Comments on Balance Sheet Effects on Household Consumption by Oleksandr Movshuk

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The views expressed in this comment are my own and not necessarily those of the Ministry of Finance or Japanese Government.

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What's wrong with wealth effects on consumption?

- Well, I think nothing is wrong.
- Perhaps, economists have done too many researches on this topic.
- Then, they agree to disagree.

- Structure of my comment
  1. Some macroeconomic discussions.
  2. Comments on the author's conclusions and related general issues.
  3. Comments on the author's microeconomic analysis in Section 4 (the heart of this paper).

Some macroeconomics

$$\begin{aligned} C_t &= f\left(Y_t, Y_{t+1}, \ldots Y_T; A_t; r_{t+1}, \ldots, r_T\right) \\ &= C(Y_t, A_t) = C(Y_t, F_t, RE_t) \end{aligned}$$

- A_t: Non-human wealth. $F_t + RE_t$.
- F_t: Financial wealth, RE_t: Housing wealth

- Observed wealth effect on consumption: $A_t \longrightarrow C_t$
- Identification problem: Both asset prices and consumption are forward-looking.
- "$A_t \Rightarrow C_t$" or "$C_t \Rightarrow A_t$" or "Common cause $\Rightarrow C_t, A_t$"

Example: Consumption-wealth ratio

- Consumption function with human wealth H_t proxied by the linear function of current labor income Y_t.

$$C_t = C\left(A_t + H_t\right) = C\left(A_t, Y_t\right)$$

- Lettau and Ludvigson (2004): Log-linearlize everything and get the cointegration system among $\{c_t, a_t, y_t\}$.

$$c_t = \alpha + \beta_a a_t + \beta_y y_t \longrightarrow cay_t \equiv c_t - \widehat{c}_t$$

1. a_t is more exogenous ($cay_t \Rightarrow C_t$): Wealth effect on consumption
2. c_t is more exogenous ($cay_t \Rightarrow A_t$): Asset price movements include too much noise. a_t adjusts to attain the long-run trend $\overline{cay}$.

- Lettau and Ludvigson (2004): Support the second scenario. Find little evidence for the wealth effect.

Are C and A really cointegrated?

- Not so obvious
- If A_t was financial wealth (stock price) alone, maybe.

- However, housing price movement is much more sluggish.
- Carroll et.al. (forthcoming):
  - "... neither theory nor evidence supports faith in the existence of a stable cointegrating vector."
  - "MPC from a \$1 change in housing wealth is about 2 cents, with a final eventual effect around 9 cents, substantially larger than the effect of shocks to financial wealth."

- There seems to be a broad consensus that housing wealth effect is much larger than stock market wealth effect.

Housing boom has complicated effects on household bsheet

- Let's say I bought a new house and I have to take out a mortgage.
  1. If everything including real estates are on included in the bsheet
     Asset: $+$; Liabilities: $+$; Net worth: No change.
  2. If real estate wealth are excluded from my bsheet
     Asset: 0; Liabilities: $+$; Net worth: Decrease.
  3. If real estate wealth and mortgages are excluded from my bsheet
     Asset: 0; Liabilities: 0; Net worth: No change.
     Asset: $-$; Liabilities: 0; Net worth: Decrease (If I pay the downpayment).

Other explanations why consumption and housing prices are correlated

- Collateral story: Kiyotaki and Moore (1997)
- Supply-side bubbles
  - Japanese case:
    In late 1980s, because Japanese banks lost their best borrower to the market financing. They find new borrowers about which they knew very little.
  - US case:
    Financial institutions believed that the securitization effectively reduces default risk in mortgage loans (Bethel, Ferrell, and Hu, 2009; Mian and Sufi, 2009)

Comments (1)

- It is not very obvious what is "asset", what is "liabilities", and what is "net worth" in this paper. Do they include housing wealth (I guess not) and housing loans (I guess yes)? Please clarify.
- If possible, try to differentiate stock market wealth effect and housing price wealth effect.
  - In early 2000s, the stock market crashed, but the housing market boom prevent US+World economy from fell into serious recession.
  - Then, caused much more serious problem latter.
- "Increase of debt" and "increase in debt capacity" are very different issues. So the author's "puzzle" does not sound like a puzzle to me.
- Purchase of durable goods is always consumption and investment at the same time.

Recent microeconomic research on the life-cycle model of consumption

- The naive life-cycle model predicts the flat consumption profile with age. However, in actual data, the life-cycle pattern of consumption is hump-shaped and seems to track the life-cycle pattern of income (Carroll and Summers 1991 and many others).

- Adjustment in the household size.
- Identification problem:
  - Age dummies, cohort dummies, time (year) dummies.
  - Cannot include thee types of the dummies together.

- Attanasio etal. (2009); Fernández-Villaverde and Krueger (2007): Imposes semi-parametric restriction on the age effect on consumption.
  - Get nice pictures for the age effect, i.e., the life-cycle pattern on consumption.

Section 4 of this paper

- Uses generalized additive model (GAM), instead of Speckman's partial linear model by Fernández-Villaverde and Krueger.

- Get the graphs for age, cohort, and year effects as well as the wealth effects on consumption.
- Note that using the semiparametric model means imposing the constraint that the age effect on consumption varies smoothly with age. OLS estimation with dummy variables is less restrictive.

Comments (2)

- Why does the author use GAM? Estimation with dummy variables is less restrictive as long as the identification problem does not matter.
- Why does he estimate the cohort effect semiparaetrically, instead of the age effect? Any economic reason?
- Have to provide the explanations for the estimated shapes of age, cohort, and year effects.
- In particular, the shapes of the age effect on durables and the cohort effect do require explanations.

References (not cited in Movshuk's paper)

- Bethel, Jennifer E., Allen Ferrell, and Gang Hu (2008) "Law and Economics Issues in Subprime Litigation", Harvard Law School John M. Olin Center for Law, Economics and Business Discussion Paper Series.
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