Discussion of

Bilbiie, Känzig and Surico:
Capital, Income Inequality, and Consumption: The Missing Link

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Which Route for Monetary Policy?, Paris, December 2019
The views expressed are mine and do not necessarily reflect those of the ECB.
Key contributions

▶ Analyze a new amplification mechanism of monetary policy, via investment/capital

▶ Saving/investment by savers boosts aggregate demand, then multiplied by high-MPC households (spenders)

▶ Complementarity between (i) capital inequality and (ii) income inequality

▶ Amplification of the two effects, 1.2 each
  \[ \Rightarrow \text{‘multiplier of the multiplier’: about } 2\times \]

▶ Broadly in line with empirical evidence on income/consumption amplification
Motivation

▶ Does GE amplify or dampen effects of policies? By how much?
  Recently: Bilbiie, Patterson, Alves et al., Auclert et al., Wolf

▶ Forward guidance puzzle: Effects of uncertainty & its cyclicality on strength of FG
  Discounting vs Compounding: McKay et al., Acharya Dogra, Bilbiie

▶ So far mostly focussing on incidence of income: How are individual incomes / MPCs correlated with aggregate income?
Key result: ‘Multiplier of the multiplier’

- Model with hand-to-mouth spenders and low-MPC savers/investors

- Joint multiplier:
  \[
  \frac{\partial c_t}{\partial r_t} = \frac{1 - \lambda}{1 - \lambda \chi \frac{1}{1 - \alpha \beta}}
  \]

  \(\lambda\) income share of spenders, \(\chi(>1)\) incidence of income, \(\alpha \beta\) saving rate of savers, \(\beta\) discount factor

- Like the Samuelson (1948) multiplier:
  \[
  \frac{1}{1 - (x + z)}
  \]

  \(x\) aggregate MPC (income inequality), \(z\) additional, saving rate multiplier

- When \(\chi > 1\), joint multiplier \(\gg\) product of the two individual multipliers

- Because savers’ investment translates into additional income

- Quantitatively, amplification of two effects roughly twice:
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  \frac{\partial c_t}{\partial r_t} \approx 2
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Figure 1: The consumption multipliers as a function of the share of hand-to-mouth $\lambda$ (using $\alpha = 0.33$, $\beta = 0.99$, and $\chi = 1.7$).

- Substantial amplification of two individual effects, about $2 \times$ [green line]
Key result: ‘Multiplier of the multiplier’

Robust to extensions (subject to maintaining tractability):

- (Some) idiosyncratic risk [of becoming HtM household]
- Sticky wages
Comment 1: Quantitatively an upper bound of the effect 

More realistically:

- MPC of spenders < 1 [≈ 0.5]
- Saving rate of savers (top 75%) < 0.33

This paper: $I_t = \alpha \beta Y_t$; but in reality not all saving is capital.

Luetticke (2018): MP to invest vs MP to save (illiquid vs liquid assets)

How does savers’ investment translate into additional income (for spenders)?

Recession: portfolio rebalancing, buying more liquid assets 

Possibly U-shaped income incidence $\chi$ (Parker, Vissing Jorgensen, 2009)

Suggestion:

- Investigate in more detail how the 2 multipliers interact, more calibrations
- Higher saving, $MPC^S \uparrow \Rightarrow$ more amplification?
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Income of spenders sensitive to monetary policy, $\chi > 1$

Response of income to MP easing ($\approx 100$ bp), by income quintile

Figure 6 Decomposition of the Total Effect on Mean Income into the Extensive and the Intensive Margin

Source: Household Finance and Consumption Survey

Note: The chart shows the percentage change in mean income across income quintiles in the euro area 4 quarters after the impact of the QE shock. It also shows the decomposition of the change into the extensive margin (transition from unemployment to employment) and the intensive margin (increase in wage). The numbers in brackets show the initial levels of mean gross household income. The figure shows an aggregate of Germany, Spain, France and Italy.

Lenza Slacalek, 2018; Patterson, Guvenen, Alves et al., ...
Comment 2: Is C of spenders more volatile than their income?

- Is consumption of spenders more volatile than their income?

\[ (1 - \alpha \beta) c^H_t = y^H_t = \chi y_t \]

\[ (1 - \alpha \beta) < 1 \]

- Would be empirically problematic (given that MPC \( \leq 1 \))
Dispersion of C (st dev, Gini) reacts to MP more than dispersion of Y

To what extent is this driven by lower vs upper tail?
Comment 4: Amplification and Secular stagnation

Relationship to current situation:

- Increase in household saving [due to inequality, aging, deleveraging, ...]
- Is amplification at work now? Supporting economic growth?
- Or does the decline in natural $r^*$ (not in the model) outweigh the effects?
- Or not enough productive investment?
Summary

- Nice exposition of complementarity between the two amplification mechanisms
- Could do more calibrations to illustrate if the amplification is so powerful in data