Essays in Consumption

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May 6, 2019

Overview

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Problem

Three methods to estimate Marginal Propensity to Consume

- Natural Experiments $\sim$ 0.2 - 0.7
- Ask people $\sim$ 0.2 - 0.5
- Blundell, Pistaferri, and Preston (2008) $\sim$ 0.05

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Outlier downward biased due to the **Time Aggregation Problem**
This paper corrects estimate to be $\sim$ 0.25

Key to BPP Identification

Income consists of *permanent* and *transitory* shocks

Transitory shock year t

$\Delta y_{t+1} = \Delta p_{t+1} + \Delta\varepsilon_{t+1}$ is a *valid instrument* for ε_t

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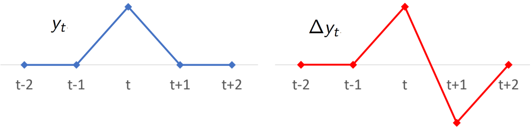

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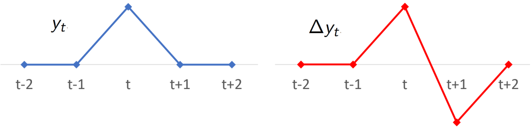

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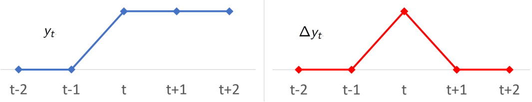

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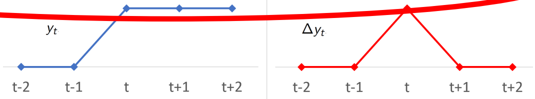
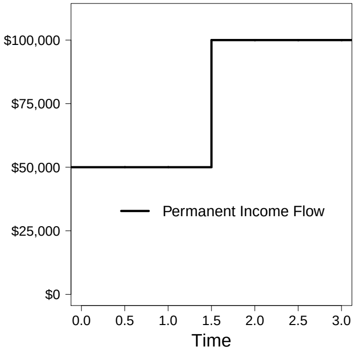


Time Aggregation



Observed permanent income growth is *positively* autocorrelated

BPP misinterprets *positive* permanent income shocks as *negative* transitory shocks

$\implies$ Thinks negative transitory shocks result in consumption *increasing*

If the Permanent Income Hypothesis holds, BPP will estimate the MPC to be -0.6

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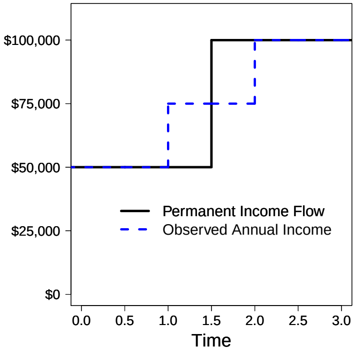

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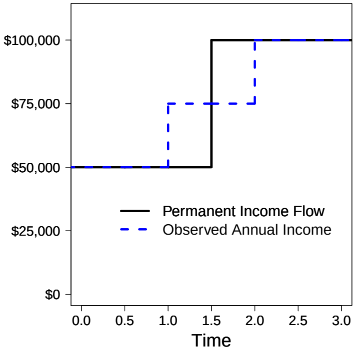

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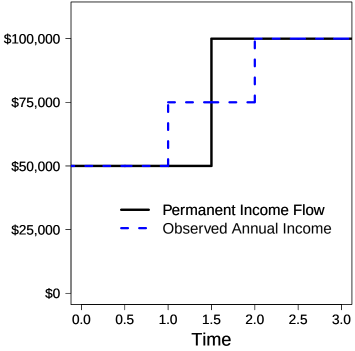

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Results

Estimate of consumption: $0.05 \rightarrow 0.24$

- Exact Same PSID data
- Exact Same Moments of the data
- Exact Same Assumptions on consumption behavior

Adjusted to Continuous Time

BUT: Result is *very* sensitive to short term dynamics of consumption

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Measuring MPC Heterogeneity

New **method** addresses bias in previous results

New **data** allows sharp focus on household heterogeneity

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Robust to short term dynamics

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Time Aggregation Problem
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Sample size in millions
Detailed balance sheet

Why Do We Care? (as macroeconomists)

1) Heterogenous agent models have testable micro behavior

2) Quantify Macro Implications

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e.g. Redistribution in Monetary Policy

What do we find? (Liquid Wealth)

Low Liquid Wealth Households:

- Hand-to-Mouth
- Spend 85 cents out of every marginal dollar, both transitory and permanent

High Liquid Wealth Households:

- Large Response to Transitory Shocks (25 cents per dollar)
- Small Response to Permanent Shocks (60 cents per dollar)

relative to Permanent Income Hypothesis or Buffer-Stock models

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MPX: Marginal Propensity to eXpend (includes durables)

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Decrease spending
a *lot*

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Increase spending
a *little*

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$$\text{1yr rate} \uparrow 1\%$$

$$\textit{Aggregate} \text{ Spending} \downarrow 26 \text{ basis points}$$

Through this redistribution channel *alone*

How Does Heterogeneity Effect Monetary Policy Transmission?

Chapter 2 Interest Rate Exposure is key *empirically*

This Chapter What drives transmission in New Keynesian models with heterogeneity?

Can we apply Auclert (2017) to these models?

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Two Agent New Keynesian Model (TANK)

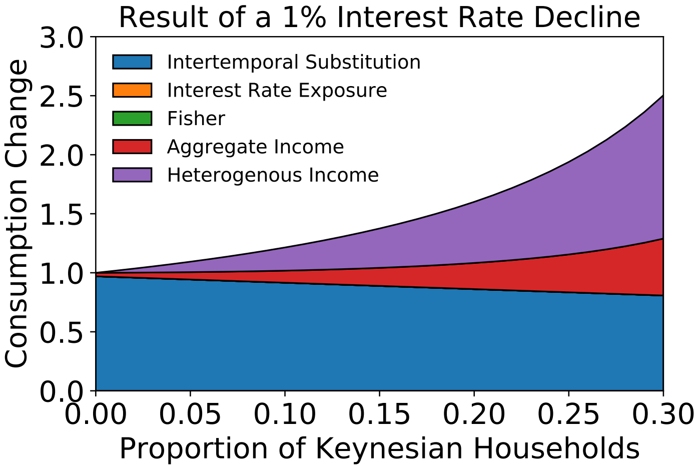
Ricardian Households

- Behave as Representative Agent NK model

Keynesian Households

- Live hand-to-mouth
- Only labor income
- Can borrow a fixed fraction of steady-state income

Monetary Policy Transmission with No Debt



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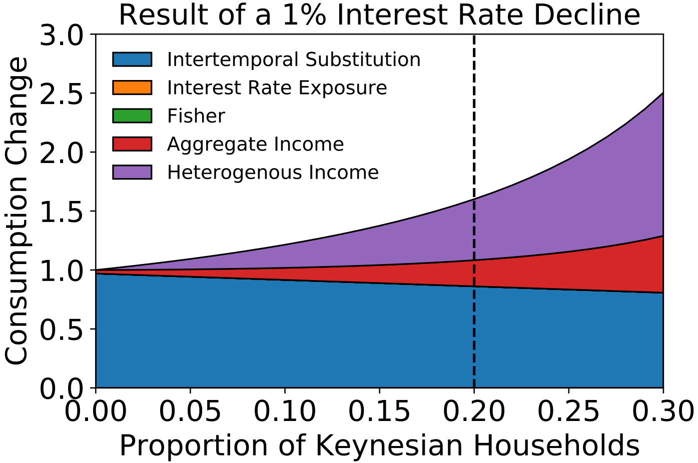

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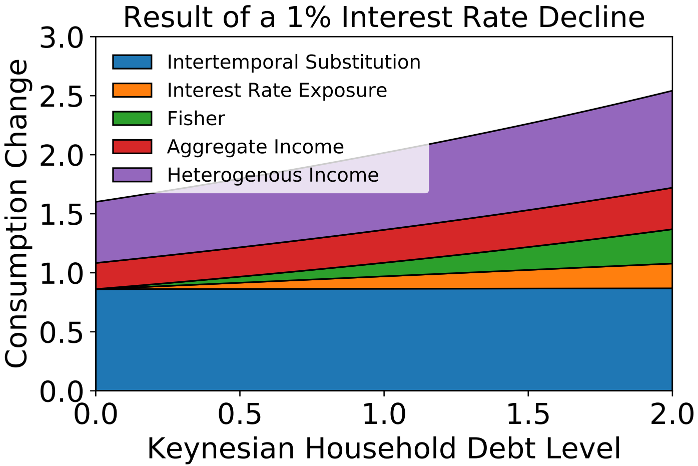

Appicability of Auclert (2017)

Capital

- Shocks become persistent
- Reasonable adjustment costs reduce persistence

Heterogeneous Agent New Keynesian (HANK) model

- Change in wealth distribution induces little persistence
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Thank You!