Discussion of Kaplan, Moll, and Violante:

Monetary Policy According to HANK

Keith Kuester

University of Bonn

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The idea

- Use the formulation of Kaplan and Violante's (KV) wealthy hand-to-mouth consumers in a sticky price business cycle model.
- Even relatively asset rich households respond to small shocks in a hand-to-mouth fashion.

The idea

- Key: financial frictions, in particular illiquid wealth:
  - Two assets: capital and government bonds.
  - Drawing down and building capital in response to shocks is very costly.
  - But liquid wealth is costly as well (rate of return dominance)
  - Plus, borrowing liquid is costly, too.
- Many households choose to be effectively liquidity-constrained.

Main results of the paper

- Intertemporal IS absent frictions (as in NK trinity model)

$$c_t = c_{t+1} - [R_t - \pi_{t+1}]$$

  Unitary direct effect of interest rate change (intertemporal substitution).
- Once modeling the liquidity position of households, *little role for intertemporal substitution* in the transmission of monetary shocks.
- Instead, strong role for changes in *income* in the transmission mechanism.

- Novel insight on the reasons for monetary transmission.
- When does the insight matter for policy?

The model

- "Standard medium-scale" New Keynesian sticky-price model with two assets:
  - liquid assets: government bonds, b_t
  - illiquid asset: physical capital, a_t
- liquidity premium in equilibrium: $r_t^a > r_t^b$.
- Standard monopolistically competitive firms.
- Mutual funds invest and hold real capital (how do they discount?)
- cashless limit: CB assumed to set interest rate on bonds according to Taylor rule and the government independently sets the supply of bonds.

The model

- idiosyncratic productivity shocks and aggregate shocks $\Rightarrow$ self-insurance.
- financial frictions on the household side

The model

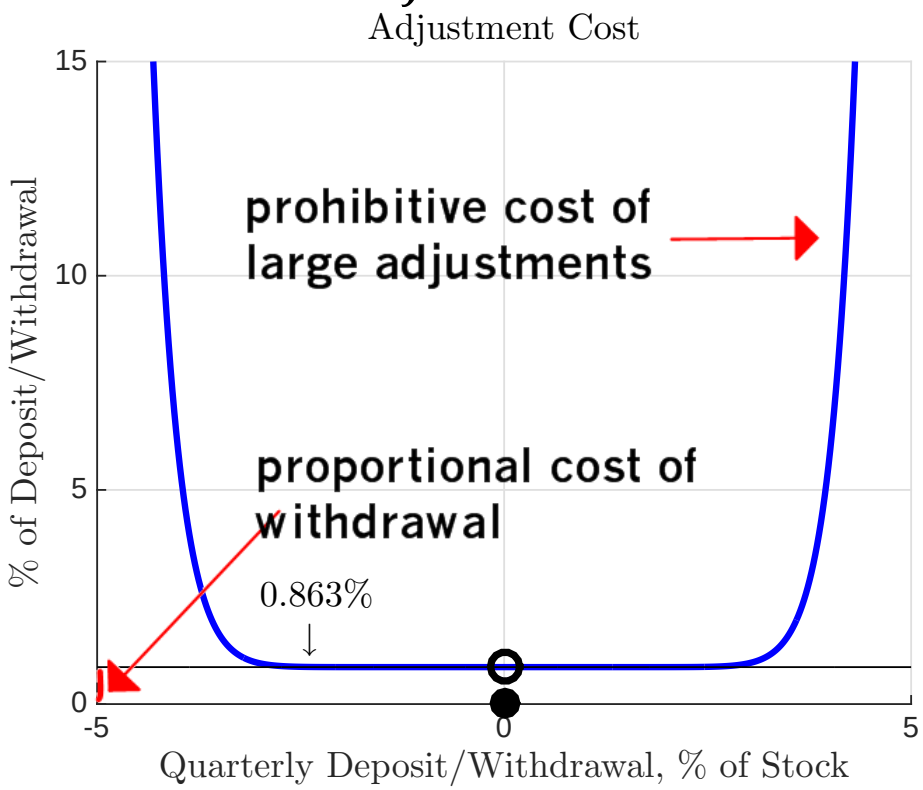
- incomplete markets with borrowing constraints: $b_t \geq -b, a_t \geq 0$.
- wedge between borrowing and lending rates $r_t^{b-} = r_t^b + \kappa$.
- portfolio adjustment costs:
  - transaction costs of deposit

$$\chi(d_t, a_t) = \chi_0 |d_t| + \chi_1 \left| \frac{d_t}{a_t} \right|^{\chi_2} a_t$$

    $\chi_0, \chi_1 > 0, \chi_2 > 1$
  - withdrawing (and depositing!) liquidity costly.

The model

Portfolio adjustment costs



- region of inaction: make no adjustments to illiquid assets unless sufficiently large gains from liquidity.
- cannot, basically, make large withdrawals or deposits.

The model

- My understanding is that the above is quarterly.
- good theory for small shocks.
- good theory for large aggregate shocks?

Comment 1: how illiquid are household portfolios?

- KMV: all equity is assumed illiquid (3/4 either held indirectly (IRA) or in the form of private businesses):
  - The remaining 1/4 can be liquidated easily?
  - Retirement accounts: borrowing from 401k? Cheap and liquid?
  - Time costs of making adjustments?

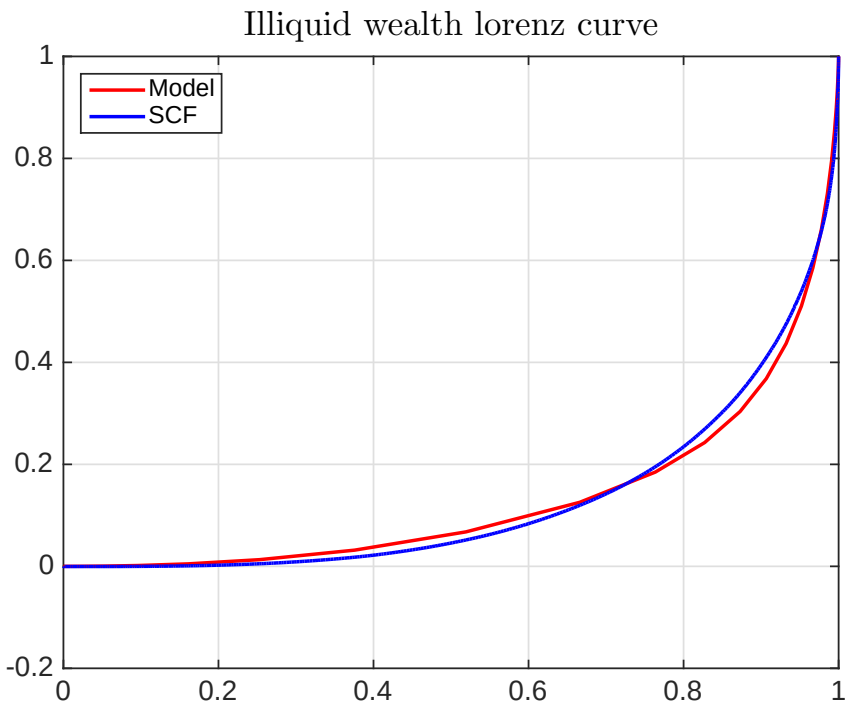
Comment 1: how illiquid are household portfolios?

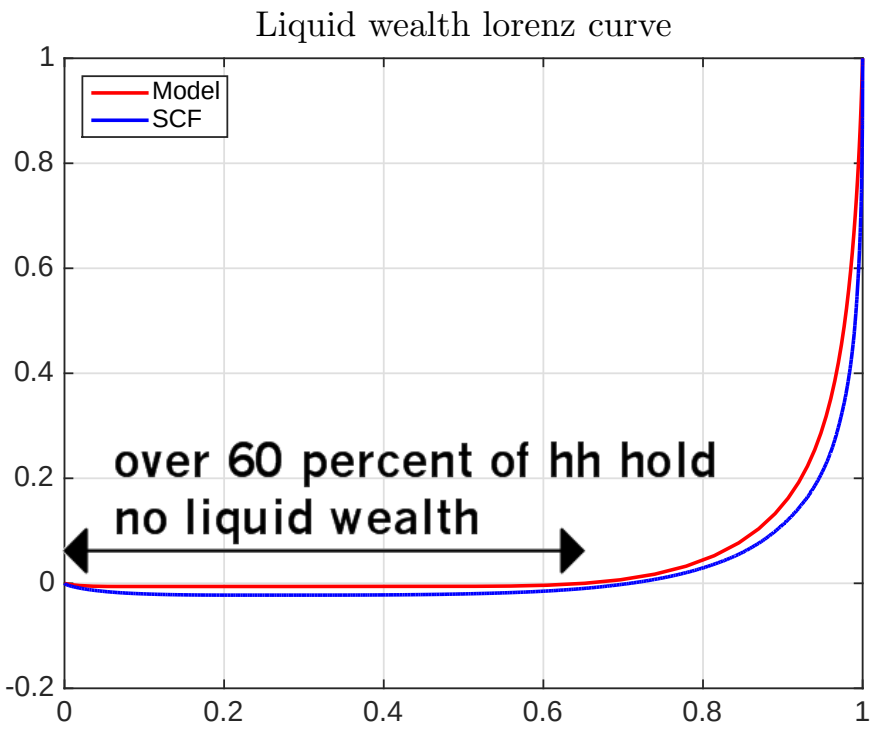
- Short-term borrowing very costly:
  - The intermediation wedge κ is large.
  - Wedge of 24 percent annualized (pay-day lenders?).

Comment 1: how illiquid are household portfolios?

- fixed dollar amount cheaper to withdraw from a the more wealth hh has.
- effect on income scales one-to-one with productivity.
- Mechanisms that keep hhs liquidity-constrained:
  - fixed share ξ of a hh's income each period deposited in illiquid asset automatically. Think 401k. Persistent vs. short-lived business cycle shocks?
  - Blanchard/Yaari structure.

Comment 1: how illiquid are household portfolios?





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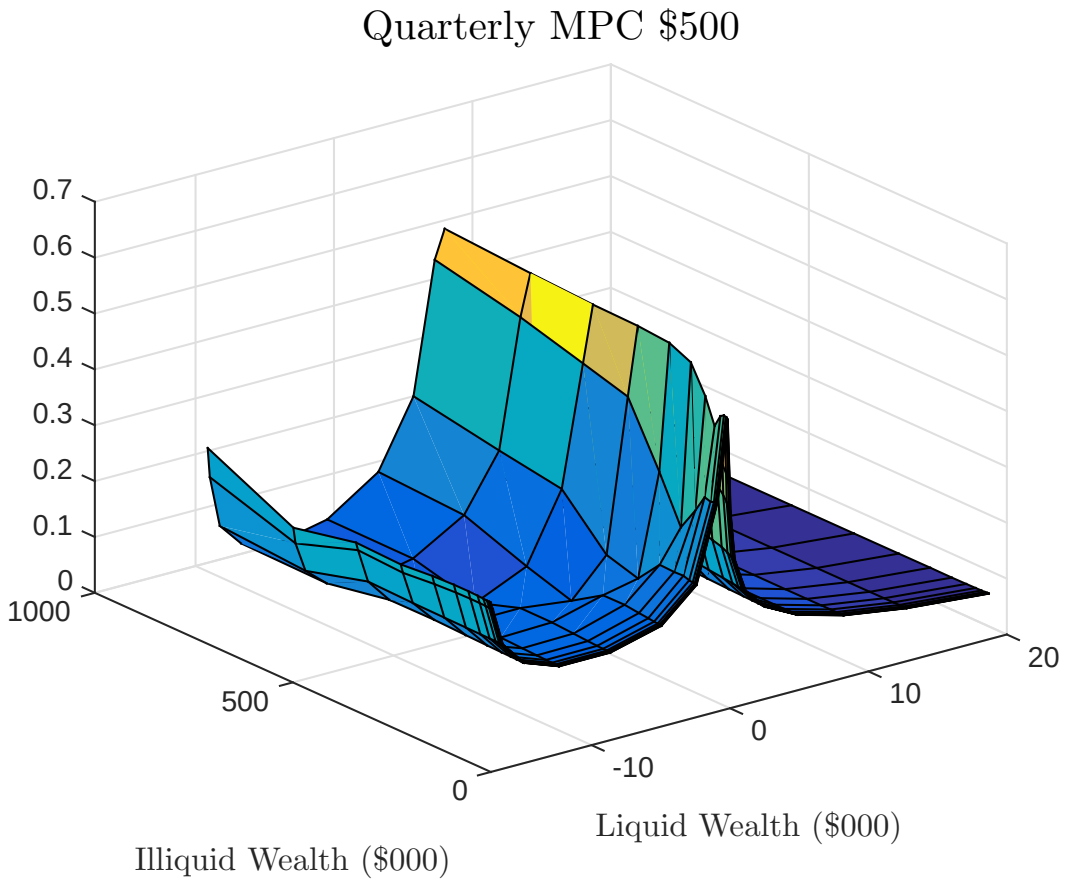
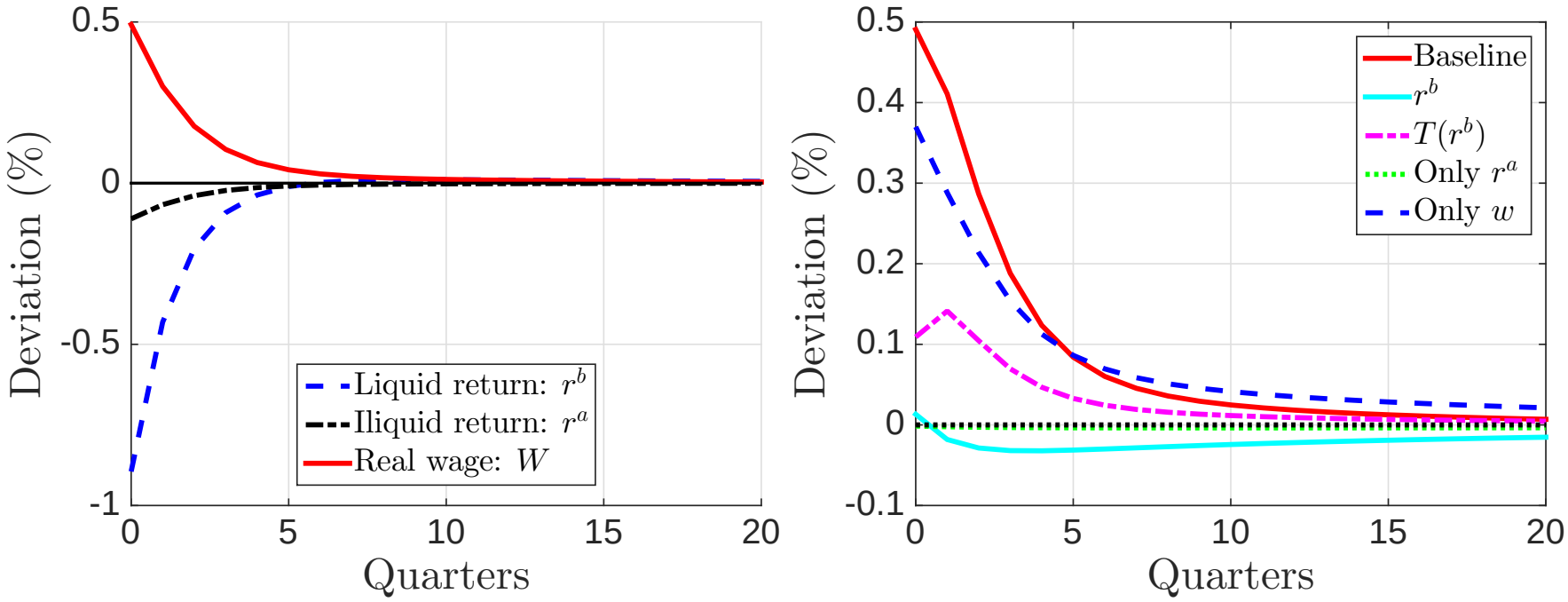


- holding liquidity is costly.
- temporary earnings shocks have little persistence.

Comment 1: how illiquid are household portfolios?

- Hold little liquid wealth.
- Lot's of hh's at the constraint, act like hand-to-mouth for small shocks (positive or negative).

The monetary transmission mechanism



(a) Prices

(b) Consumption Decomposition

- Direct effect of the easing of the real rate small.
- Nevertheless sizable contraction in output.

The monetary transmission mechanism

- Effects mostly indirect, due to changes in *current* income.
- Intuition?

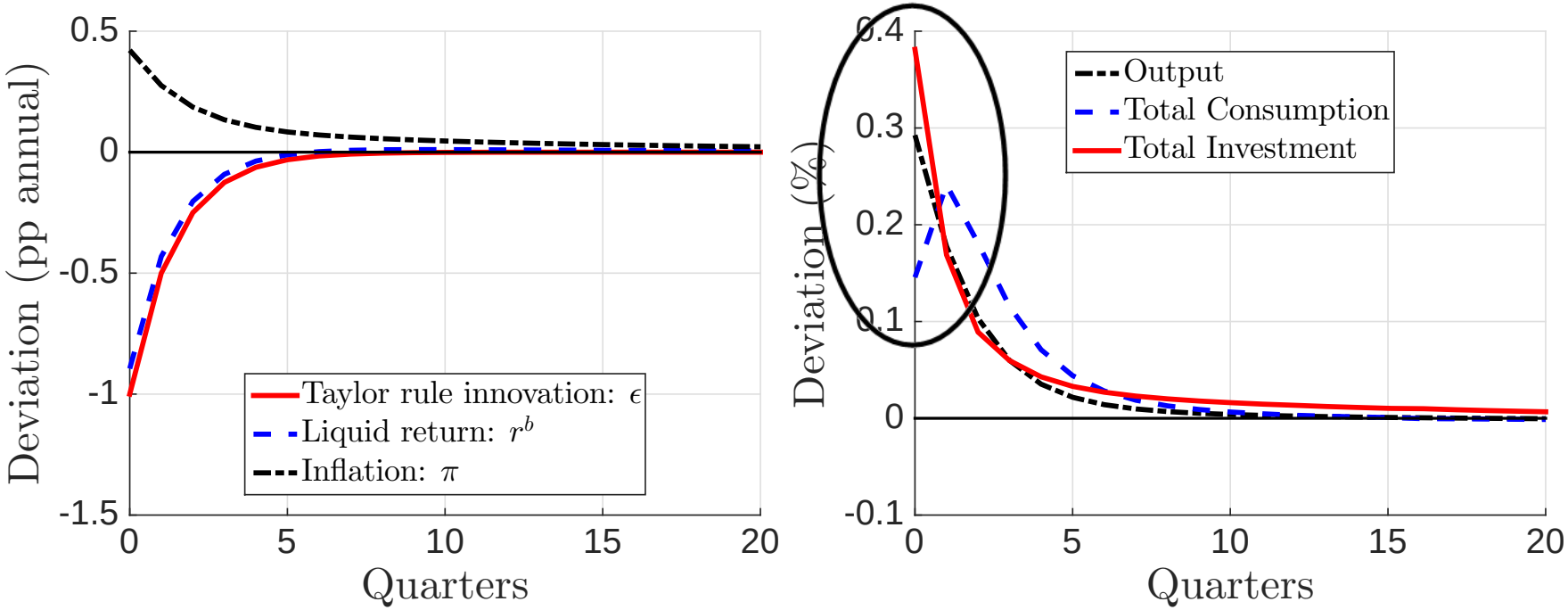
The monetary transmission mechanism

- Few households react by adjusting savings when real rate falls.
- Some do, however. Their consumption response increases demand.
- That increase in demand increases labor demand, and earnings.
- The liquidity-constrained households consume that increase in income.
- More demand, more income, ...

The monetary transmission mechanism

- So, while the direct effect is small, the indirect effect can be large.
- The *income* is central in this theory of monetary transmission.

Comment 2: Aggregate effects



(a) MP Shock, Interest Rate, Inflation

(b) Output, Consumption, Investment

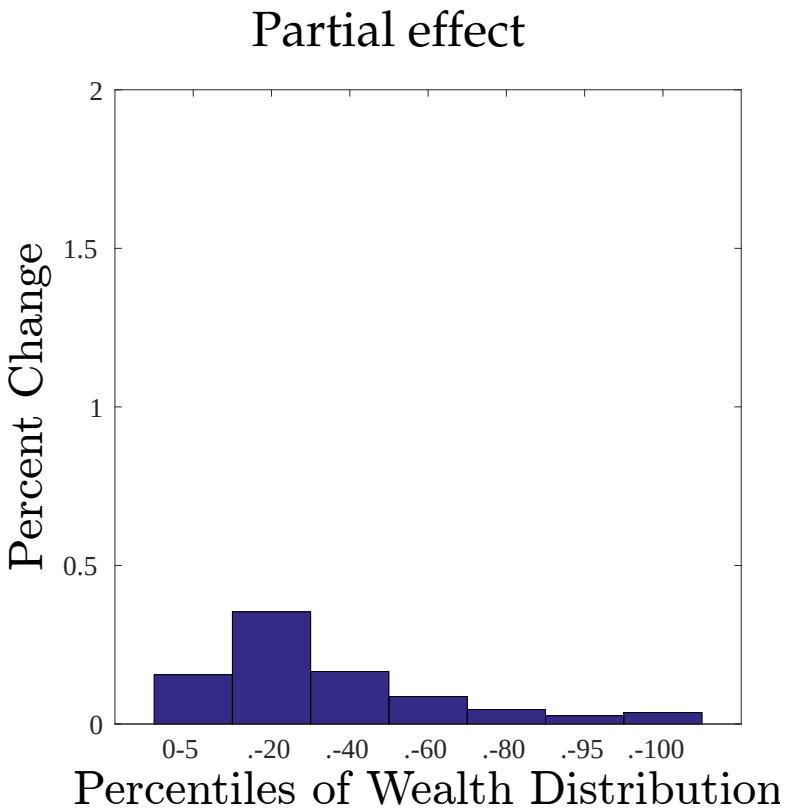
- Effect on output half as large as in CEE
- Persistence? Slope of NKPC implies Calvo-stickiness of 0.75 (adjustment once every 4 qtrs)?

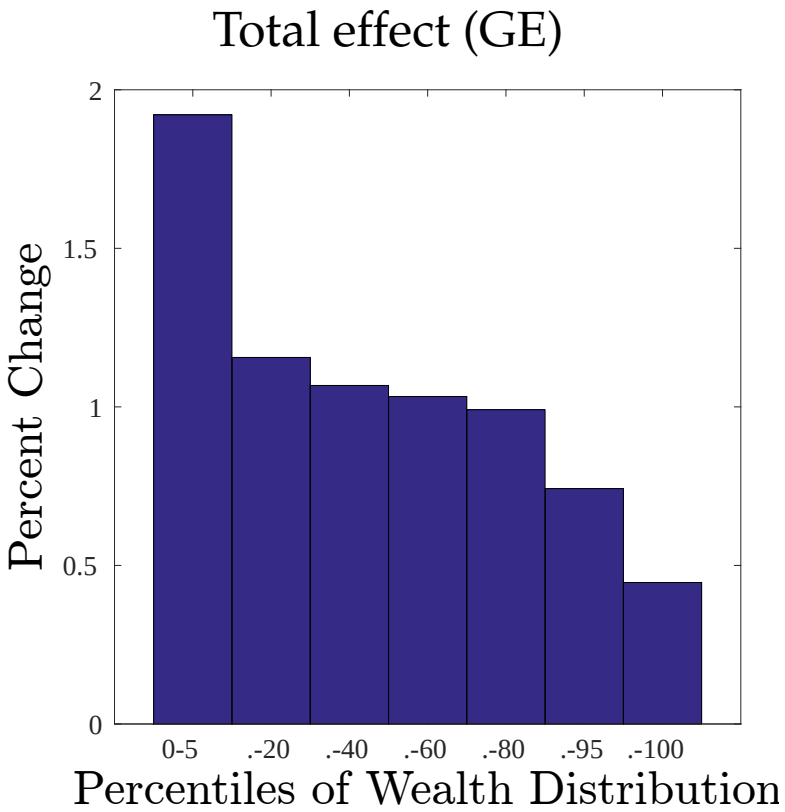
Comment 2: Aggregate effects

- Investment responds too little relative to output.
- But then, what is the counterfactual?
- How do responses look like in rep-agent model?

Contribution of real rate to consumption (Luetticke 2015)

- Partial effect: interest rate moves, holding prices and income fixed

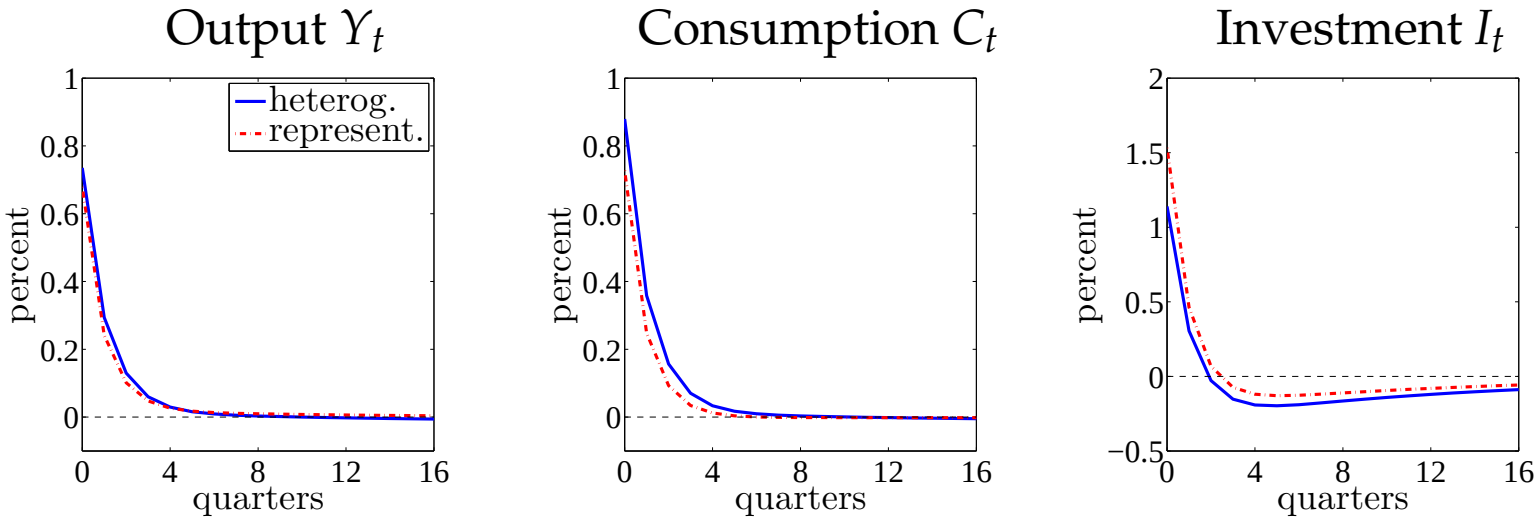




Transmission compared to rep agent (Luetticke 2015)

With incomplete markets:

- Consumption increases 0.15 percent **more**
- Investment increases 0.40 percent **less**



Comment 3: (When) does microfoundation matter?

- Model can be used to motivate large share of hand-to-mouth hh.
- Does sophisticated modeling matter for practical purposes beyond this?
- Isn't this effectively hand-to-mouth model with fixed shares?
- How much does the share of liquidity-constrained hh respond, say, in a deep recession/over the cycle?
- State-dependence?

Conclusions

- Absolutely thought-provoking paper.
- Key point: monetary transmission may go through other channels than intertemporal substitution.

- The monetary transmission mechanism may be impaired not only due to lack of transmission of policy rate to borrowing and lending rates.
  - interaction of mp with labor-market frictions?
  - expected monetary/fiscal mix matters for transmission.