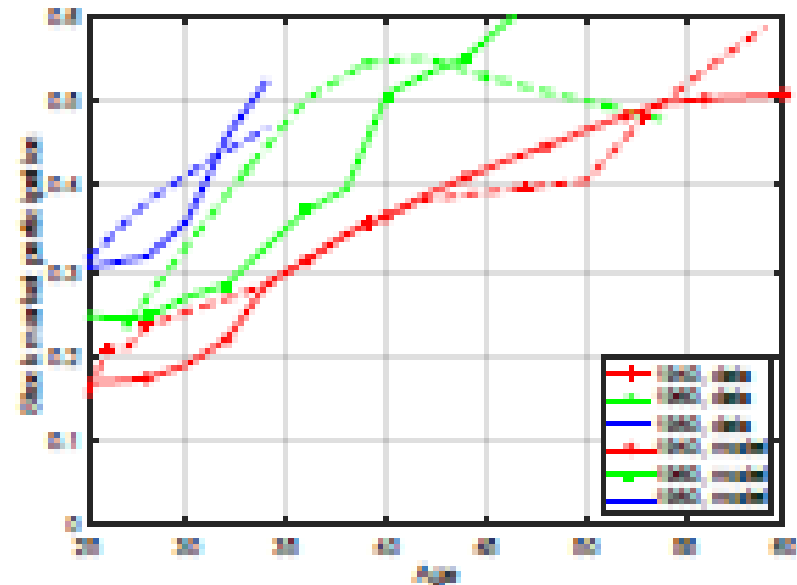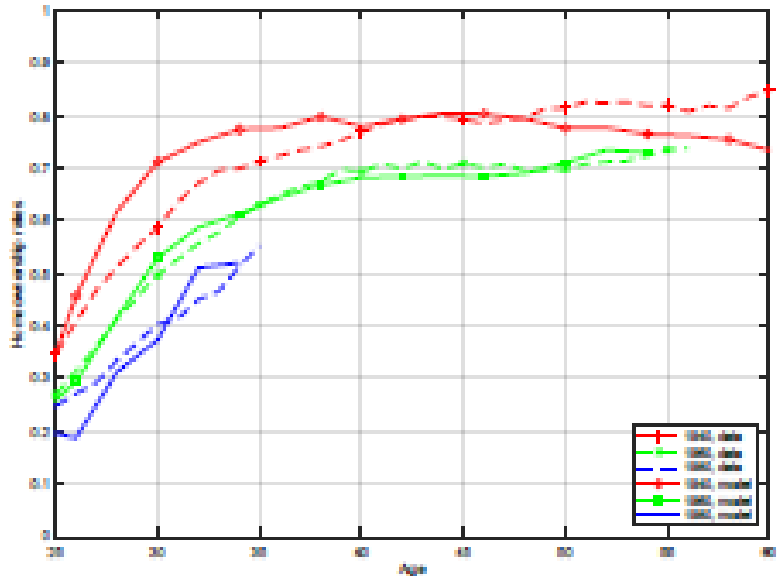

Figure 8: Homeownership by cohorts, data vs. model

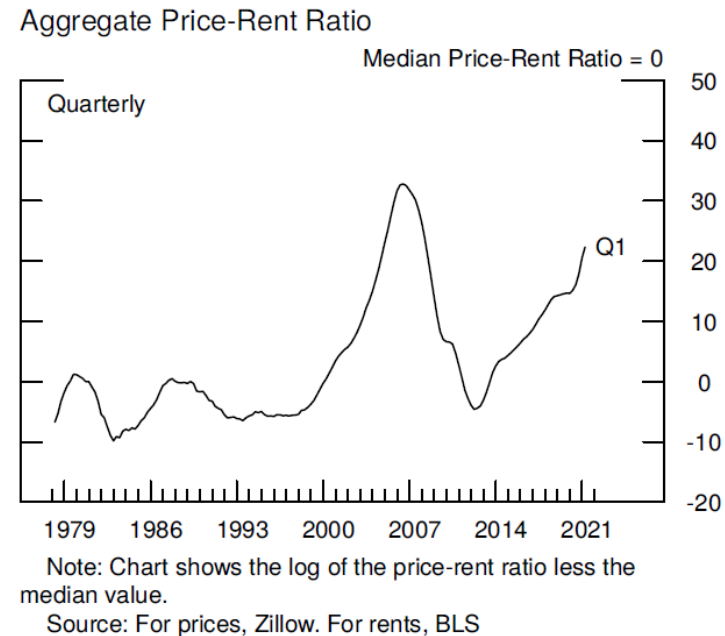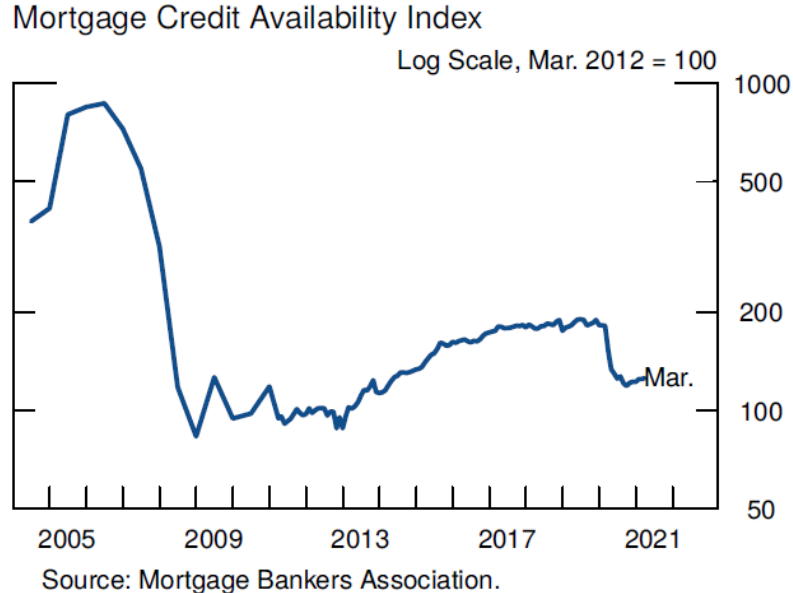Figure 10: Stock market participation by age and cohort, data vs model.

Findings (cont'ed):

- <u>For the 1960s' cohort, simulations suggest</u>:

  - Initial earnings inequality explains 2/3 of changes in early-life homeownership relative to the baseline.
  - Subsequent higher earnings risk also contributes to changes in the age-profile of ownership.

- <u>For the 1980s' cohort, simulations suggest</u>:

  - Effect of elevated house price to income ratios largely offset by relaxed lending conditions.   The combination of these two factors explains about 1/3 of changes in early-life homeownership relative to the baseline, on net.
  - The rest accounted by earnings dynamics. (Suggest: extend discussion of these results in the text.)

Comments

1. Housing and the 1980's cohort

- Tightening of credit standard much sooner than 2010.

- Price-rent ratios elevated (not only price-to-income) in the run-up to the Global Financial Crisis.   Allowing γ^r to be time-variant would be useful.

Mortgage Credit Availability Index
Log Scale, Mar. 2012 = 100
Source: Mortgage Bankers Association.

Aggregate Price-Rent Ratio
Median Price-Rent Ratio = 0
Note: Chart shows the log of the price-rent ratio less the median value.
Source: For prices, Zillow. For rents, BLS

2. Estimation of lifecycle earnings by cohort

- Estimation of the earnings profile for each cohort designed to reflect latest insights of the literature, but the discussion of the estimation details is scant.

- Is the PSID panel long enough to allow for an identification of the life-cycle earnings moments for the 1980s cohort?

- Discussion of the estimation of the earnings should be one of the central pieces of the paper.

3. Establishing stylized facts

- Establishing facts on homeownership and earnings across generations: moments in Figure 1 are estimated from the PSID. Is it possible to verify using Census data?

- Stable homeownership rates over time: Discuss briefly why homeownership rates have stayed relatively constant over time despite the declines in early-life homeownership.
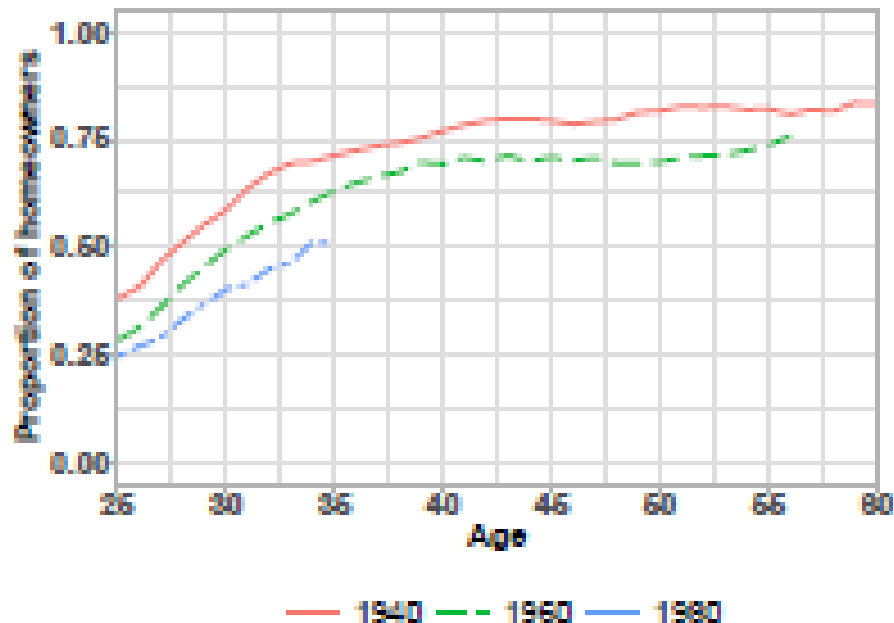
4. Focus on Nuts and Bolts

- The model has many features which may not be essential to the analysis (i.e., homing cost assistance to wealth-poor households, detailed tax code that appears, however, time-invariant).

- Other features could be clearer: i.e., relationship between housing (h) and housing service flow (s).

- Data work not sufficiently flashed out (largely in the appendix).

- Focus on the data work and key features of the model (lift key parts from the appendix). Relegate secondary issues to the appendix.

Thank you!